

ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL TO AAR-MED (AMC & GM to AAR-MED)

State Civil Aviation Agency of the Republic of Azerbaijan

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SUBPART A – GENERAL REQUIREMENTS

SECTION 1 - GENERAL

AMC1 MED.A.015 MEDICAL CONFIDENTIALITY

To ensure medical confidentiality, all medical reports and records should be securely held with accessibility arestricted to personnel authorised by the medical assessor or, where applicable, by the head of the aero-medical centre (AeMC), the aero-medical examiner (AME) or general medical practitioner (GMP).

GM1 MED.A.020 DECREASE IN MEDICAL FITNESS

Medication – Guidance for Pilots and Cabin crew members/load masters

a) Any medication can cause side effects, some of which may impair the safe performance of flying duties. Equally, symptoms of colds, sore throats, diarrhoea and other abdominal upsets may cause little or no problem whilst on the ground but may distract the pilot or cabin crew/load master member and degrade their performance whilst on duty. The in-flight environment may also increase the severity of symptoms which may only be minor whilst on the ground. Therefore, one issue with medication and flying 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 pilots and cabin crew/load master in deciding whether expert aero-medical advice by an AME, AeMC, GMP or medical assessor is needed.

b) Before taking any medication and acting as a pilot or cabin crew/load master member, the following three basic questions should be satisfactorily answered:

(1) Do I feel fit to fly?

(2) Do I really need to take medication at all?

(3) Have I given this particular medication a personal trial on the ground to ensure that it will not have any adverse effects on my ability to fly?

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 flying duties:

(1) Antibiotics. Antibiotics may have short-term or delayed side effects which can affect pilot or cabin crew/load masters performance. More significantly, however, their use usually indicates that an infection is present and, thus, the effects of this infection may mean that a pilot or cabin crew member is not fit to fly 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 pilot or cabin crew member 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 flying duties. However, adverse effects associated with mefloquine include insomnia, strange dreams, mood changes, nausea, diarrhoea and headaches. In addition, mefloquine may cause

spatial disorientation and lack of fine coordination and is, therefore, not compatible with flying duties.

(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 flying, so that, if treatment is necessary, expert aero-medical 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 pseudo-ephedrine which are not compatible with flying duties. However, mucolytic agents (e.g. carbocysteine) are well-tolerated and are compatible with flying duties.

(5) Decongestants. Nasal decongestants with no effect on alertness may be compatible with flying duties. However, as the underlying condition requiring the use of decongestants may be incompatible with flying duties, expert aero-medical advice should be sought. For example, oedema of the mucosal membranes causes difficulties in equalising the pressure in the ears or sinuses.

(6) Nasal corticosteroids are commonly used to treat hay fever, and they are compatible with flying duties.

(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 flying duties. However, the pilot or cabin crew/load masters member should give affirmative answers to the three basic questions listed in (b) before using the medication and carrying out flying duties.

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 flying duties.

(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-diarrhoeal drugs. Loperamide is one of the more common anti-diarrhoeal drugs and is usually safe to take whilst flying. However, the diarrhoea itself often makes the pilot and cabin crew member unfit for flying duties.

(10) Hormonal contraceptives and hormone replacement therapy usually have no adverse effects and are compatible with flying duties.

(11) Erectile dysfunction medication. This medication may cause disturbances in colour vision and dizziness. There should be at least 6 hours between taking sildenafil and flying duty; and 36 hours between taking vardenafil or tadalafil and flying duty.

(12) Smoking cessation. Nicotine replacement therapy may be acceptable. However, other medication affecting the central nervous system (buproprion, varenicline) is not acceptable for pilots.

(13) High blood pressure medication. Most anti-hypertensive drugs are compatible with flying duties. However, if the level of blood pressure is such that drug therapy is required, the pilot or cabin crew member/load masters member should be monitored for any side effects before carrying out flying duties. Therefore, consultation with the AME, AeMC, GMP or medical assessor as applicable, is needed.

(14) Asthma medication. Asthma has to be clinically stable before a pilot or cabin crew/load masters member can return to flying duties. The use of respiratory aerosols or powders, such as corticosteroids, beta-2-agonists or chromoglycic acid may be compatible with flying duties. However, the use of oral steroids or theophylline derivatives is incompatible with flying duty. Pilots or Cabin crew members/load masters using medication for asthma should consult the AME, AeMC, GMP or medical assessor, as applicable.

(15) Tranquillisers and sedatives. The inability to react, due to the use of this group of medicines, has been a contributory cause to fatal aircraft accidents. In addition, the underlying condition for which these medications have been prescribed will almost certainly mean that the mental state of a pilot or cabin crew member/load master member is not compatible with flying duties.

(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. Expert aero-medical advice should be obtained before using sleeping tablets.

(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. Expert aero-medical advice should be obtained.

(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. Overdosage 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 flying. The period will vary considerably from individual to individual, but a pilot or cabin crew member/load master member should not fly for at least 12 hours after a local anaesthetic, and for at least 48 hours after a general, spinal or epidural anaesthetic (see MED.A.020).

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 pilot or the cabin crew/load masters member on the ground prior to flying. It should be noted that medication which would not normally affect pilot or cabin crew/load masters performance may do so in individuals who are ‘oversensitive’ to a particular preparation. Individuals are, therefore, advised not to take any medicines before or during flight unless they are completely familiar with their effects on their own bodies. In cases of doubt, pilots and Cabin crew members/load masters should consult an AME, AeMC, GMP or medical assessor, as applicable.

f) Other treatments

g) 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, GMP or medical assessor, as applicable, for assessing fitness.

AMC1 MED.A.025 OBLIGATIONS OF THE AEMC, AME AND GMP

(a) If the medical examination is carried out by two or more AMEs or GMPs, only one of them should be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

(b) The applicant should be made aware that the associated medical certificate or cabin crew/load master report may be suspended or revoked if the applicant provides incomplete, inaccurate or false statements on their medical history to the AeMC, AME or GMP.

(c) In cases where the AeMC or AME is required to assess the fitness of an applicant for a class 2 medical certificate in consultation with the medical assessor of the licensing authority, they should document the consultation in accordance with the procedure established by the competent authority.

(d) The AeMC, AME or GMP should give advice to the applicant on treatment and preventive measures if, during the course of the examination, medical conditions or risk factors are identified which may endanger the medical fitness of the applicant in the future.

(e) When data is not being properly recorded in the Aero-medical data repository due to unserviceability of the system, the AeMCs and AMEs should enter, or correct the existing data, in the Aero-medical data repository without undue delay when the system recovers.

(f) In case of denial or referral to the licensing authority, the AeMC, AME or GMP should inform the applicant in writing regarding the result of the assessment in a form and manner established by the competent authority.

GM1 MED.A.025 OBLIGATIONS OF THE AEMC, AME AND GMP

Guidelines for the AeMC, AME or GMP Conducting the Medical Examinations and Assessments for Medical Certification of Flight Crew Members

(a) Before performing the medical examination, the AeMC, AME or GMP should:

(1) verify the applicant's identity by checking their identity card, passport, driving licence or other official document containing a photograph of the applicant;

(2) obtain details of the applicant's flight crew licence from the applicant's licensing authority if they do not have their licence with them;

(3) except for initial applicants, obtain details of the applicant's most recent medical certificate from the medical assessor of the applicant's licensing authority if they do not have their certificate with them;

(4) in the case of a specific medical examination(s) (SIC) limitation on the existing medical certificate, obtain details of the specific medical condition and any associated instructions from the medical assessor of the applicant's licensing

authority. This could include, for example, a requirement to undergo a specific examination or test;

(5) except for initial applicants, ascertain, from the previous medical certificate, which routine medical test(s) should be conducted, for example electrocardiography (ECG);

(6) provide the applicant with the application form for a medical certificate and the instructions for completion and ask the applicant to complete the form but not to sign it yet;

(7) go through the form with the applicant and give information to help the applicant understand the significance of the entries and ask any questions which might help the applicant to recall important historical medical data;

(8) verify that the form is complete and legible, ask the applicant to sign and date the form and then sign it as well. If the applicant declines to complete the application form fully, inform the applicant that it may not be possible to issue a medical certificate regardless of the outcome of the clinical examination and assessment.

(b) Once all the items in (a) have been addressed, the AeMC, AME or GMP should:

(1) perform the medical examination of the applicant in accordance with the applicable rules;

(2) arrange for additional specialist medical examinations, such as otorhinolaryngology (ENT) or ophthalmology, to be conducted as applicable and obtain the associated report forms or reports;

(3) complete the medical examination report form in accordance with the associated instructions for completion;

(4) ensure that all of the report forms are complete, accurate and legible.

(c) Once all the actions in (b) have been carried out, the AeMC, AME or GMP shouldreview the report forms and:

(1) if satisfied that the applicant meets the applicable medical requirements as set out in AAR-MED, issue a medical certificate for the appropriate class, with limitations if necessary. The applicant should sign the certificate once signed by the AeMC, AME or GMP; or

(2) if the applicant does not meet the applicable medical requirements, or if the fitness of the applicant for the class of medical certificate applied for is in doubt:

i. refer the decision on medical fitness to, or consult the decision on medical fitness with, the medical assessor of the licensing authority or AME in compliance with MED.B.001; or

ii. deny issuance of a medical certificate, explain the reason(s) for denial to the applicant and inform them of their right of a review according to the procedures of the competent authority.

(d) The AeMC, AME or GMP should send the documents as required by MED.A.025(b) to the medical assessor of the applicant's licensing authority within 5 days from the date of the medical examination. If a medical certificate has been denied or the decision has been referred, the documents should be sent to the medical assessor of the licensing authority on the same day that the denial or referral decision is reached.

SECTION 2 - REQUIREMENTS FOR MEDICAL CERTIFICATES

AMC1 MED.A.030 MEDICAL CERTIFICATES

(a) A class 1 medical certificate includes the privileges and validities of class 2 and LAPL medical certificates.

(b) A class 2 medical certificate includes the privileges and validities of a LAPL medical certificate.

AMC1 MED.A.035 APPLICATION FOR A MEDICAL CERTIFICATE

Except for initial applicants, the AeMC, AME or GMP should not start the aero-medical examination for the issue of the medical certificate where applicants do not present the most recent medical certificate, unless relevant information is received from the medical assessor of the licensing authority.

SUBPART B – REQUIREMENTS for PILOT MEDICAL CERTIFICATES

SECTION 1 – GENERAL

AMC1 MED.B.001 LIMITATIONS TO MEDICAL CERTIFICATES

GENERAL

(a) An AeMC or AME may refer the decision on fitness of an applicant to the medical assessor of the licensing authority in borderline cases or where fitness is in doubt.

(b) In cases where a fit assessment may only be considered with a limitation, the AeMC, AME, GMP or the medical assessor of the licensing authority should evaluate the medical condition of the applicant in consultation with flight operations and other experts, if necessary.

(c) Initial application of limitations

(1) The limitations TML, VDL, VML, VNL and VCL, as listed in AMC2 MED.B.001(a), may be imposed by an AME or an AeMC for class 1, class 2, and LAPL medical certificates, or a GMP for LAPL medical certificates.

(2) All other limitations listed in AMC2 MED.B.001(a) should only be imposed:

i. for class 1 medical certificates, by the medical assessor of the licensing authority where a referral is required according to MED.B.001;

ii. for class 2 medical certificates, by the AME or AeMC in consultation with the medical assessor of the licensing authority where consultation is required according to MED.B.001;

iii. for LAPL medical certificates, by an AME or AeMC.

(d) Removal of limitations

(1) For class 1 medical certificates, all limitations should only be removed by the medical assessor of the licensing authority.

(2) For class 2 medical certificates, limitations may be removed by the medical assessor of the licensing authority or by an AeMC or AME in consultation with the medical assessor of the licensing authority.

(3) For LAPL medical certificates, limitations may be removed by an AeMC or AME.

AMC2 MED.B.001 LIMITATIONS TO MEDICAL CERTIFICATES

Limitation Codes

(a) The following abbreviations for limitations codes should be used on the medical certificates as applicable:

Code	Limitation
TML	Limited period of validity of the medical certificate
VDL	Valid only with correction for defective distant vision
VML	Valid only with correction for defective distant, intermediate and near vision
VNL	Valid only with correction for defective near vision
CCL	Correction by means of contact lenses
VCL	Valid by day only
RXO	Specialist ophthalmological examination(s)
SIC	Specific medical examination(s)
HAL	Valid only when hearing aids are worn
APL	Valid only with approved prosthesis
AHL	Valid only with approved hand controls
OML	Valid only as, or with, a qualified co-pilot
OCL	Valid only as a qualified co-pilot
OSL	Valid only with a safety pilot and in aircraft with dual controls
OPL	Valid only without passengers
ORL	Valid only with a safety pilot if passengers are carried
OAL	Restricted to demonstrated aircraft type
SSL	Special restriction(s) as specified

(b) The abbreviations for the limitation codes should be explained to the holder of a medical certificate as follows:

(1) *TML Time limitation*

The period of validity of the medical certificate is limited to the duration as shown on the medical certificate. This period of validity commences on the date of the medical examination. Any period of validity remaining on the previous medical certificate is no longer valid. The holder of the medical certificate should present themselves for re-examination when advised and should follow any medical recommendations.

(2) *VDL Wear corrective lenses and carry a spare set of spectacles*

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of the medical certificate should wear spectacles or contact lenses that correct for defective distant vision as examined and approved by the AeMC, AME or GMP. Contact lenses may not be worn until cleared to do so by the AeMC, AME or GMP. A spare set of spectacles, approved by the AeMC, AME or GMP, should be readily available.

(3) VML Wear multifocal spectacles and carry a spare set of spectacles

Correction for defective distant, intermediate and near vision: whilst exercising the privileges of the licence, the holder of the medical certificate should wear spectacles that correct for defective distant, intermediate and near vision as examined and approved by the AeMC, AME or GMP. Contact lenses or full frame spectacles, when either correct for near vision only, may not be worn. A spare set of spectacles, approved by the AeMC, AME or GMP, should be readily available.

(4) *VNL Have available corrective spectacles and carry a spare set of spectacles*

Correction for defective near vision: whilst exercising the privileges of the licence, the holder of the medical certificate should have readily available spectacles that correct for defective near vision as examined and approved by the AeMC, AME or GMP. Contact lenses or full frame spectacles, when either correct for near vision only, may not be worn. A spare set of spectacles, approved by the AeMC, AME or GMP, should be readily available.

(5) *CCL Wear contact lenses that correct for defective distant vision*

Correction for defective distant vision: whilst exercising the privileges of the licence, the holder of a medical certificate should wear contact lenses that correct for defective distant vision, as examined and approved by the AeMC, AME or GMP. A spare set of similarly correcting spectacles, approved by the AeMC, AME or GMP, should be readily available for immediate use whilst exercising the privileges of the licence.

(6) *VCL Valid by day only*

This limitation allows holders of a class 2 or LAPL medical certificate with varying degrees of colour deficiency, to exercise the privileges of their licence by daytime only.

(7) *RXO Specialist ophthalmological examination(s)*

Specialist ophthalmological examination(s), other than the examinations stipulated in AAR-MED, are required for a significant reason.

(8) *SIC Specific regular medical examination(s) contact the medical assessor of the licensing authority*

This limitation requires the AeMC, or AME to contact the medical assessor of the licensing authority before embarking upon a revalidation or renewal aero-medical assessment. The limitation is likely to concern a medical history or additional examination(s) which the AeMC or AME should be aware of prior to undertaking the assessment.

(9) *HAL Wear hearing aid(s)*

Whilst exercising the privileges of the licence, the holder of the medical certificate should use hearing aid(s) that compensate for defective hearing as examined and approved by the AeMC or AME. A spare set of batteries should be readily available.

(10) *APL Valid only with approved prosthesis*

This limitation applies to the holder of a medical certificate with a musculoskeletal condition when a medical flight test or a flight simulator test has shown that the use of a prosthesis is required to safely exercise the privileges of the licence. The prosthesis to be used should be approved.

(11) *AHL Valid only with approved hand controls*

This limitation applies to the holder of a medical certificate who has a limb deficiency or other anatomical problem which had been shown by a medical flight test or flight simulator testing to be acceptable but to require the aircraft to be equipped with suitable, approved hand controls.

(12) OML Valid only as or with a qualified co-pilot

This limitation applies to holders of a class 1 medical certificate who do not fully meet the aero-medical requirements for single-pilot operations, but are fit for multi-pilot operations. Refer to MED.B.001(d)(1).

(13) *OCL Valid only as a qualified co-pilot*

This limitation is an extension of the OML and are restricted to the role of co-pilot.

(14) *OSL Valid only with a safety pilot and in aircraft with dual controls*

This limitation applies to holders of a class 2 or a LAPL medical certificate only. The safety pilot should be made aware of the type(s) of possible incapacity that the pilot whose medical certificate has been issued with this limitation may suffer and should be prepared to take over the aircraft controls during flight. Refer to MED.B.001(d)(2).

(15) *OPL Valid only without passengers*

This limitation applies to holders of a class 2 or LAPL medical certificate with a medical condition that may lead to an increased level of risk to flight safety when exercising the privileges of the licence. This limitation is to be applied when this risk is not acceptable for the carriage of passengers. Refer to MED.B.001(d)(3).

(16) *ORL Valid only with a safety pilot if passengers are carried and in aircraft with dual controls*

This limitation applies to holders of a class 2 or LAPL medical certificate with a medical condition that may lead to an increased level of risk to flight safety when exercising the privileges of the licence. The safety pilot, if carried, should be made aware of the type(s) of possible incapacity that the pilot whose medical certificate has been issued with this limitation may suffer and should be prepared to take over the aircraft controls during flight. Refer to MED.B.001(d)(4).

(17) *OAL Restricted to demonstrated aircraft type*

This limitation applies to the holder of a medical certificate who has a limb deficiency or other medical problem which had been shown by a medical flight test or flight simulator testing to be acceptable but to require a restriction to a specific class and type of aircraft.

(18) *SSL Special restriction(s) as specified*

This limitation may be considered when an individually specified limitation, not defined in this AMC, is appropriate to mitigate an increased level of risk to flight safety. The description of the SSL should be entered on the medical certificate or in a separate document to be carried with the medical certificate.

SECTION 2 – MEDICAL REQUIREMENTS FOR CLASS 1 AND CLASS 2 MEDICAL CERTIFICATES

AMC1 MED.B.010 CARDIOVASCULAR SYSTEM

(a) Examination

Exercise electrocardiography
An exercise ECG when required as part of a cardiovascular assessment should be symptom limited and completed to a minimum of Bruce Stage IV or equivalent.

(b) General

(1) Cardiovascular risk factor assessment

i. Serum lipid estimation is case finding and significant abnormalities should be reviewed, investigated and supervised by the AeMC or AME in consultation with the medical assessor of the licensing authority.

ii. Applicants with an accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should undergo a cardiovascular evaluation by the AeMC or AME, if necessary in consultation with the medical assessor of the licensing authority.

(2) Cardiovascular assessment

i. Reporting of resting and exercise electrocardiograms should be by the AME or an accredited specialist.

ii. The extended cardiovascular assessment should be undertaken at an AeMC or may be delegated to a cardiologist.

(c) Peripheral arterial disease

If there is no significant functional impairment, a fit assessment may be considered provided:

(1) applicants without symptoms of coronary artery disease have reduced any vascular risk factors to an appropriate level;

(2) applicants should be on appropriate secondary prevention treatment;

(3) exercise electrocardiography is satisfactory. Further tests may be required which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta of less than 5 cm in diameter may be assessed as fit before surgery, with an OML subject to satisfactory evaluation by a cardiologist. Follow-up by ultra-sound scans or other imaging techniques, as necessary, should be determined by the medical assessor of the licensing authority.

(2) Applicants may be assessed as fit with an OML after surgery for an aneurysm of the thoracic or abdominal aorta if the blood pressure and cardiovascular evaluation is satisfactory. Regular evaluations by a cardiologist should be carried out.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should undergo evaluation by a cardiologist and assessment by the medical assessor of the licensing authority. If considered significant, further investigation should include at least 2D Doppler echocardiography or equivalent imaging.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit. Applicants with significant abnormality of any of the heart valves should be assessed as unfit.

(3) Aortic valve disease

i. Applicants with a bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated. Follow-up with echocardiography, as necessary, should be determined by the medical assessor of the licensing authority.

ii. Applicants with aortic stenosis may be assessed as fit provided the left ventricular function is intact and the mean pressure gradient is less than 20 mmHg. Applicants with an aortic valve orifice with indexation on the body surface of more than 0.6 cm2/m2 and a mean pressure gradient above 20 mmHg, but not greater than 50 mmHg, may be assessed as fit with an OML. Follow-up with 2D Doppler echocardiography, as necessary, should be determined by the medical assessor of the licensing authority in all cases. Alternative measurement techniques with equivalent ranges may be used. Regular evaluation by a cardiologist should be considered. Applicants with a history of systemic embolism or significant dilatation of the thoracic aorta should be assessed as unfit.

iii. Applicants with trivial aortic regurgitation may be assessed as fit. A greater degree of aortic regurgitation should require an OML. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Follow-up, as necessary, should be determined by the medical assessor of the licensing authority.

(4) Mitral valve disease

i. Asymptomatic applicants with an isolated mid-systolic click due to mitral leaflet prolapse may be assessed as fit.

ii. Applicants with rheumatic mitral stenosis should normally be assessed as unfit.

iii. Applicants with minor regurgitation may be assessed as fit. Periodic cardiological review should be determined by the medical assessor of the licensing authority.

iv. Applicants with moderate mitral regurgitation may be considered as fit with an OML if the 2D Doppler echocardiogram demonstrates satisfactory left ventricular dimensions and satisfactory myocardial function is confirmed by exercise electrocardiography. Periodic cardiological review should be required, as determined by the medical assessor of the licensing authority.

v. Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter or evidence of systolic impairment should be assessed as unfit.

(f) Valvular surgery

Applicants who have undergone cardiac valve replacement or repair should be assessed as unfit. A fit assessment may be considered in the following cases:

(1) Mitral leaflet repair for prolapse is compatible with a fit assessment, provided post-operative investigations reveal satisfactory left ventricular function without systolic or diastolic dilation and no more than minor mitral regurgitation.

(2) Asymptomatic applicants with a tissue valve or with a mechanical valve who, at least 6 months following surgery, are taking no cardioactive medication may be considered for a fit assessment with an OML. Investigations which demonstrate normal valvular and ventricular configuration and function should have been completed as demonstrated by:

i. a satisfactory symptom limited exercise ECG. Myocardial perfusion imaging/stress echocardiography should be required if the exercise ECG is abnormal or any coronary artery disease is suspected;

ii. a 2D Doppler echocardiogram showing no significant selective chamber enlargement, a tissue valve with minimal structural alteration and a normal Doppler blood flow, and no structural or functional abnormality of the other heart valves. Left ventricular fractional shortening should be normal.

Follow-up with exercise ECG and 2D echocardiography, as necessary, should be determined by the medical assessor of the licensing authority.

(3) Where anticoagulation is needed after valvular surgery, a fit assessment with an OML may be considered if the haemorrhagic risk is acceptable and the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 international normalised ratio (INR) values are documented, of which at least 4 are within the INR target range. The INR target range should be determined by the type of surgery performed.

(g) Thromboembolic disorders

Applicants with arterial or venous thrombosis or pulmonary embolism should be assessed as unfit. A fit assessment with an OML may be considered after a period of stable anticoagulation as prophylaxis, after review by the medical assessor of the licensing authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range and the haemorrhagic risk is acceptable. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment with an OML may be considered after review by the medical assessor of the licensing authority after a stabilisation period of 3 months. Applicants with pulmonary embolism should also be evaluated by a cardiologist. Following cessation of anticoagulant therapy, for any indication, applicants should undergo a re-assessment by the medical assessor of the licensing authority.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium should be assessed as unfit. A fit assessment may be considered following complete resolution and satisfactory cardiological evaluation which may include 2D Doppler echocardiography, exercise ECG and/or myocardial perfusion imaging/stress echocardiography and 24-hour ambulatory ECG. Coronary

angiography may be indicated. Frequent review and an OML may be required after fit assessment.

(2) Applicants with a congenital abnormality of the heart should be assessed as unfit. Applicants following surgical correction or with minor abnormalities that are functionally unimportant may be assessed as fit following cardiological evaluation. No cardioactive medication is acceptable. Investigations may include 2D Doppler echocardiography, exercise ECG and 24-hour ambulatory ECG. The potential hazard of any medication should be considered as part of the assessment. Particular attention should be paid to the potential for the medication to mask the effects of the congenital abnormality before or after surgery. Regular cardiological evaluations should be carried out.

(i) Syncope

(1) In the case of a single episode of vasovagal syncope which can be explained and is compatible with flight safety, a fit assessment may be considered.

(2) Applicants with a history of recurrent vasovagal syncope should be assessed as unfit. A fit assessment may be considered after a 6-month period without recurrence, provided cardiological evaluation is satisfactory. Such evaluation should include:

i. a satisfactory symptom limited 12 lead exercise ECG to Bruce Stage IV, or equivalent. If the exercise ECG is abnormal, myocardial perfusion imaging/stress echocardiography or equivalent test should be carried out;

ii. a 2D Doppler echocardiogram showing neither significant selective chamber enlargement nor structural or functional abnormality of the heart, valves or myocardium;

iii. a 24-hour ambulatory ECG recording showing no conduction disturbance, complex or sustained rhythm disturbance or evidence of myocardial ischaemia.

(3) A tilt test, or equivalent, carried out to a standard protocol showing no evidence of vasomotor instability may be required.

(4) Neurological review should be required.

(5) An OML should be required until a period of 5 years has elapsed without recurrence. The medical assessor of the licensing authority may determine a shorter or longer period of OML according to the individual circumstances of the case.

(6) Applicants who experienced loss of consciousness without significant warning should be assessed as unfit.

(j) Blood pressure

(1) The diagnosis of hypertension should require cardiovascular evaluation to include potential vascular risk factors.

(2) Anti-hypertensive treatment should be agreed by the medical assessor of the licensing authority. Acceptable medication may include:

i. non-loop diuretic agents;

ii. ACE inhibitors;

iii. angiotensin II receptor blocking agents (sartans);

iv. channel calcium blocking agents;

v. certain (generally hydrophilic) beta-blocking agents.

(3) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that satisfactory control has been achieved and the treatment is compatible with the safe exercise of the privileges of the applicable licence(s).

(k) Coronary artery disease

(1) Chest pain of uncertain cause should require full investigation. Applicants with angina pectoris should be assessed as unfit, whether or not it is alleviated by medication.

(2) In suspected asymptomatic coronary artery disease, exercise electrocardiography should be required. Further tests may be required, which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) Applicants with evidence of exercise-induced myocardial ischaemia should be assessed as unfit.

(4) After an ischaemic cardiac event or revascularisation procedure, applicants should have reduced cardiovascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on appropriate secondary prevention treatment.

i. A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event or revasculisation procedure and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be made available to the medical assessor of the licensing authority:

A. there should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction;

B. the whole coronary vascular tree should be assessed as satisfactory by a cardiologist, and particular attention should be paid to multiple stenoses and/or multiple revascularisations;

C. Applicants with an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should be assessed as unfit.

ii. At least 6 months from the ischaemic myocardial event or revascularisation procedure, the following investigations should be completed (equivalent tests may be substituted):

A. an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;

B. an echocardiogram showing satisfactory left ventricular function with no important abnormality of wall motion (such as dyskinesia or akinesia) and a left ventricular ejection fraction of 50 % or more;

C. in cases of angioplasty/stenting, a myocardial perfusion scan or stress echocardiogram, or equivalent test, which should show no evidence of

reversible myocardial ischaemia. If there is any doubt about myocardial perfusion in other cases (infarction or bypass grafting) a perfusion scan, or equivalent test, should also be carried out;

D. further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

iii. Follow-up should be annual (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It should include a review by a cardiologist, exercise ECG and cardiovascular risk assessment. Additional investigations may be required by the medical assessor of the licensing authority.

A. After coronary artery bypass grafting, a myocardial perfusion scan, or equivalent test, should be performed if there is any indication, and in all cases within 5 years from the procedure.

B. In all cases, coronary angiography should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

iv. Successful completion of the 6-month or subsequent review will allow a fit assessment with an OML.

(l) Rhythm and conduction disturbances

(1) Applicants with significant rhythm or conduction disturbance should undergo evaluation by a cardiologist before a fit assessment with an OML, as necessary, may be considered. Appropriate follow-up should be carried out at regular intervals. Such evaluation should include:

i. exercise ECG to the Bruce protocol or equivalent. Bruce stage 4 should be achieved and no significant abnormality of rhythm or conduction, or evidence of myocardial ischaemia should be demonstrated. Withdrawal of cardioactive medication prior to the test should normally be required;

ii. 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

iii. 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include (equivalent tests may be substituted):

iv. 24-hour ECG recording repeated as necessary;

v. electrophysiological study;

vi. myocardial perfusion imaging;

vii. cardiac magnetic resonance imaging (MRI);

viii. coronary angiogram.

ix. any other investigation deemed necessary by the approved cardiologist after individualised risk assessment

(2) Applicants with frequent or complex forms of supra ventricular or ventricular ectopic complexes require full cardiological evaluation.

(3) Where anticoagulation is needed for a rhythm disturbance, a fit assessment with an OML may be considered if the haemorrhagic risk is acceptable and the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment with an OML may be considered after review by the medical assessor of the licensing authority after a stabilisation period of 3 months.

(4) Ablation

Applicants who have undergone ablation therapy should be assessed as unfit. A fit assessment may be considered following successful catheter ablation and should require an OML for at least one year, unless an electrophysiological study, undertaken at a minimum of 2 months after the ablation, demonstrates satisfactory results. For those whose long-term outcome cannot be assured by invasive or non-invasive testing, an additional period with an OML and/or observation may be necessary.

(5) Supraventricular arrhythmias

Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, should be assessed as unfit. A fit assessment may be considered if cardiological evaluation is satisfactory.

i. Atrial fibrillation/flutter

A. For initial applicants, a fit assessment should be limited to those with a single episode of arrhythmia which is considered by the medical assessor of the licensing authority to be unlikely to recur.

B. For revalidation, applicants may be assessed as fit if cardiological evaluation is satisfactory and the stroke risk is sufficiently low. A fit assessment with an OML may be considered after a period of stable anticoagulation as prophylaxis, after review by the medical assessor of the licensing authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment with an OML may be considered after review by the medical assessor of the licensing authority after a stabilisation period of 3 months.

ii. Applicants with asymptomatic sinus pauses up to 2.5 seconds on resting electrocardiography may be assessed as fit if exercise electrocardiography, echocardiography and 24-hour ambulatory ECG are satisfactory.

iii. Applicants with symptomatic sino-atrial disease should be assessed as unfit.

(6) Mobitz type 2 atrio-ventricular block

Applicants with Mobitz type 2 AV block should require full cardiological evaluation and may be assessed as fit in the absence of distal conducting tissue disease.

(7) Complete right bundle branch block

i. Applicants with complete right bundle branch block should undergo a cardiological evaluation on first presentation. A fit assessment may be considered if there is no underlying pathology.

ii. Applicants with bifascicular block may be assessed as fit with an OML after a satisfactory cardiological evaluation. The OML may be considered for removal if an electrophysiological study demonstrates no infra-Hissian block, or a 3-year period of satisfactory surveillance has been completed.

(8) Complete left bundle branch block

i. A fit assessment may be considered subject to satisfactory cardiological evaluation and a 3-year period with an OML, and without an OML after 3 years of surveillance and satisfactory cardiological evaluation.

ii. Investigation of the coronary arteries is necessary for applicants over age 40.

(9) Ventricular pre-excitation

i. Asymptomatic initial applicants with pre-excitation may be assessed as fit if an electrophysiological study, including adequate drug-induced autonomic stimulation reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded.

ii. Asymptomatic applicants with pre-excitation may be assessed as fit at revalidation with limitation(s) as appropriate. Limitations may not be necessary if an electrophysiological study, including adequate drug-induced autonomic stimulation, reveals no inducible re-entry tachycardia and the existence of multiple accessory pathways is excluded.

(10) Pacemaker

Applicants with a subendocardial pacemaker should be assessed as unfit. A fit assessment with an OML may be considered at revalidation no sooner than 3 months after insertion provided:

i. there is no other disqualifying condition;

ii. a bipolar lead system, programmed in bipolar mode without automatic mode change has been used;

iii. the applicant is not pacemaker dependent; and

iv. the applicant has a follow-up at least every 12 months, including a pacemaker check.

(11) QT prolongation

Applicants with asymptomatic QT prolongation may be assessed as fit with an OML subject to satisfactory cardiological evaluation.

(12) Brugada pattern on electrocardiography

Applicants with a Brugada pattern Type 1 should be assessed as unfit. Applicants with Type 2 or Type 3 may be assessed as fit, with limitations as appropriate, subject to satisfactory cardiological evaluation.

AMC2 MED.B.010 CARDIOVASCULAR SYSTEM

(a) Examination

Exercise electrocardiography

An exercise ECG when required as part of a cardiovascular assessment should be symptom-limited and completed to a minimum of Bruce Stage IV or equivalent.

(b) General

(1) Cardiovascular risk factor assessment

Applicants with an accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should undergo a cardiovascular evaluation by the AeMC or AME.

(2) Cardiovascular assessment

Reporting of resting and exercise electrocardiograms should be by the AME or an accredited specialist.

(c) Peripheral arterial disease

A fit assessment may be considered for an applicant with peripheral arterial disease, or after surgery for peripheral arterial disease, provided there is no significant functional impairment, any vascular risk factors have been reduced to an appropriate level, the applicant is receiving acceptable secondary prevention treatment, and there is no evidence of myocardial ischaemia.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta of less than 5 cm in diameter may be assessed as fit, subject to satisfactory cardiological evaluation. Regular cardiological evaluations should be carried out.

(2) Applicants with an aneurysm of the thoracic or supra-renal abdominal aorta of less than 5 cm in diameter may be assessed as fit with an ORL or OSL, subject to satisfactory cardiological evaluation. Regular follow-up should be carried out.

(3) Applicants may be assessed as fit after surgery for an infra-renal abdominal aortic aneurysm, subject to satisfactory cardiological evaluation. Regular cardiological evaluations should be carried out.

(4) Applicants may be assessed as fit with an ORL or OSL after surgery for a thoracic or supra-renal abdominal aortic aneurysm, subject to satisfactory cardiological evaluation. Regular cardiological evaluations should be carried out.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should undergo further cardiological evaluation.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit.

(3) Aortic valve disease

i. Applicants with a bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated. Follow-up with echocardiography, as necessary, should be determined in consultation with the medical assessor of the licensing authority.

ii. Applicants with aortic stenosis may be assessed as fit provided the left ventricular function is intact and the mean pressure gradient is less than 20 mmHg. Applicants with an aortic valve orifice of more than 1 cm2 and a mean pressure gradient above 20 mmHg, but not greater than 50 mmHg, may be assessed as fit with an ORL or OSL. Follow-up with 2D Doppler echocardiography, as necessary, should be determined in consultation with the medical assessor of the licensing authority in all cases. Alternative measurement techniques with equivalent ranges may be used. Regular cardiological evaluation should be considered. Applicants with a history of systemic embolism or significant dilatation of the thoracic aorta should be assessed as unfit.

iii. Applicants with trivial aortic regurgitation may be assessed as fit. Applicants with a greater degree of aortic regurgitation may be assessed as fit with an OSL. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Follow-up, as necessary, should be determined in consultation with the medical assessor of the licensing authority.

(4) Mitral valve disease

i. Asymptomatic applicants with an isolated mid-systolic click due to mitral leaflet prolapse may be assessed as fit.

ii. Applicants with rheumatic mitral stenosis should be assessed as unfit.

iii. Applicants with minor regurgitation may be assessed as fit. Periodic cardiological review should be determined in consultation with the medical assessor of the licensing authority.

iv. Applicants with moderate mitral regurgitation may be considered as fit with an ORL or OSL if the 2D Doppler echocardiogram demonstrates satisfactory left ventricular dimensions and satisfactory myocardial function is confirmed by exercise electrocardiography. Periodic cardiological review should be determined in consultation with the medical assessor of the licensing authority.

v. Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter or evidence of systolic impairment should be assessed as unfit.

(f) Valvular surgery

(1) Applicants who have undergone cardiac valve replacement or repair may be assessed as fit without limitations subject to satisfactory post-operative cardiological evaluation and if no anticoagulants are needed.

(2) Where anticoagulation is needed after valvular surgery, a fit assessment with an ORL or OSL may be considered after cardiological evaluation if the haemorrhagic risk is acceptable. The review should show that the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. The INR target range should be determined by the type of surgery performed. Applicants

who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence(s) if the INR is within the target range, may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

(g) Thromboembolic disorders

Applicants with arterial or venous thrombosis or pulmonary embolism should be assessed as unfit. A fit assessment with an ORL or OSL may be considered after a period of stable anticoagulation as prophylaxis in consultation with the medical assessor of the licensing authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range and the haemorrhagic risk is acceptable. Applicants who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence(s) if the INR is within the target range may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months. Applicants with pulmonary embolism should also undergo a cardiological evaluation. Following cessation of anticoagulant therapy for any indication, applicants should undergo a re-assessment in consultation with the medical assessor of the licensing authority.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium may be assessed as fit subject to satisfactory cardiological evaluation.

(2) Applicants with a congenital abnormality of the heart, including those who have undergone surgical correction, may be assessed as fit subject to satisfactory cardiological evaluation. Cardiological follow-up may be necessary and should be determined in consultation with the medical assessor of the licensing authority.

(i) Syncope

(1) In the case of a single episode of vasovagal syncope which can be explained and is compatible with flight safety, a fit assessment may be considered.

(2) Applicants with a history of recurrent vasovagal syncope should be assessed as unfit. A fit assessment may be considered after a 6-month period without recurrence, providing cardiological evaluation is satisfactory. Neurological review may be indicated.

(j) Blood pressure

(1) When the blood pressure at examination consistently exceeds 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment, the applicant should be assessed as unfit.

(2) The diagnosis of hypertension requires review of other potential vascular risk factors.

(3) Applicants with symptomatic hypotension should be assessed as unfit.

(4) Anti-hypertensive treatment should be compatible with flight safety.

(5) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that satisfactory control has been achieved and that the treatment is compatible with the safe exercise of the privileges of the applicable licence(s).

(k) Coronary artery disease

(1) Chest pain of uncertain cause requires full investigation.

(2) Applicants with suspected asymptomatic coronary artery disease should undergo cardiological evaluation which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(3) Applicants with evidence of exercise-induced myocardial ischaemia should be assessed as unfit.

(4) After an ischaemic cardiac event, or revascularisation, applicants without symptoms should have reduced cardiovascular risk factors to an appropriate level. Medication, when used to control angina pectoris, is not acceptable. All applicants should be on appropriate secondary prevention treatment.

i. A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available to the AME.

A. There should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction.

B. The whole coronary vascular tree should be assessed as satisfactory by a cardiologist and particular attention should be paid to multiple stenoses and/or multiple revascularisations.

C. Applicants with an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should be assessed as unfit.

ii. At least 6 months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed (equivalent tests may be substituted):

A. an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm disturbance;

B. an echocardiogram showing satisfactory left ventricular function with no important abnormality of wall motion and a satisfactory left ventricular ejection fraction of 50 % or more;

C. in cases of angioplasty/stenting, a myocardial perfusion scan or stress echocardiogram, or equivalent test, which should show no evidence of reversible myocardial ischaemia. If there is doubt about revascularisation in myocardial infarction or bypass grafting, a perfusion scan, or equivalent test, should also be carried out;

D. further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

iii. Periodic follow-up should include a cardiological evaluation.

A. After coronary artery bypass grafting, a myocardial perfusion scan (or equivalent test) should be performed if there is any indication, and in all cases within five years from the procedure for a fit assessment without an OSL, OPL or ORL.

B. In all cases, coronary angiography should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

iv. Successful completion of the six-month or subsequent review will allow a fit assessment. Applicants may be assessed as fit with an ORL or OSL having successfully completed only an exercise ECG.

(5) Applicants with angina pectoris should be assessed as unfit, whether or not it is alleviated by medication.

(l) Rhythm and conduction disturbances

(1) Applicants with significant rhythm or conduction disturbance should undergo cardiological evaluation before a fit assessment may be considered with an ORL or OSL, as appropriate. Such evaluation should include:

i. exercise ECG to the Bruce protocol or equivalent. Bruce stage 4 should be achieved and no significant abnormality of rhythm or conduction, or evidence of myocardial ischaemia should be demonstrated. Withdrawal of cardioactive medication prior to the test should normally be required;

ii. 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

iii. 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include (equivalent tests may be substituted):

iv. 24-hour ECG recording repeated as necessary;

v. electrophysiological study;

vi. myocardial perfusion imaging;

vii. cardiac magnetic resonance imaging (MRI);

viii. coronary angiogram.

ix. any other investigation deemed necessary by the approved cardiologist after individualised risk assessment

(2) Where anticoagulation is needed for a rhythm disturbance, a fit assessment with an ORL or OSL may be considered, if the haemorrhagic risk is acceptable and the anticoagulation is stable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. Applicants who measure their INR on a ‘near patient’ testing

system within 12 hours prior to flight and only exercise the privileges of their licence(s) if the INR is within the target range may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

(3) Ablation

A fit assessment may be considered following successful catheter ablation subject to satisfactory cardiological review undertaken at a minimum of 2 months after the ablation.

(4) Supraventricular arrhythmias

i. Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, may be assessed as fit if cardiological evaluation is satisfactory.

ii. Applicants with atrial fibrillation/flutter may be assessed as fit if cardiological evaluation is satisfactory and the stroke risk is sufficiently low. Where anticoagulation is needed, a fit assessment with an ORL or OSL may be considered after a period of stable anticoagulation as prophylaxis, in consultation with the medical assessor of the licensing authority. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. Applicants who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence(s) if the INR is within the target range may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

iii. Applicants with asymptomatic sinus pauses up to 2.5 seconds on resting electrocardiography may be assessed as fit if cardiological evaluation is satisfactory.

(5) Heart block

i. Applicants with first degree and Mobitz type 1 AV block may be assessed as fit.

ii. Applicants with Mobitz type 2 AV block may be assessed as fit in the absence of distal conducting tissue disease.

(6) Complete right bundle branch block

Applicants with complete right bundle branch block may be assessed as fit with appropriate limitations, such as an ORL, and subject to satisfactory cardiological evaluation.

(7) Complete left bundle branch block

Applicants with complete left bundle branch block may be assessed as fit with appropriate limitations, such as an ORL, and subject to satisfactory cardiological evaluation.

(8) Ventricular pre-excitation

Asymptomatic applicants with ventricular pre-excitation may be assessed as fit with limitation(s) as appropriate, subject to satisfactory cardiological evaluation. Limitations may not be necessary if an electrophysiological study is conducted and the results are satisfactory.

(9) Pacemaker

Applicants with a subendocardial pacemaker should be assessed as unfit. A fit assessment may be considered no sooner than 3 months after insertion, providing:

i. there is no other disqualifying condition;

ii. a bipolar lead system, programmed in bipolar mode without automatic mode change, has been used;

iii. the applicant is not pacemaker dependent; and

iv. the applicant has a follow-up at least every 12 months, including a pacemaker check.

(10) QT prolongation

Applicants with asymptomatic QT prolongation may be assessed as fit with an ORL or OSL subject to satisfactory cardiological evaluation.

(11) Brugada pattern on electrocardiography

Applicants with a Brugada pattern Type 1 should be assessed as unfit. Applicants with Type 2 or Type 3 may be assessed as fit, with limitation(s) as appropriate, subject to satisfactory cardiological evaluation.

(m) Heart or heart/lung transplantation

(1) Applicants who have undergone heart or heart/lung transplantation may be assessed as fit, with appropriate limitation(s) such as an ORL, no sooner than 12 months after transplantation, provided that cardiological evaluation is satisfactory with:

i. no rejection in the first year following transplantation;

ii. no significant arrhythmias;

iii. a left ventricular ejection fraction ≥ 50%;

iv. a symptom limited exercise ECG; and

v. a coronary angiogram if indicated;

(2) Regular cardiological evaluations should be carried out.

GM1 MED.B.010 CARDIOVASCULAR SYSTEM

MITRAL VALVE DISEASE

(a) Minor regurgitation should have evidence of no thickened leaflets or flail chordae and left atrial internal diameter of less than or equal to 4.0 cm.

(b) The following may indicate severe regurgitation:

(1) LV internal diameter (diastole) > 6.0 cm; or

(2) LV internal diameter (systole) > 4.1 cm; or

(3) Left atrial internal diameter > 4.5 cm.

(c) Doppler indices, such as width of jet, backwards extension and whether there is flow reversal in the pulmonary veins may be helpful in assessing severity of regurgitation.

GM2 MED.B.010 CARDIOVASCULAR SYSTEM

VENTRICULAR PRE-EXCITATION

Asymptomatic applicants with pre-excitation may be assessed as fit if they meet the following criteria, which may also indicate a satisfactory electrophysiological evaluation:

(a) refractory period > 300 ms;

(b) no induced atrial fibrillation.

GM3 MED.B.010 CARDIOVASCULAR SYSTEM

ANTICOAGULATION

Applicants taking anticoagulant medication which requires monitoring with INR testing, should measure their INR on a ‘near patient’ testing system within 12 hours prior to flight and the privileges of the applicable licence(s) should only be exercised if the INR is within the target range. The INR result should be recorded and the results should be reviewed at each aero-medical assessment.

GM4 MED.B.010 CARDIOVASCULAR SYSTEM

MITRAL VALVE DISEASE

(a) Minor regurgitation should have evidence of no thickened leaflets or flail chordae and left atrial internal diameter of less than or equal to 4.0 cm.

(b) The following may indicate severe regurgitation:

(1) LV internal diameter (diastole) > 6.0 cm; or

(2) LV internal diameter (systole) > 4.1 cm; or

(3) Left atrial internal diameter > 4.5 cm.

(c) Doppler indices, such as width of jet, backwards extension and whether there is flow reversal in the pulmonary veins may be helpful in assessing severity of regurgitation.

GM5 MED.B.010 CARDIOVASCULAR SYSTEM

VENTRICULAR PRE-EXCITATION

Asymptomatic applicants with pre-excitation may be assessed as fit if they meet the following criteria:

(a) no inducible re-entry tachycardia;

(b) refractory period > 300 ms;

(c) no induced atrial fibrillation;

(d) no evidence of multiple accessory pathways.

GM6 MED.B.010 CARDIOVASCULAR SYSTEM

CARDIOVASCULAR RISK ASSESSMENT

(a) Indication:

(1) Hypertension;

(2) Hyperlipidaemia;

(3) Diabetes;

(4) Smoking;

(5) Obesity and lack of exercise;

(6) Adults 45–74 years without known history of CVD;

(7) Metabolic Syndrome (hypertension, hyperlipidaemia, insulin resistance and truncal obesity);

(8) Obstructive sleep apnoea.

(b) Method for CVD risk assessment

(1) Test required for assessment include but are not limited to lipid profile, check for blood pressure, random blood glucose and HBA1c.

(2) The AME should use internationally recognised calculators/charts/or score cards for the estimation of CHD. If SCORE chart is used for the estimation of CHD risk may be higher than indicated in the chart in:

(i) Sedentary or obese subjects, especially those with central obesity;

(ii) Those with a strong family history of premature CVD;

(iii) Socially deprived individuals and those from some ethnic minorities;

(iv) Individuals with diabetes. The SCORE charts should only be used in those with type 1 diabetes without target-organ damage; other diabetic subjects are already at very high risk;

(v) Those with low HDL cholesterol or increased LDL, triglyceride, fibrinogen, opoB, Lp(a) levels and increased high-sensitivity CRP;

(vi) Asymptomatic subjects with evidence of pre-clinical atherosclerosis, for example plaque on ultrasonography.

(c) Assessing and management of the cardiovascular risks

(1) Risk of CVD less than 10% risk over 10 years (SCORE≤3%):

The medical certificate may be issued without limitation once all modifiable risk factors have been discussed with the applicant. A management strategy should be detailed in the reports to the licensing authority.

(2) Risk of CVD 10-20% over 10 years (SCORE 4-7%):

(i) Modifiable risk factors should be addressed in conjunction with adjustment of current or the addition of approved prevention medications e.g. statins

(ii) After the control of the modifiable risk factors, if the calculated risk remains in the intermediate zone, the extended cardiovascular assessment including exercise electrocardiography or equivalent should be undertaken by an approved cardiologist.

(iii) If cardiac evaluation rules out significant risk of ischemic heart events, the medical certificate may be issued with limitations if necessary, and annual approved cardiology follow up.

(3) Risk of CVD > 20% over 10 years (SCORE≥7%) or presence of diabetes, left ventricular hypertrophy, symptomatic carotid disease (CVA cerebrovascular accident, TIA transient ischemic attacks), or peripheral vascular disease including aneurysm, abnormal tests – ABIs)

(i) The licence holder should be assessed as unfit.

(ii) An approved cardiac consultation will be required with further cardiac evaluation including exercise electrocardiography or equivalent to rule out any significant risk of ischemic heart events changes.

(iii) All the modifiable risk factor should be discussed with the applicant and a management strategy detailed in the report to the licensing authority.

(iv) On satisfactory the medical certificate may be issued with OML restriction and cardiology follow up as detailed by the approved cardiologist.

AMC1 MED.B.015 RESPIRATORY SYSTEM

(a) Examination

(1) Spirometry

A spirometric examination is required for initial examination and on clinical indication. Applicants with an FEV1/FVC ratio of less than 70 % should be evaluated by a specialist in respiratory disease.

(2) Chest radiography

Posterior/anterior chest radiography may be required at initial, revalidation or renewal examinations if clinically or epidemiologically indicated

(b) Chronic obstructive pulmonary disease

Applicants with chronic obstructive pulmonary disease should be assessed as unfit. Applicants with only minor impairment of pulmonary function may be assessed as fit.

(c) Asthma

Applicants with asthma requiring medication or experiencing recurrent attacks of asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with flight safety. Applicants requiring systemic steroids should be assessed as unfit.

(d) Inflammatory disease

For applicants with active inflammatory disease of the respiratory system a fit assessment may be considered when the condition has resolved without sequelae and no medication is required.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Investigation should be undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if no medication is required, and the disease is investigated and shown to be limited to hilar lymphadenopathy and inactive.

(2) Applicants with cardiac or neurological sarcoid should be assessed as unfit.

(f) Pneumothorax

(1) Applicants with a spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered if respiratory evaluation is satisfactory:

i. 1 year following full recovery from a single spontaneous pneumothorax;

ii. at revalidation, 6 weeks following full recovery from a single spontaneous pneumothorax, with an OML for at least a year after full recovery;

iii. following surgical intervention in the case of a recurrent pneumothorax provided there is satisfactory recovery.

(2) Applicants with a recurrent spontaneous pneumothorax that has not been surgically should be assessed as unfit.

(3) A fit assessment following full recovery from a traumatic pneumothorax as a result of an accident or injury may be acceptable once full absorption of the pneumothorax is demonstrated.

(g) Thoracic surgery

(1) Applicants requiring major thoracic surgery should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

(2) A fit assessment following lesser chest surgery may be considered after satisfactory recovery and full respiratory evaluation.

(h) Sleep apnoea syndrome/sleep disorder

Applicants with unsatisfactorily treated sleep apnoea syndrome should be assessed as unfit.

AMC2 MED.B.015 RESPIRATORY SYSTEM

(a) Examination

(1) A spirometric examination should be performed on clinical indication. Applicants with a forced expiratory volume in the first one second (FEV1)/forced vital capacity(FVC)ratio of less than 70 % should be evaluated by a specialist in respiratory disease.

(2) Posterior/anterior chest radiography may be required if clinically or epidemiologically indicated.

(b) Chronic obstructive pulmonary disease

Applicants with only minor impairment of pulmonary function may be assessed as fit.

(c) Asthma

Applicants with asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with flight safety. Applicants requiring systemic steroids should be assessed as unfit.

(d) Inflammatory disease

Applicants with active inflammatory disease of the respiratory system should be assessed as unfit pending resolution of the condition.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Investigation should be undertaken with respect to the possibility of systemic involvement. A fit assessment may be considered once the disease is inactive.

(2) Applicants with cardiac sarcoid should be assessed as unfit.

(f) Pneumothorax

(1) Applicants with spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered if respiratory evaluation is satisfactory:

i. six weeks following full recovery from a single spontaneous pneumothorax;

ii. following surgical intervention in the case of a recurrent pneumothorax, provided there is satisfactory recovery.

(2) A fit assessment following full recovery from a traumatic pneumothorax as a result of an accident or injury may be acceptable once full absorption of the pneumothorax is demonstrated.

(g) Thoracic surgery

Applicants requiring major thoracic surgery should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

(h) Sleep apnoea syndrome

Applicants with unsatisfactorily treated sleep apnoea syndrome should be assessed as unfit.

AMC1 MED.B.020 DIGESTIVE SYSTEM

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

Applicants with pancreatitis should be assessed as unfit pending assessment. A fit assessment may be considered if the cause is removed.

(c) Gallstones

(1) Applicants with a single asymptomatic large gallstone discovered incidentally may be assessed as fit if not likely to cause incapacitation in flight.

(2) Applicants with asymptomatic multiple gallstones may be assessed as fit with an OML.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease should be assessed as fit if the inflammatory bowel disease is in established remission and stable and if systemic steroids are not required for its control.

(e) Peptic ulceration

Applicants with peptic ulceration should be assessed as unfit pending full recovery and demonstrated healing.

(f) Digestive tract and abdominal surgery

Applicants who have undergone a surgical operation for medical conditions of the digestive tract or its adnexa, including a total or partial excision or a diversion of any of these organs or herniae should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic, and there is only a minimal risk of secondary complication or recurrence.

(g) Liver disease

Applicants with morphological or functional liver disease, or after surgery, including liver transplantation, may be assessed as fit subject to satisfactory gastroenterological evaluation.

AMC2 MED.B.020 DIGESTIVE SYSTEM

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

Applicants with pancreatitis should be assessed as unfit pending satisfactory recovery.

(c) Gallstones

(1) Applicants with a single asymptomatic large gallstone or asymptomatic multiple gallstones may be assessed as fit.

(2) Applicants with symptomatic single or multiple gallstones should be assessed as unfit. A fit assessment may be considered following gallstone removal.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit provided that the disease is stable and not likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(e) Peptic ulceration

Applicants with peptic ulceration should be assessed as unfit pending full recovery.

(f) Digestive tract and abdominal surgery

Applicants who have undergone a surgical operation:

(1) for herniae; or

(2) on the digestive tract or its adnexa, including a total or partial excision or diversion of any of these organs should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic, and there is only a minimal risk of secondary complication or recurrence.

(g) Liver disease

Applicants with morphological or functional liver disease, or after surgery, including liver transplantation, may be assessed as fit subject to satisfactory gastroenterological evaluation.

AMC1 MED.B.025 METABOLIC AND ENDOCRINE SYSTEMS

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.

(b) Obesity

Applicants with a Body Mass Index ≥ 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable licence(s) and the results of

a risk assessment, including evaluation of the cardiovascular system and evaluation of the possibility of sleep apnoea, are satisfactory.

(c) Addison's disease

Applicants with Addison's disease should be assessed as unfit. A fit assessment with an OML may be considered, provided that cortisone is carried and available for use whilst exercising the privileges of the applicable licence(s).

(d) Gout

Applicants with acute gout should be assessed as unfit. A fit assessment may be considered once asymptomatic, after cessation of treatment or the condition is stabilised on anti-hyperuricaemic therapy.

(e) Thyroid dysfunction

Applicants with hyperthyroidism or hypothyroidism should be assessed as unfit. A fit assessment may be considered when a stable euthyroid state is attained.

(f) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.

(g) Diabetes mellitus

Subject to good control of blood sugar with no hypoglycaemic episodes:

(1) applicants with diabetes mellitus not requiring medication may be assessed as fit;

(2) the use of antidiabetic medications that are not likely to cause hypoglycaemia may be acceptable for a fit assessment with an OML.

AMC2 MED.B.025 METABOLIC AND ENDOCRINE SYSTEMS

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction should be assessed as unfit. A fit assessment may be considered if the condition is asymptomatic, clinically compensated and stable.

(b) Obesity

Applicants with a Body Mass Index ≥ 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable licence(s) and the results of a risk assessment, including evaluation of the cardiovascular system and evaluation of the possibility of sleep apnoea, are satisfactory.

(c) Addison's disease

Applicants with Addison's disease may be assessed as fit provided that cortisone is carried and available for use whilst exercising the privileges of the applicable licence(s).

(d) Gout

Applicants with acute gout should be assessed as unfit until asymptomatic.

(e) Thyroid dysfunction

Applicants with thyroid disease may be assessed as fit once a stable euthyroid state is attained.

(f) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance is fully controlled by diet and regularly reviewed.

(g) Diabetes mellitus

Applicants with diabetes mellitus may be assessed as fit. The use of antidiabetic medications that are not likely to cause hypoglycaemia may be acceptable.

AMC1 MED.B.030 HAEMATOLOGY

(a) Abnormal haemoglobin

Applicants with abnormal haemoglobin should be investigated.

(b) Anaemia

(1) Applicants with anaemia demonstrated by a reduced haemoglobin level require investigation. Applicants with an haematocrit of less than 32 % should be assessed as unfit. A fit assessment may be considered in cases where the primary cause, such as iron or B12 deficiency, has been treated and the haemoglobin or haematocrit has stabilised at a satisfactory level.

(2) Applicants with anaemia which is unamenable to treatment should be assessed as unfit.

(c) Erythrocytosis

Applicants with erythrocytosis should be assessed as unfit. A fit assessment with an OML may be considered if investigation establishes that the condition is stable and no associated pathology is demonstrated.

(d) Haemoglobinopathy

(1) Applicants with a haemoglobinopathy should be assessed as unfit. A fit assessment may be considered where minor thalassaemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated. The haemoglobin level should be satisfactory.

(2) Applicants with sickle cell disease (homozygote) should be assessed as unfit.

(e) Coagulation disorders

(1) Applicants with a coagulation disorder should be assessed as unfit. A fit assessment may be considered if there is no history of significant bleeding episodes.

(2) Applicants with thrombocytopenia with a platelet count less than 75x109/L should be assessed as unfit. A fit assessment may be considered once the platelet count is above 75x109/L and stable.

(f) Haemorrhagic disorders

Applicants with a haemorrhagic disorder require investigation. A fit assessment with an OML may be considered if there is no history of significant bleeding.

(g) Thromboembolic disorders

(1) Applicants with a thrombotic disorder require investigation. A fit assessment may be considered when the applicant is asymptomatic and there is only minimal risk of secondary complication or recurrence.

(2) If anticoagulation is used as treatment, refer to AMC1 MED.B.010(g).

(3) Applicants with arterial embolus should be assessed as unfit. A fit assessment may be considered once recovery is complete, the applicant is asymptomatic, and there is only minimal risk of secondary complication or recurrence.

(h) Disorders of the lymphatic system

Applicants with significant localised and generalised enlargement of the lymphatic glands or haematological disease should be assessed as unfit and require investigation. A fit assessment may be considered in cases of an acute infectious process which is fully recovered or Hodgkin's lymphoma or other lymphoid malignancy which has been treated and is in full remission.

(i) Leukaemia

(1) Applicants with acute leukaemia should be assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Applicants with chronic leukaemia should be assessed as unfit. After a period of demonstrated stability a fit assessment may be considered.

(3) Applicants with a history of leukaemia should have no history of central nervous system involvement and no continuing side-effects from treatment of flight safety importance. Haemoglobin and platelet levels should be satisfactory. Regular follow-up is required.

(j) Splenomegaly

Applicants with splenomegaly should be assessed as unfit and require investigation. A fit assessment may be considered when the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

AMC2 MED.B.030 HAEMATOLOGY

(a) Abnormal haemoglobin

Haemoglobin should be tested when clinically indicated.

(b) Anaemia

Applicants with anaemia demonstrated by a reduced haemoglobin level or low haematocrit may be assessed as fit once the primary cause has been treated and the haemoglobin or haematocrit has stabilised at a satisfactory level.

(c) Erythrocytosis

Applicants with erythrocytosis may be assessed as fit if the condition is stable and no associated pathology is demonstrated.

(d) Haemoglobinopathy

Applicants with a haemoglobinopathy may be assessed as fit if minor thalassaemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

(e) Coagulation and haemorrhagic disorders

Applicants with a coagulation or haemorrhagic disorder may be assessed as fit if there is no likelihood of significant bleeding.

(f) Thromboembolic disorders

Applicants with a thrombotic disorder may be assessed as fit if there is minimal likelihood of significant clotting episodes. If anticoagulation is used as treatment, refer to AMC2 MED.B.010(g).

(g) Disorders of the lymphatic system

Applicants with significant enlargement of the lymphatic glands or haematological disease may be assessed as fit if the condition is unlikely to interfere with the safe exercise of the privileges of the applicable licence(s). Applicants may be assessed as fit in cases of acute infectious process which is fully recovered or Hodgkin's lymphoma or other lymphoid malignancy which has been treated and is in full remission.

(h) Leukaemia

(1) Applicants with acute leukaemia may be assessed as fit once in established remission.

(2) Applicants with chronic leukaemia may be assessed as fit after a period of demonstrated stability.

(3) In cases (h)(1) and (h)(2), there should be no history of central nervous system involvement and no continuing side effects from treatment of flight safety importance. Haemoglobin and platelet levels should be satisfactory. Regular follow-up is required.

(i) Splenomegaly

Applicants with splenomegaly may be assessed as fit if the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

AMC1 MED.B.035 GENITOURINARY SYSTEM

(a) Abnormal urinalysis

Investigation is required if there is any abnormal finding on urinalysis.

(b) Renal disease

(1) Applicants presenting with any signs of renal disease should be assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable.

(2) Applicants requiring dialysis should be assessed as unfit.

(c) Urinary calculi

(1) Applicants with an asymptomatic calculus or a history of renal colic require investigation.

(2) Applicants presenting with one or more urinary calculi should be assessed as unfit and require investigation.

(3) Whilst awaiting assessment or treatment, a fit assessment with an OML may be considered.

(4) After successful treatment for a calculus a fit assessment without an OML may be considered.

(5) Applicants with parenchymal residual calculi may be considered for a fit assessment with an OML.

(d) Renal and urological surgery

(1) Applicants who have undergone a major surgical operation on the genitourinary system or its adnexa involving a total or partial excision or a diversion of any of its organs, should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

(2) After other urological surgery, a fit assessment may be considered when the applicant is completely asymptomatic and there is only minimal risk of secondary complication or recurrence.

(3) Applicants with compensated nephrectomy without hypertension or uraemia may be considered for a fit assessment.

(4) Applicants who have undergone renal transplantation may be considered for a fit assessment with an OML if it is fully compensated and tolerated with only minimal immuno-suppressive therapy after at least 12 months.

(5) Applicants who have undergone total cystectomy may be considered for a fit assessment with an OML if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

AMC2 MED.B.035 GENITOURINARY SYSTEM

(a) Renal disease

Applicants presenting with renal disease may be assessed as fit if blood pressure is satisfactory and renal function is acceptable. Applicants requiring dialysis should be assessed as unfit.

(b) Urinary calculi

(1) Applicants presenting with one or more urinary calculi should be assessed as unfit.

(2) Applicants with an asymptomatic calculus or a history of renal colic require investigation.

(3) While awaiting assessment or treatment, a fit assessment with an OSL may be considered.

(4) After successful treatment the applicant may be assessed as fit.

(5) Applicants with parenchymal residual calculi may be assessed as fit.

(c) Renal and urological surgery

(1) Applicants who have undergone a major surgical operation on the genitourinary system or its adnexa involving a total or partial excision or a diversion of any of its organs, should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

(2) After other urological surgery, a fit assessment may be considered when the applicant is completely asymptomatic and there is only minimal risk of secondary complication or recurrence.

(3) Applicants with compensated nephrectomy without hypertension or uraemia may be assessed as fit.

(4) Applicants who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and with only minimal immuno-suppressive therapy.

(5) Applicants who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

AMC1 MED.B.040 INFECTIOUS DISEASE

(a) Infectious disease General

In cases of infectious disease, consideration should be given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(b) Tuberculosis

(1) Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered following completion of therapy.

(2) Applicants with quiescent or healed lesions may be assessed as fit. Specialist evaluation should consider the extent of the disease, the treatment required and possible side effects of medication.

(c) Syphilis

Applicants with acute syphilis should be assessed as unfit. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(d) (d) HIV positivity

(1) Applicants who are HIV positive may be assessed as fit with an OML if a full investigation provides no evidence of HIV associated diseases that might give rise to

incapacitating symptoms. Frequent review of the immunological status and neurological evaluation by an appropriate specialist should be carried out. A cardiological evaluation may also be required, depending on the medication.

(2) Applicants with signs or symptoms of an AIDS-defining condition should be assessed as unfit.

(e) Infectious hepatitis

Applicants with infectious hepatitis should be assessed as unfit. A fit assessment may be considered once the applicant has become asymptomatic. Regular review of the liver function should be carried out.

AMC2 MED.B.040 INFECTIOUS DISEASE

(a) Tuberculosis

(1) Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered following completion of therapy.

(2) Applicants with quiescent or healed lesions may be assessed as fit. Specialist evaluation should consider the extent of the disease, the treatment required and possible side effects of medication.

(b) HIV positivity

(1) Applicants who are HIV positive may be assessed as fit if a full investigation provides no evidence of HIV associated diseases that might give rise to incapacitating symptoms. Frequent review of the immunological status and neurological evaluation by an appropriate specialist should be carried out. A cardiological evaluation may be required, depending on the medication.

(2) Applicants with signs or symptoms of an AIDS-defining condition should be assessed as unfit.

AMC1 MED.B.045 OBSTETRICS AND GYNAECOLOGY

(a) Gynaecological surgery

Applicants who have undergone a major gynaecological operation should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic, and the risk of

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit with an OML during the first 26 weeks of gestation following review of the obstetric evaluation by the AeMC or AME who should inform the medical assessor of the licensing authority.

(2) The AeMC or AME should provide written advice to the applicant and the supervising physician regarding potentially significant complications of pregnancy.

AMC2 MED.B.045 OBSTETRICS AND GYNAECOLOGY

(a) Gynaecological surgery

Applicants who have undergone a major gynaecological operation should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication or recurrence is minimal.

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit during the first 26 weeks of gestation following satisfactory obstetric evaluation.

(2) Licence privileges may be resumed upon satisfactory confirmation of full recovery following confinement or termination of pregnancy.

AMC1 MED.B.050 MUSCULOSKELETAL SYSTEM

(a) Applicants with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery require full evaluation prior to a fit assessment.

(b) Applicants with inflammatory, infiltrative, traumatic or degenerative disease of the musculoskeletal system may be assessed as fit, provided the condition is in remission or is stable and the applicant is taking no disqualifying medication and has satisfactorily completed a medical flight or simulator flight test. Appropriate limitation(s) apply.

(c) Applicants with abnormal musculoskeletal system, including obesity, undertaking medical fight or flight simulator testing should satisfactorily perform all tasks required for the type of flight intended, including the emergency and evacuation procedures.

AMC2 MED.B.050 MUSCULOSKELETAL SYSTEM

(a) Applicants with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery should require full evaluation prior to a fit assessment.

(b) Applicants with inflammatory, infiltrative, traumatic or degenerative disease of the musculoskeletal system may be assessed as fit provided the condition is in remission or is stable and the applicant is taking no disqualifying medication and has satisfactorily completed a medical flight test. Appropriate limitation(s) may apply.

(c) Applicants with abnormal musculoskeletal system, including obesity, undertaking a medical flight test should satisfactorily perform all tasks required for the type of flight intended, including the emergency and evacuation procedures.

AMC1 MED.B.055 MENTAL HEALTH

(a) Mental health assessment as part of the initial class 1 aero-medical examination

(1) A comprehensive mental health assessment should be conducted and recorded taking into account social, environmental and cultural contexts.

(2) The applicant's history and symptoms of disorders that might pose a threat to flight safety should be identified and recorded.

(3) The mental health assessment should include assessment and documentation of:

i. general attitudes to mental health, including understanding possible indications of reduced mental health in themselves and others;

ii. coping strategies under periods of psychological stress or pressure in the past, including seeking advice from others;

iii. childhood behavioural problems;

iv. interpersonal and relationship issues;

v. current work and life stressors; and

vi. overt personality disorders.

(4) Where there are signs or is established evidence that an applicant may have a psychiatric or psychological disorder, the applicant should be referred for specialist opinion and advice.

(b) Mental health assessment as part of revalidation or renewal class 1 medical examination

(1) The assessment should include review and documentation of:

i. current work and life stressors;

ii. coping strategies under periods of psychological stress or pressure in the past, including seeking advice from others;

iii. any difficulties with operational crew resource management (CRM);

iv. any difficulties with employer and/or other colleagues and managers; and

v. interpersonal and relationship issues, including difficulties with relatives, friends, and work colleagues.

(2) Where there are signs or is established evidence that an applicant may have a psychiatric or psychological disorder, the applicant should be referred for specialist opinion and advice.

(3) Established evidence should be verifiable information from an identifiable source related to the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or proficiency checks, behaviour or knowledge relevant to the safe exercise of the privileges of the applicable licence(s).

(c) Assessment of holders of a class 1 medical certificate referenced in MED.B.055(d)

Assessment of holders of a class 1 medical certificate referenced in MED.B.055(d) may require psychiatric and psychological evaluation as determined by the medical assessor of the licensing authority. A SIC limitation should be imposed in case of a fit assessment. Follow-up and removal of SIC limitation, as necessary, should be determined by the medical assessor of the licensing authority.

(d) Psychoactive substance testing

(1) Drug tests should screen for opioids, cannabinoids, amphetamines, cocaine, hallucinogens and sedative hypnotics. Following a risk assessment performed by the competent authority on the target population, screening tests may include additional drugs.

(2) For renewal/revalidation, random psychoactive substance screening test may be performed based on the risk assessment by the competent authority on the target

population. If random psychoactive substance screening test is considered, it should be performed and reported in accordance with the procedures developed by the competent authority.

(3) In the case of a positive psychoactive substance screening result, confirmation should be required in accordance with national standards and procedures for psychoactive substance testing.

(4) In case of a positive confirmation test, a psychiatric evaluation should be undertaken before a fit assessment may be considered by the medical assessor of the licensing authority.

(e) Assessment and referral decisions

(1) Psychotic disorder

Applicants with a history, or the occurrence, of a functional psychotic disorder should be assessed as unfit. A fit assessment may be considered if a cause can be unequivocally identified as one which is transient, has ceased and the risk of recurrence is minimal.

(2) Organic mental disorder

Applicants with an organic mental disorder should be assessed as unfit. Once the cause has been treated, an applicant may be assessed as fit following satisfactory psychiatric evaluation.

(3) Psychoactive medication

Applicants who use psychoactive medication likely to affect flight safety should be assessed as unfit. If stability on maintenance psychoactive medication is confirmed, a fit assessment with an OML may be considered. If the dosage or type of medication is changed, a further period of unfit assessment should be required until stability is confirmed.

(4) Schizophrenia, schizotypal or delusional disorder

Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder may only be considered for a fit assessment if the medical assessor of the licensing authority concludes that the original diagnosis was inappropriate or inaccurate as confirmed by psychiatric evaluation, or, in the case of a single episode of delirium of which the cause was clear, provided that the applicant has suffered no permanent mental impairment.

(5) Mood disorder

Applicants with an established mood disorder should be assessed as unfit. After full recovery and after full consideration of the individual case, a fit assessment may be considered, depending on the characteristics and severity of the mood disorder.

(6) Neurotic, stress-related or somatoform disorder

Where there are signs or is established evidence that an applicant may have a neurotic, stress-related or somatoform disorder, the applicant should be referred for psychiatric or psychological opinion and advice.

(7) Personality or behavioural disorders

Where there are signs or is established evidence that an applicant may have a personality or behavioural disorder, the applicant should be referred for psychiatric or psychological opinion and advice.

(8) Disorders due to alcohol or other psychoactive substance(s) use or misuse

i. Applicants with mental or behavioural disorders due to alcohol or other psychoactive substance(s) use or misuse, with or without dependency, should be assessed as unfit.

ii. A fit assessment may be considered after a period of two years of documented sobriety or freedom from psychoactive substance use or misuse. At revalidation or renewal, a fit assessment may be considered earlier with an OML. Depending on the individual case, treatment and evaluation may include in-patient treatment of some weeks and inclusion into a support programme followed by ongoing checks, including drug and alcohol testing and reports resulting from the support programme, which may be required indefinitely.

(9) Deliberate self-harm and suicide attempt

Applicants who have carried out a single self-destructive action or repeated acts of deliberate self-harm or suicide attempt should be assessed as unfit. A fit assessment may be considered after full consideration of an individual case and may require psychiatric or psychological evaluation. Neuropsychological evaluation may also be required.

(10) Assessment

The assessment should take into consideration if the indication for the treatment, side effects and addiction risks of such treatment and the characteristics of the psychiatric disorder are compatible with flight safety.

(f) Specialist opinion and advice

(1) In case a specialist evaluation is needed, following the evaluation, the specialist should submit a written report to the AME, AeMC or medical assessor of the licensing authority as appropriate, detailing their opinion and recommendation.

(2) Psychiatric evaluations should be conducted by a qualified psychiatrist having adequate knowledge and experience in aviation medicine.

(3) The psychological opinion and advice should be based on a clinical psychological assessment conducted by a suitably qualified and accredited clinical psychologist with expertise and experience in aviation psychology.

(4) The psychological evaluation may include a collection of biographical data, the administration of aptitude as well as personality tests and clinical interview.

AMC2 MED.B.055 MENTAL HEALTH

(a) Mental health assessment as part of class 2 aero-medical examination

(1) A mental health assessment should be conducted and recorded taking into account social, environmental and cultural contexts.

(2) The applicant's history and symptoms of disorders that might pose a threat to flight safety should be identified and recorded.

(3) Where there are signs or is established evidence that an applicant may have a psychiatric or psychological disorder, the applicant should be referred for specialist opinion and advice.

(4) Established evidence should be verifiable information from an identifiable source related to the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or proficiency checks, behaviour or knowledge relevant to the safe exercise of the privileges of the applicable licence(s).

(b) Assessment of holders of a class 2medical certificate referenced in MED.B.055(d)

Assessment of holders of a class 2 medical certificate referenced in MED.B.055(d) may require psychiatric and psychological evaluation as determined by the AME, AeMC or medical assessor of the licensing authority. Follow-up, as necessary, should be determined in consultation with the medical assessor of the licensing authority.

(c) Assessment and referral decisions

(1) Psychotic disorder

Applicants with a history, or the occurrence, of a functional psychotic disorder should be assessed as unfit. A fit assessment may be considered if a cause can be unequivocally identified as one which is transient, has ceased and the risk of recurrence is minimal.

(2) Organic mental disorder

Applicants with an organic mental disorder should be assessed as unfit. Once the cause has been treated, an applicant may be assessed as fit following satisfactory psychiatric evaluation.

(3) Schizophrenia, schizotypal or delusional disorder

Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder may only be considered for a fit assessment in consultation with the medical assessor of the licensing authority if the original diagnosis was inappropriate or inaccurate as confirmed by psychiatric evaluation, or, in the case of a single episode of delirium of which the cause was clear, provided that the applicant has suffered no permanent mental impairment.

(4) Mood disorder

Applicants with an established mood disorder should be assessed as unfit. After full recovery and after full consideration of the individual case, a fit assessment may be considered, depending on the characteristics and severity of the mood disorder.

(5) Neurotic, stress-related or somatoform disorder

Where there are signs or is established evidence that an applicant may have a neurotic, stress-related or somatoform disorder, the applicant should be referred for psychiatric opinion and advice.

(6) Personality or behavioural disorders

Where there are signs or is established evidence that an applicant may have a personality or behavioural disorder, the applicant should be referred for psychiatric opinion and advice.

(7) Psychoactive medication

Applicants who use psychoactive medication likely to affect flight safety should be assessed as unfit. If stability on maintenance psychoactive medication is confirmed, a fit assessment with an OSL or OPL may be considered. If the dosage or type of medication is changed, a further period of unfit assessment should be required until stability is confirmed.

(8) Disorders due to alcohol or other psychoactive substance(s) use or misuse

i. Applicants with mental or behavioural disorders due to alcohol or other psychoactive substance(s) use or misuse, with or without dependency, should be assessed as unfit.

ii. Drug and alcohol tests

A. In the case of a positive drug or alcohol result, confirmation should be required in accordance with national procedures for drugs and alcohol testing.

B. In case of a positive confirmation test, a psychiatric evaluation should be undertaken before a fit assessment may be considered.

iii. A fit assessment may be considered after a period of two years of documented sobriety or freedom from psychoactive substance use or misuse. At revalidation or renewal, a fit assessment may be considered earlier with an OSL or OPL. Depending on the individual case, treatment and evaluation may include in-patient treatment of some weeks and inclusion into a support programme followed by ongoing checks, including drug and alcohol testing and reports resulting from the support programme, which may be required indefinitely.

(d) Deliberate self-harm

Applicants who have carried out a single self-destructive action or repeated acts of deliberate self-harm or suicide attempt should be assessed as unfit. A fit assessment may be considered after full consideration of an individual case and may require psychiatric or psychological evaluation. Neuropsychological evaluation may also be required.

(e) Specialist opinion and advice

(1) In case a specialist evaluation is needed, following the evaluation, the specialist should submit a written report to the AME, AeMC or medical assessor of the licensing authority as appropriate, detailing their opinion and recommendation.

(2) Psychiatric evaluations should be conducted by a qualified psychiatrist having adequate knowledge and experience in aviation medicine.

(3) The psychological opinion and advice should be based on a clinical psychological assessment conducted by a suitably qualified and accredited clinical psychologist with expertise and experience in aviation psychology.

(4) The psychological evaluation may include a collection of biographical data, the administration of aptitude as well as personality tests and clinical interview.

GM1 MED.B.055 MENTAL HEALTH

(a) Symptoms of concern may include but are not limited to:

(1) use of alcohol or other psychoactive substances;

(2) loss of interest/energy;

(3) eating and weight changes;

(4) sleeping problems;

(5) low mood and, if present, any suicidal thoughts;

(6) family history of psychiatric disorders, particularly suicide;

(7) anger, agitation or high mood; and

(8) depersonalisation or loss of control.

(b) The following aspects should be taken into consideration when conducting the mental health examination:

(1) Appearance;

(2) Attitude;

(3) Behaviour;

(4) Mood;

(5) Speech;

(6) Thoughts process and content;

(7) Perception;

(8) Cognition;

(9) Insight; and

(10) Judgement.

GM2 MED.B.055 MENTAL HEALTH

(a) Drugs and alcohol screening tests used should:

(1) provide information regarding medium-term consumption;

(2) be accepted on national level by the competent authority based on the availability and suitability for the scope mentioned in point(a)(1) above.

(b) Statistical data of the screening campaign mentioned in AMC1 MED.B.055(d)(1) should be made available to the Agency on a yearly basis.

GM3 MED.B.055 MENTAL HEALTH

(a) The mental health assessment for class 2 applicants should include assessment and documentation of:

(1) general attitudes to mental health, including understanding possible indications of reduced mental health in themselves and others;

(2) coping strategies under periods of psychological stress or pressure in the past, including seeking advice from others;

(3) childhood behavioural problems;

(4) interpersonal and relationship issues, including difficulties with relatives, friends, and work colleagues;

(5) current work and life stressors, including difficulties with aviation operational environment; and

(6) overt personality disorders.

(b) In regard to symptoms of concern and aspects to be taken into consideration when conducting mental health examination for class 2 applicants, guidance presented in GM1 MED.B.055 should be used.

GM4 MED.B.055 MENTAL HEALTH

Drugs and alcohol screening tests used should:

(a) provide information regarding medium-term consumption;

(b) be accepted on national level by the competent authority based on the availability and suitability with the scope mentioned in GM2 MED.B.055(a) above.

AMC1 MED.B.065 NEUROLOGY

(a) Epilepsy

(1) Applicants with a diagnosis of epilepsy should be assessed as unfit unless there is unequivocal evidence of a syndrome of benign childhood epilepsy associated with a very low risk of recurrence, and unless the applicant has been free of recurrence and off treatment for more than 10 years. One or more convulsive episode after the age of 5 should lead to unfitness. In the case of an acute symptomatic seizure, which is considered to have a very low risk of recurrence, a fit assessment may be considered after neurological evaluation.

(2) Applicants may be assessed as fit with an OML if:

i. there is a history of a single afebrile epileptiform seizure;

ii. there has been no recurrence after at least 10 years off treatment;

iii. there is no evidence of continuing predisposition to epilepsy.

(b) EEG

(1) Electroencephalography is required when indicated by the applicant's history or on clinical grounds.

(2) Applicants with epileptiform paroxysmal EEG abnormalities and focal slow waves should be assessed as unfit.

(c) Neurological disease

Applicants with any disease of the nervous system which is likely to cause a hazard to flight safety should be assessed as unfit. However, in certain cases, including cases of minor functional losses associated withstable disease, a fit assessment may be considered after full evaluation which should include a medical flight test which may be conducted in a flight simulation training device.

(d) Migraine

Applicants with an established diagnosis of migraine or other severe periodic headaches likely to cause a hazard to flight safety should be assessed as unfit. A fit assessment may be considered after full evaluation. The evaluation should take into account at least the following: auras, visual field loss, frequency, severity, therapy. Appropriate limitation(s) may apply.

(e) Episode of disturbance of consciousness

In the case of a single episode of disturbance of consciousness, which can be satisfactorily explained, a fit assessment may be considered, but applicants experiencing a recurrence should be assessed as unfit.

(f) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury should be evaluated by a neurologist. A fit assessment may be considered if there has been a full recovery and the risk of epilepsy is sufficiently low.

(g) Spinal or peripheral nerve injury

Applicants with a history or diagnosis of spinal or peripheral nerve injury or a disorder of the nervous system due to a traumatic injury should be assessed as unfit. A fit assessment may be considered if neurological evaluation is satisfactory and the conditions of AMC1 MED.B.050 are satisfied.

(h) Vascular deficiencies

Applicants with a disorder of the nervous system due to vascular deficiencies including haemorrhagic and ischaemic events should be assessed as unfit. A fit assessment may be considered if neurological evaluation is satisfactory and the conditions of AMC1 MED.B.050 are satisfied. A cardiological evaluation and medical flight test should be undertaken for applicants with residual deficiencies.

AMC2 MED.B.065 NEUROLOGY

(a) Epilepsy

Applicants may be assessed as fit if:

(1) there is a history of a single afebrile epileptiform seizure, considered to have a very low risk of recurrence;

(2) there has been no recurrence after at least 10 years off treatment; and

(3) there is no evidence of continuing predisposition to epilepsy.

(b) Neurological disease

Applicants with any disease of the nervous system which is likely to cause a hazard to flight safety should be assessed as unfit. However, in certain cases, including cases of functional loss associated with stable disease, a fit assessment may be considered after full evaluation which should include a medical flight test which may be conducted in a flight simulation training device.

(c) Migraine

Applicants with an established diagnosis of migraine or other severe periodic headaches likely to cause a hazard to flight safety should be assessed as unfit. A fit assessment may be considered after full evaluation. The evaluation should take into account at least the following: auras, visual field loss, frequency, severity, and therapy. Appropriate limitation(s) may apply.

(d) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury may be assessed as fit if there has been a full recovery and the risk of epilepsy is sufficiently low. An evaluation by a neurologist may be required depending on the staging of the original injury.

(e) Spinal or peripheral nerve injury

Applicants with a history or diagnosis of spinal or peripheral nerve injury or a disorder of the nervous system due to a traumatic injury should be assessed as unfit. A fit assessment may be considered if neurological evaluation is satisfactory and the conditions of AMC2 MED.B.050 are satisfied.

(f) Vascular deficiencies

Applicants with a disorder of the nervous system due to vascular deficiencies including haemorrhagic and ischaemic events should be assessed as unfit. A fit assessment may be considered if neurological evaluation is satisfactory and the provisions of AMC2 MED.B.050 are met. A cardiological evaluation and medical flight test should be undertaken for applicants with residual deficiencies.

AMC1 MED.B.070 VISUAL SYSTEM

(a) Eye examination

(1) At each aero-medical examination, an assessment of the visual fitness should be undertaken and the eyes should be examined with regard to possible pathology.

(2) All abnormal and doubtful cases should be referred to an ophthalmologist. Conditions which indicate ophthalmological examination include but are not limited to a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury, or eye surgery.

(3) Where specialist ophthalmological examinations are required for any significant reason, this should be imposed as a limitation on the medical certificate.

(4) The possible cumulative effect of more than one eye condition should be evaluated by an ophthalmologist.

(b) Comprehensive eye examination

A comprehensive eye examination by an eye specialist is required at the initial examination. All abnormal and doubtful cases should be referred to an ophthalmologist. The examination should include:

(1) history;

(2) visual acuities near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media (slit lamp) and fundoscopy;

(4) ocular motility;

(5) binocular vision;

(6) visual fields;

(7) tonometry on clinical indication;

(8) objective refraction: hyperopic initial applicants with a hyperopia of more than +2 dioptres and under the age of 25 should undergo objective refraction in cycloplegia;

(9) assessment of mesopic contrast sensitivity; and

(10) colour vision.

(c) Routine eye examination

A routine eye examination may be performed by an AME and should include:

(1) history;

(2) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media and fundoscopy; and

(4) further examination on clinical indication.

(d) Refractive error and anisometropia

(1) Applicants with the following conditions may be assessed as fit subject to satisfactory ophthalmic evaluation and provided that optimal correction has been considered and no significant pathology is demonstrated:

i. hypermetropia not exceeding +5.0 dioptres;

ii. myopia not exceeding –6.0 dioptres;

iii. astigmatism not exceeding 2.0 dioptres;

iv. anisometropia not exceeding 2.0 dioptres.

(2) Applicants should wear contact lenses if:

i. hypermetropia exceeds +5.0 dioptres;

ii. anisometropia exceeds 3.0 dioptres.

(3) An evaluation by an eye specialist should be undertaken 5-yearly if:

i. the refractive error is between –3.0 and –6.0 dioptres or +3 and +5 dioptres;

ii. astigmatism or anisometropia is between 2.0 and 3.0 dioptres.

(4) An evaluation by an eye specialist should be undertaken 2-yearly if:

i. the refractive error is greater than –6.0 dioptres or +5.0 dioptres;

ii. astigmatism or anisometropia exceeds 3.0 dioptres.

(e) Uncorrected visual acuity

No limits apply to uncorrected visual acuity.

(f) Visual acuity

(1) Reduced vision in one eye or monocularity: Applicants for revalidation or renewal with reduced central vision or acquired loss of vision in one eye may be assessed as fit with an OML if:

i. the binocular visual field or, in the case of monocularity, the monocular visual field is acceptable;

ii. in the case of monocularity, a period of adaptation time has passed from the known point of visual loss, during which the applicant should be assessed as unfit;

iii. the unaffected eye achieves distant visual acuity of 6/6 (1,0) corrected or uncorrected;

iv. the unaffected eye achieves intermediate visual acuity of N14 and N5 for near;

v. the underlying pathology is acceptable according to ophthalmological assessment and there is no significant ocular pathology in the unaffected eye; and

vi. a medical flight test is satisfactory.

(2) Visual fields

Applicants with a visual field defect, who do not have reduced central vision or acquired loss of vision in one eye, may be assessed as fit if the binocular visual field is normal.

(g) Keratoconus

Applicants with keratoconus may be assessed as fit if the visual requirements are met with the use of corrective lenses and periodic evaluation is undertaken by an ophthalmologist.

(h) Binocular function

Applicants with heterophoria (imbalance of the ocular muscles) exceeding:

(1) at 6 metres:

2.0 prism dioptres in hyperphoria,

10.0 prism dioptres in esophoria,

8.0 prism dioptres in exophoria

and

(2) at 33 centimetres:

1.0 prism dioptre in hyperphoria,

8.0 prism dioptres in esophoria,

12.0 prism dioptres in exophoria

should be assessed as unfit. A fit assessment may be considered if an orthoptic evaluation demonstrates that the fusional reserves are sufficient to prevent asthenopia and diplopia.

(i) Eye surgery

The assessment after eye surgery should include an ophthalmological examination.

(1) After refractive surgery, a fit assessment may be considered, provided that:

i. stability of refraction of less than 0.75 dioptres variation diurnally has been achieved;

ii. examination of the eye shows no post-operative complications;

iii. glare sensitivity is within normal standards;

iv. mesopic contrast sensitivity is not impaired;

v. an evaluation is undertaken by an eye specialist.

(2) Following intraocular lens surgery, including cataract surgery, a fit assessment may be considered once recovery is complete and the visual requirements are met with or without correction. Intraocular lenses should be monofocal and should not impair colour vision and night vision.

(3) Retinal surgery entails unfitness. A fit assessment may be considered 6 months after surgery, or earlier if recovery is complete. A fit assessment may also be considered earlier after retinal laser therapy. Regular follow-up by an ophthalmologist should be carried out.

(4) Glaucoma surgery entails unfitness. A fit assessment may be considered 6 months after surgery or earlier if recovery is complete. Regular follow-up by an ophthalmologist should be carried out.

(j) Visual correction

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

AMC2 MED.B.070 VISUAL SYSTEM

(a) Eye examination

(1) At each aero-medical revalidation examination an assessment of the visual fitness of the applicant should be undertaken and the eyes should be examined with regard to possible pathology. Conditions which indicate further ophthalmological examination include but are not limited to a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury, or eye surgery.

(2) At the initial assessment, the examination should include:

i. history;

ii. visual acuities near, intermediate and distant vision (uncorrected and with best optical correction if needed);

iii. examination of the external eye, anatomy, media and fundoscopy;

iv. ocular motility;

v. binocular vision;

vi. visual fields;

vii. colour vision;

viii. further examination on clinical indication.

(3) At the initial assessment the applicant should submit a copy of the recent spectacle prescription if visual correction is required to meet the visual requirements.

(b) Routine eye examination

A routine eye examination should include:

(1) history;

(2) visual acuities - near, intermediate and distant vision (uncorrected and with best optical correction if needed);

(3) examination of the external eye, anatomy, media and fundoscopy;

(4) further examination on clinical indication.

(c) Visual acuity

Reduced vision in one eye or monocularity: Applicants with reduced vision or loss of vision in one eye may be assessed as fit if:

(1) the binocular visual field or, in the case of monocularity, the monocular visual field is acceptable;

(2) in the case of monocularity, a period of adaptation time has passed from the known point of visual loss, during which the applicant should be assessed as unfit;

(3) the unaffected eye achieves distant visual acuity of 6/6 (1,0), corrected or uncorrected;

(4) the unaffected eye achieves intermediate visual acuity of N14 or equivalent and N5 or equivalent for near (Refer to GM1 MED.B.070);

(5) there is no significant ocular pathology in the unaffected eye; and

(6) a medical flight test is satisfactory.

(d) Binocular function

Reduced stereopsis, abnormal convergence not interfering with near vision and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may be acceptable.

(e) Eye surgery

(1) The assessment after eye surgery should include an ophthalmological examination.

(2) After refractive surgery a fit assessment may be considered provided that there is satisfactory stability of refraction, there are no post-operative complications and no increase in glare sensitivity.

(3) After cataract, retinal or glaucoma surgery a fit assessment may be considered once recovery is complete and the visual requirements are met with or without correction.

(f) Visual correction

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

GM1 MED.B.070 VISUAL SYSTEM

COMPARISON OF DIFFERENT READING CHARTS (APPROXIMATE FIGURES)

(a) Test distance: 40 cm

Decimal	Nieden	Jäger	Snellen	N	Parinaud
1,0	1	2	1,5	3	2
0,8	2	3	2	4	3
0,7	3	4	2,5		
0,6	4	5	3	5	4
0,5	5	5		6	5
0,4	7	9	4	8	6
0,35	8	10	4,5		8
0,32	9	12	5,5	10	10
0,3	9	12		12	
0,25	9	12		14	
0,2	10	14	7,5	16	14
0,16	11	14	12	20	

(b) Test distance: 80 cm

Decimal	Nieden	Jäger	Snellen	N	Parinaud
1,2	4	5	3	5	4
1,0	5	5		6	5
0,8	7	9	4	8	6
0,7	8	10	4,5		8
0,63	9	12	5,5	10	10
0,6	9	12		12	10
0,5	9	12		14	10
0,4	10	14	7,5	16	14
0,32	11	14	12	20	14

GM2 MED.B.070 VISUAL SYSTEM

EYE SPECIALIST

The term 'eye specialist' refers to an ophthalmologist or a vision care specialist qualified in optometry and trained to recognise pathological conditions.

AMC1 MED.B.075 COLOUR VISION

(a) At revalidation and renewal examinations, colour vision should be tested on clinical indication.

(b) The Ishihara test (24 plate version) is considered passed if the first 15 plates, presented in a random order, are identified without error.

(c) Those failing the Ishihara test should be examined either by:

(1) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is 4 scale units or less, or if the anomalous quotient is acceptable; or by

(2) lantern testing with a Spectrolux, Beynes or Holmes-Wright lantern. This test is considered passed if the applicant passes without error a test with accepted lanterns.

(3) Colour Assessment and Diagnosis (CAD) test. This test is considered passed if the threshold is less than 6 standard normal (SN) units for deutan deficiency, or less than 12 SN units for protan deficiency. A threshold greater than 2 SN units for tritan deficiency indicates an acquired cause which should be investigated.

AMC2 MED.B.075 COLOUR VISION

(a) Colour vision should be tested on clinical indication at revalidation and renewal examinations.

(b) The Ishihara test (24 plate version) is considered passed if the first 15 plates, presented in a random order, are identified without error.

(c) Those failing the Ishihara test should be examined either by:

(1) anomaloscopy (Nagel or equivalent). This test is considered passed if the colour match is trichromatic and the matching range is 4 scale units or less, or if the anomalous quotient is acceptable; or by

(2) lantern testing with a Spectrolux, Beynes or Holmes-Wright lantern. This test is considered passed if the applicant passes without error a test with accepted lanterns.

(3) Colour Assessment and Diagnosis (CAD) test. This test is considered passed if the threshold is less than 6 standard normal (SN) units for deutan deficiency, or less than 12 SN units for protan deficiency. A threshold greater than 2 SN units for tritan deficiency indicates an acquired cause which should be investigated.

AMC1 MED.B.080 OTORHINOLARYNGOLOGY (ENT)

(a) Hearing

(1) Applicants should understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with the applicant's back turned towards the AME.

(2) Applicants with hypoacusis may be assessed as fit if a speech discrimination test or functional flight deck hearing test demonstrates satisfactory hearing ability. A vestibular function test may be appropriate.

(3) If the hearing requirements can only be met with the use of hearing aids, the hearing aids should provide optimal hearing function, be well tolerated and suitable for aviation purposes.

(b) Comprehensive ENT examination

A comprehensive ENT examination should include:

(1) history;

(2) clinical examination including otoscopy, rhinoscopy, and examination of the mouth and throat;

(3) tympanometry or equivalent;

(4) clinical examination of the vestibular system.

(c) Ear conditions

(1) Applicants with an active pathological process of the internal or middle ear should be assessed as unfit. A fit assessment may be considered once the condition has stabilised or there has been a full recovery.

(2) Applicants with an unhealed perforation or dysfunction of the tympanic membranes should be assessed as unfit. An applicant with a single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

Applicants with disturbance of vestibular function should be assessed as unfit. A fit assessment may be considered after full recovery. The presence of spontaneous or positional nystagmus requires complete vestibular evaluation by specialist. Applicants with significant abnormal caloric or rotational vestibular responses should be assessed as unfit. Abnormal vestibular responses should be assessed in their clinical context.

(e) Sinus dysfunction

Applicants with any dysfunction of the sinuses should be assessed as unfit until there has been full recovery.

(f) Oral/upper respiratory tract infections

Applicants with a significant infection of the oral cavity or upper respiratory tract should be assessed as unfit. A fit assessment may be considered after full recovery.

(g) Speech disorder

Applicants with a significant disorder of speech or voice should be assessed as unfit.

(h) Air passage restrictions

Applicants with significant restriction of the nasal air passage on either side, or significant malformation of the oral cavity or upper respiratory tract may be assessed as fit if ENT evaluation is satisfactory.

(i) Eustachian tube(s)

Applicants with permanent dysfunction of the Eustachian tube(s) may be assessed as fit if ENT evaluation is satisfactory.

(j) Sequelae of surgery of the internal or middle ear

Applicants with sequelae of surgery of the internal or middle ear should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

AMC2 MED.B.080 OTORHINOLARYNGOLOGY (ENT)

(a) Hearing

(1) Applicants should understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with the applicant's back turned towards the AME.

(2) Applicants with hypoacusis may be assessed as fit if a speech discrimination test or unctional cockpit hearing test demonstrates satisfactory hearing ability.

(3) If the hearing requirements can be met only with the use of hearing aids, the hearing aids should provide optimal hearing function, be well tolerated and suitable for aviation purposes.

(4) Applicants with profound deafness or major disorder of speech, or both, may be assessed as fit with an SSL, such as 'limited to areas and operations where the use of radio is not mandatory'. The aircraft should be equipped with appropriate alternative warning devices in lieu of sound warnings.

(b) Examination

An ENT examination should form part of all initial, revalidation and renewal examinations.

(c) Ear conditions

(1) Applicants with an active pathological process of the internal or middle ear should be assessed as unfit until the condition has stabilised or there has been a full recovery.

(2) Applicants with an unhealed perforation or dysfunction of the tympanic membranes should be assessed as unfit. An applicant with a single dry perforation of non-infectious origin which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

Applicants with disturbance of vestibular function should be assessed as unfit pending full recovery.

(e) Sinus dysfunction

Applicants with any dysfunction of the sinuses should be assessed as unfit pending full recovery.

(f) Oral/upper respiratory tract infections

Applicants with a significant infection of the oral cavity or upper respiratory tract should be assessed as unfit. A fit assessment may be considered after full recovery.

(g) Speech disorder

Applicants with a significant disorder of speech or voice should be assessed as unfit.

(h) Air passage restrictions

Applicants with significant restriction of the nasal air passage on either side, or significant malformation of the oral cavity or upper respiratory tract may be assessed as fit if ENT evaluation is satisfactory.

(i) Eustachian tube dysfunction

Applicants with permanent dysfunction of the Eustachian tube(s) may be assessed as fit if ENT evaluation is satisfactory.

(j) Sequelae of surgery of the internal or middle ear

Applicants with sequelae of surgery of the internal or middle ear should be assessed as unfit until recovery is complete, the applicant is asymptomatic, and the risk of secondary complication is minimal.

GM1 MED.B.080 OTORHINOLARYNGOLOGY (ENT)

PURE TONE AUDIOGRAM

The pure tone audiogram may also cover the 4 000 Hz frequency for early detection of decrease in hearing.

GM2 MED.B.080 OTORHINOLARYNGOLOGY (ENT)

PURE TONE AUDIOGRAM

The pure tone audiogram may also cover the 4 000 Hz frequency for early detection of decrease in hearing.

AMC1 MED.B.085 DERMATOLOGY

(a) If doubt exists about the fitness of applicants with eczema (exogenous and endogenous), severe psoriasis, bacterial infections, drug induced or bullous eruptions or urticaria, the AME should refer the case to the medical assessor of the licensing authority.

(b) Systemic effects of radiant or pharmacological treatment for a dermatological condition should be reviewed before a fit assessment may be considered.

(c) In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

AMC2 MED.B.085 DERMATOLOGY

In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

AMC1 MED.B.090 ONCOLOGY

(a) Applicants who have been diagnosed with a malignant disease may be assessed as fit provided that:

(1) after primary treatment, there is no evidence of residual malignant disease likely to jeopardise flight safety;

(2) time appropriate to the type of tumour and primary treatment has elapsed;

(3) the risk of inflight incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment. Special attention should be paid to applicants who have received anthracycline chemotherapy;

(5) satisfactory oncology follow-up reports are provided to the medical assessor of the licensing authority.

(b) An OML should be applied as appropriate.

(c) Applicants receiving ongoing chemotherapy or radiation treatment should be assessed as unfit.

(d) Applicants with pre-malignant conditions of the skin may be assessed as fit if treated or excised as necessary and there is regular follow-up.

AMC2 MED.B.090 ONCOLOGY

(a) Applicants who have been diagnosed with a malignant disease may be considered for a fit assessment provided that:

(1) after primary treatment, there is no evidence of residual malignant disease likely to jeopardise flight safety;

(2) time appropriate to the type of tumour and primary treatment has elapsed;

(3) the risk of in-flight incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment that may jeopardise flight safety;

(5) arrangements for an oncological follow-up have been made for an appropriate period of time.

(b) Applicants receiving ongoing chemotherapy or radiation treatment should be assessed as unfit.

(c) Applicants with pre-malignant conditions of the skin may be assessed as fit if treated or excised as necessary and there is a regular follow-up.

SECTION 3 – SPECIFIC REQUIREMENTS FOR LAPL MEDICAL CERTIFICATES

AMC1 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

When a specialist evaluation is required under this section, the aero-medical assessment of the applicant should be performed by an AeMC, an AME or, in the case of AMC5 MED.B.095(d), by the medical assessor of the licensing authority.

AMC2 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

CARDIOVASCULAR SYSTEM

(a) Examination

Pulse and blood pressure should be recorded at each examination.

(b) General

(1) Cardiovascular risk factor assessment

An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) requires cardiovascular evaluation.

(2) Aortic aneurysm

Applicants with an aortic aneurysm may be assessed as fit subject to satisfactory cardiological evaluation and a regular follow-up.

(3) Cardiac valvular abnormalities

i. Applicants with a cardiac murmur may be assessed as fit if the murmur is assessed as being of no pathological significance.

ii. Applicants with a cardiac valvular abnormality may be assessed as fit subject to satisfactory cardiological evaluation.

(4) Valvular surgery

After cardiac valve replacement or repair, a fit assessment may be considered, with an ORL if anticoagulation is needed, subject to satisfactory post-operative cardiological evaluation. Anticoagulation should be stable and the haemorrhagic risk should be acceptable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. The INR target range should be determined by the type of surgery performed. Applicants who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence if the INR is within the target range, may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not

requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

(5) Other cardiac disorders

i. Applicants with other cardiac disorders may be assessed as fit subject to satisfactory cardiological evaluation. A fit assessment may be considered, with an ORL if anticoagulation is needed. Anticoagulation should be stable and the haemorrhagic risk should be acceptable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. The INR target range should be determined by the type of surgery performed. Applicants who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence if the INR is within the target range, may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

ii. Applicants with symptomatic hypertrophic cardiomyopathy should be assessed as unfit.

(c) Blood pressure

(1) When the blood pressure consistently exceeds 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment, the applicant should be assessed as unfit.

(2) Applicants initiating medication for the control of blood pressure should be assessed as unfit until the absence of significant side effects has been established.

(d) Coronary artery disease

(1) Applicants with suspected myocardial ischaemia should undergo a cardiological evaluation before a fit assessment may be considered.

(2) with angina pectoris requiring medication for cardiac symptoms should be assessed as unfit.

(3) After an ischaemic cardiac event, including myocardial infarction or revascularisation, applicants without symptoms should have reduced cardiovascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on appropriate secondary prevention treatment.

(4) In cases (d)(1), (d)(2) and (d)(3), applicants who have had a satisfactory cardiological evaluation to include an exercise test or equivalent that is negative for ischaemia may be assessed as fit.

(e) Rhythm and conduction disturbances

(1) Applicants with a significant disturbance of cardiac rhythm or conduction should be assessed as unfit unless a cardiological evaluation concludes that the disturbance is not likely to interfere with the safe exercise of the privileges of the licence. A fit

assessment may be considered, with an ORL if anticoagulation is needed. Anticoagulation should be stable and the haemorrhagic risk should be acceptable. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range. The INR target range should be determined by the type of surgery performed. Applicants who measure their INR on a 'near patient' testing system within 12 hours prior to flight and only exercise the privileges of their licence if the INR is within the target range, may be assessed as fit without the above-mentioned limitation. The INR results should be recorded and the results should be reviewed at each aero-medical assessment. Applicants taking anticoagulation medication not requiring INR monitoring, may be assessed as fit without the above-mentioned limitation in consultation with the medical assessor of the licensing authority after a stabilisation period of 3 months.

(2) Pre-excitation

Applicants with ventricular pre-excitation may be assessed as fit subject to satisfactory cardiological evaluation. Applicants with ventricular pre-excitation associated with a significant arrhythmia should be assessed as unfit.

(3) Automatic implantable defibrillating system

Applicants with an automatic implantable defibrillating system should be assessed as unfit.

(4) Pacemaker

A fit assessment may be considered subject to satisfactory cardiological evaluation.

AMC3 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

RESPIRATORY SYSTEM

(a) Applicants should undergo pulmonary morphological or functional tests when clinically indicated.

(b) Asthma and chronic obstructive pulmonary disease

Applicants with asthma or impairment of pulmonary function may be assessed as fit provided that the condition is considered stable with satisfactory pulmonary function and medication is compatible with flight safety. Systemic steroids may be acceptable provided that the dosage required is acceptable and there are no adverse side effects.

(c) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Investigation should be undertaken with respect to the possibility of systemic involvement. A fit assessment may be considered once the disease is inactive.

(2) Applicants with cardiac sarcoidosis should be assessed as unfit.

(d) Pneumothorax

(1) Applicants with spontaneous pneumothorax may be assessed as fit subject to satisfactory respiratory evaluation following recovery from a single spontaneous

pneumothorax or following recovery from surgical intervention for a recurrent pneumothorax.

(2) Applicants with traumatic pneumothorax may be assessed as fit following recovery.

(e) Thoracic surgery

Applicants who have undergone thoracic surgery may be assessed as fit following recovery.

(f) Sleep apnoea syndrome/sleep disorder

Applicants with unsatisfactorily treated sleep apnoea syndrome should be assessed as unfit.

AMC4 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

DIGESTIVE SYSTEM

(a) Gallstones

Applicants with symptomatic gallstones should be assessed as unfit. A fit assessment may be considered following gallstone removal.

(b) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit provided that the disease is stable and not likely to interfere with the safe exercise of the privileges of the licence.

(c) Peptic ulceration

Applicants with peptic ulceration may be assessed as fit subject to satisfactory gastroenterological evaluation.

(d) Digestive tract and abdominal surgery

Applicants who have undergone a surgical operation:

(1) for herniae; or

(2) on the digestive tract or its adnexa, including a total or partial excision or diversion of any of these organs,

(3) should be assessed as unfit. A fit assessment may be considered if recovery is complete, the applicant is asymptomatic, and there is only a minimal risk of secondary complication or recurrence.

(e) Pancreatitis

Applicants with pancreatitis may be assessed as fit after satisfactory recovery.

(f) Liver disease

Applicants with morphological or functional liver disease or after surgery, including liver transplantation, may be assessed as fit subject to satisfactory gastroenterological evaluation.

AMC5 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

METABOLIC AND ENDOCRINE SYSTEMS

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit subject to demonstrated stability of the condition and satisfactory aero-medical evaluation.

(b) Obesity

Obese applicants may be assessed as fit if the excess weight is not likely to interfere with the safe exercise of the licence.

(c) Thyroid dysfunction

Applicants with thyroid disease may be assessed as fit once a stable euthyroid state is attained.

(d) Diabetes mellitus

(1) Applicants using antidiabetic medications that are not likely to cause hypoglycaemia may be assessed as fit.

(2) Applicants with diabetes mellitus Type 1 should be assessed as unfit.

(3) Applicants with diabetes mellitus Type 2 treated with insulin may be assessed as fit with limitations for revalidation if blood sugar control has been achieved and the process under (e) and (f) is followed. An ORL is required. A TML for 12 months may be needed to ensure compliance with the follow-up requirements below. Licence privileges should not include rotary aircraft flying.

(e) Aero-medical assessment by, or under the guidance of, the medical assessor of the licensing authority:

(1) A diabetology review at yearly intervals, including:

i. symptom review;

ii. of data logging of blood sugar;

iii. cardiovascular status. Exercise ECG at age 40, at 5-yearly intervals thereafter and on clinical indication, including an accumulation of risk factors;

iv. nephropathy status.

(2) Ophthalmological review at yearly intervals, including:

i. visual fields — Humphrey-perimeter;

ii. retinae — full dilatation slit lamp examination;

iii. cataract — clinical screening.

The development of retinopathy requires a full ophthalmological review.

(3) Blood testing at 6-monthly intervals:

i. HbA1c;

ii. renal profile;

iii. liver profile;

iv. lipid profile.

(4) Applicants should be assessed as temporarily unfit after:

i. changes of medication/insulin leading to a change to the testing regime until stable blood sugar control can be demonstrated;

ii. a single unexplained episode of severe hypoglycaemia until stable blood sugar control can be demonstrated.

(5) Applicants should be assessed as unfit in the following cases:

i. loss of hypoglycaemic awareness;

ii. development of retinopathy with any visual field loss;

iii. significant nephropathy;

iv. any other complication of the disease where flight safety may be jeopardised.

(f) Pilot responsibility

Blood sugar testing is carried out during non-operational and operational periods. A whole blood glucose measuring device with memory should be carried and used. Equipment for continuous glucose monitoring (CGMS) should not be used. Pilots should prove to the AME or AeMC or medical assessor of the licensing authority that testing has been performed as indicated below and with which results.

(1) Testing during non-operational periods: normally 3–4 times/day or as recommended by the treating physician, and on any awareness of hypoglycaemia.

(2) Testing frequency during operational periods:

i. 120 minutes before departure;

ii. <30 minutes before departure;

iii. 60 minutes during flight;

iv. 30 minutes before landing.

(3) Actions following glucose testing:

i. 120 minutes before departure: if the test result is >15 mmol/l, piloting should not be commenced.

ii. 10–15g of carbohydrate should be ingested and a re-test performed within 30 minutes if:

A. any test result is <4,5 mmol/l;

B. the pre-landing test measurement is missed or a subsequent go-around/diversion is performed.

AMC6 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

HAEMATOLOGY

Applicants with a haematological condition, such as:

(a) abnormal haemoglobin including, but not limited to, anaemia, erythrocytosis or haemoglobinopathy;

(b) coagulation, haemorrhagic or thrombotic disorder;

(c) significant lymphatic enlargement;

(d) acute or chronic leukaemia;

(e) splenomegaly;

may be assessed as fit subject to satisfactory aero-medical evaluation. If anticoagulation is being used as treatment, refer to AMC2 MED.B.095(b)(4).

AMC7 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

GENITOURINARY SYSTEM

(a) Applicants with a genitourinary disorder, such as:

(1) renal disease; or

(2) one or more urinary calculi, or a history of renal colic

may be assessed as fit subject to satisfactory renal and urological evaluation, as applicable.

(b) Applicants who have undergone a major surgical operation on the genitourinary system or its adnexa may be assessed as fit following recovery.

(c) Applicants who have undergone renal transplantation may be assessed as fit subject to satisfactory renal evaluation.

AMC8 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

INFECTIOUS DISEASE

(a) Applicants who are HIV positive may be assessed as fit subject to satisfactory aero-medical evaluation.

(b) Applicants with other chronic infections may be assessed as fit provided the infections are not likely to interfere with the safe exercise of the privileges of the licence.

AMC9 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

OBSTETRICS AND GYNAECOLOGY

(a) Pregnancy

Holders of a LAPL medical certificate should only exercise the privileges of their licences until the end of the 26th week of gestation under routine antenatal care.

(b) Applicants who have undergone a major gynaecological operation may be assessed as fit after recovery.

AMC10 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

MUSCULOSKELETAL SYSTEM

Applicants should have satisfactory functional use of the musculoskeletal system to enable the safe exercise of the privileges of the licence.

AMC11 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

MENTAL HEALTH

(a) Applicants with a mental or behavioural disorder due to use or misuse of alcohol or other psychoactive substances, with or without dependency, should be assessed as unfit. A fit assessment may be considered after a period of two years of documented sobriety or freedom from psychoactive substance use or misuse, subject to satisfactory psychiatric evaluation after successful treatment. At revalidation or renewal, a fit assessment may be considered earlier. Depending on the individual case, treatment and evaluation may include in-patient treatment of some weeks followed by ongoing checks, including blood testing and peer reports, which may be required indefinitely.

(b) Applicants with a history of, or the occurrence of, a functional psychotic disorder should be assessed as unfit. A fit assessment may be considered if a cause can be unequivocally identified as one which is transient, has ceased, and the risk of recurrence is minimal.

Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder should be assessed as unfit. A fit assessment may only be considered if the original diagnosis was inappropriate or inaccurate as confirmed by psychiatric evaluation or, in the case of a single episode of delirium, provided that the applicant has suffered no permanent impairment.

(c) Psychoactive substances

Applicants who use or misuse psychoactive substances or psychoactive medication likely to affect flight safety should be assessed as unfit. If stability on maintenance psychoactive medication is confirmed, a fit assessment with appropriate limitation(s) may be considered. If the dosage or type of medication is changed, a further period of unfit assessment should be required until stability is confirmed.

(d) Applicants with a psychiatric condition, such as:

(1) mood disorder;

(2) neurotic disorder;

(3) personality disorder;

(4) mental or behavioural disorder

(e) should undergo satisfactory psychiatric evaluation before a fit assessment may be considered.

(f) Applicants with a history of significant or repeated acts of deliberate self-harm should undergo satisfactory psychiatric or psychological evaluation or both before a fit assessment may be considered.

(g) Psychiatric evaluations and reviews may include reports from the applicant's flight instructor.

(h) Applicants with a psychological disorder may need to be referred for psychological opinion and advice.

(i) In case a specialist evaluation is needed, following the evaluation, the specialist should submit a written report to the AME, AeMC, GMP or medical assessor of the licensing authority as appropriate, detailing their opinion and recommendation.

AMC12 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

NEUROLOGY

(a) Epilepsy and seizures

(1) Applicants with an established diagnosis of and under treatment for epilepsy should be assessed as unfit. A re-assessment after all treatment has been stopped for at least 5 years should include a review of neurological reports.

(2) Applicants may be assessed as fit if:

i. there is a history of a single afebrile epileptiform seizure considered to have a very low risk of recurrence;

ii. there has been no recurrence after at least 5 years off treatment;

iii. a cause has been identified and treated and there is no evidence of continuing predisposition to epilepsy.

(b) Neurological disease

Applicants with any disease of the nervous system which is likely to cause a hazard to flight safety should be assessed as unfit. However, in certain cases, including cases of functional loss associated with stable disease, a fit assessment may be considered after full evaluation including, if necessary, a medical flight test.

(c) Migraine

Applicants with an established diagnosis of migraine or other severe periodic headaches likely to cause a hazard to flight safety should be assessed as unfit. A fit assessment may be considered after full evaluation. The evaluation should take into account at least the following: auras, visual field loss, frequency, severity, therapy. Appropriate limitation(s) may apply.

(d) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury may be assessed as fit if there has been a full recovery and the risk of epilepsy is sufficiently low. An evaluation by a neurologist may be required depending on the staging of the original injury.

(e) Spinal or peripheral nerve injury

Applicants with a history or diagnosis of spinal or peripheral nerve injury or a disorder of the nervous system due to a traumatic injury may be assessed as fit if neurological evaluation is satisfactory and the conditions of AMC10 MED.B.095 are satisfied.

(f) Vascular deficiencies

Applicants with a disorder of the nervous system due to vascular deficiencies including haemorrhagic and ischaemic events should be assessed as unfit. A fit assessment may be considered if neurological evaluation is satisfactory and the conditions of AMC10 MED.B.095 are satisfied. A cardiological evaluation and medical flight test should be undertaken for applicants with residual deficiencies.

AMC13 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

VISUAL SYSTEM

(a) Applicants should not possess any abnormality of the function of the eyes or their adnexa or any active pathological condition, congenital or acquired, acute or chronic, or any sequelae of eye surgery or trauma, which is likely to interfere with the safe exercise of the privileges of the applicable licence.

(b) Eye examination

The examination should include visual acuities (near, intermediate and distant vision) and visual field.

(c) Visual acuity

(1) Visual acuity with or without corrective lenses should be 6/9 (0,7) binocularly and 6/12 (0,5) in each eye.

(2) Applicants who do not meet the required visual acuity should be assessed by an AME or AeMC, taking into account the privileges of the licence held and the risk involved.

(3) Applicants should be able to read, binocularly, an N5 chart (or equivalent) at 30-50 cm and an N14 chart (or equivalent) at 100 cm, with correction if prescribed (Refer to GM1 MED.B.070).

(d) Visual acuity

Applicants with substandard vision in one eye may be assessed as fit if the better eye:

(1) achieves distant visual acuity of 6/6 (1,0), corrected or uncorrected;

(2) achieves distant visual acuity less than 6/6 (1,0) but not less than 6/9 (0,7), after ophthalmological evaluation.

(e) Visual field defects

Applicants with a visual field defect may be assessed as fit if the binocular visual field or, in the case of monocularity, the monocular visual field is acceptable.

(f) Eye surgery

(1) After refractive surgery, a fit assessment may be considered, provided that there is satisfactory stability of refraction, there are no post-operative complications and no significant increase in glare sensitivity.

(2) After cataract, retinal or glaucoma surgery a fit assessment may be considered once recovery is complete.

(g) Visual correction

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

AMC14 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

COLOUR VISION

Applicants for a night rating should correctly identify 9 of the first 15 plates of the 24-plate edition of Ishihara pseudoisochromatic plates or should be colour safe.

AMC15 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

OTORHINOLARYNGOLOGY (ENT)

(a) Hearing

(1) Applicants should understand correctly conversational speech when tested with or without hearing aids at a distance of 2 metres from and with the applicant's back turned towards the examiner.

(2) If the hearing requirements can only be met with the use of hearing aid(s), the hearing aid(s) should provide optimal hearing function, be well-tolerated, and be suitable for aviation purposes.

(3) Applicants with hypoacusis should demonstrate satisfactory functional hearing ability.

(4) Applicants with profound deafness or major disorder of speech, or both, may be assessed as fit with an SSL such as 'limited to areas and operations where the use of radio is not mandatory'. The aircraft should be equipped with appropriate alternative warning devices in lieu of sound warnings.

(b) Ear conditions

Applicants with:

(1) an active pathological process of the internal or middle ear;

(2) unhealed perforation or dysfunction of the tympanic membrane(s);

(3) disturbance of vestibular function;

(4) significant restriction of the nasal passages;

(5) sinus dysfunction;

(6) significant malformation or significant infection of the oral cavity or upper respiratory tract; or

(7) significant disorder of speech or voice

should undergo further examination to establish that the condition does not interfere with the safe exercise of the privileges of the licence.

AMC16 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

DERMATOLOGY

In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be considered.

AMC17 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

ONCOLOGY

(a) In the case of malignant disease, applicants may be considered for a fit assessment if:

(1) there is no evidence of residual malignant disease likely to jeopardise flight safety;

(2) time appropriate to the type of tumour has elapsed since the end of primary treatment;

(3) the risk of in-flight incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment that may jeopardise flight safety.

(b) Arrangements for an oncological follow-up should be made for an appropriate period of time.

(c) Applicants with an established history or clinical diagnosis of intracerebral malignant tumour should be assessed as unfit.

GM1 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

DIABETES MELLITUS TYPE 2 TREATED WITH INSULIN – GENERAL

(a) Pilots and their treating physician should be aware that if the HbA1c target level was set to normal (non-diabetic) levels, this will significantly increase the chance of hypoglycaemia. For safety reasons the target level of HbA1c is therefore set to 7,5–8,5 % even though there is evidence that lower HbA1c levels are correlated with fewer diabetic complications.

(b) The safety pilot should be briefed pre-flight on the potential condition of the pilot. The results of blood sugar testing before and during flight should be shared with the safety pilot for the acceptability of the values obtained.

GM2 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

DIABETES MELLITUS TYPE 2 TREATED WITH INSULIN – CONVERSION TABLE FOR HbA1c IN % AND MMOL/MOL

HbA1c in %	HbA1c in mmol/mol
4,7	28
5,0	31
5,3	34
5,6	38
5,9	41
6,2	44
6,5	48
6,8	51
7,4	57
8,0	64
8,6	70
9,2	77
9,8	84
10,4	90
11,6	103

GM3 MED.B.095 MEDICAL EXAMINATION AND ASSESSMENT OF APPLICANTS FOR LAPL MEDICAL CERTIFICATES

MOOD DISORDER

After full recovery from a mood disorder and after full consideration of the individual case, a fit assessment may be considered, depending on the characteristics and gravity of the mood disorder. If stability on maintenance psychoactive medication is confirmed, a fit assessment may be considered. If the dosage or type of medication is changed, a further evaluation may be required until stability is confirmed.

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SUBPART C – REQUIREMENTS FOR MEDICAL FITNESS OF CABIN CREW/LOAD MASTERS

SECTION 1 – GENERAL REQUIREMENTS

AMC1 MED.C.005 AERO-MEDICAL ASSESSMENTS

(a) When conducting aero-medical examinations and assessments of Cabin crew members/load masters, as applicable, their medical fitness should be assessed with particular regard to their physical and mental ability to:

(1) undergo the training required for cabin crew/load masters to acquire and maintain competence, e.g. actual fire-fighting, slide descending, using Protective Breathing Equipment (PBE) in a simulated smoke-filled environment, providing first aid;

(2) manipulate the aircraft systems and emergency equipment to be used by cabin crew/load masters, e.g. cabin management systems, doors/exits, escape devices, fire extinguishers, taking also into account the class and type of aircraft operated, e.g. narrow-bodied or wide-bodied, single/multi-deck, single/multi-cabin crew operation;

(3) continuously tolerate the aircraft environment whilst performing duties, e.g. altitude, pressure, re-circulated air, noise; and the type of operations such as short/medium/long/ultra long haul; and

(4) perform the required duties and responsibilities efficiently during normal and abnormal operations, and in emergency situations and psychologically demanding circumstances, e.g. assistance to crew members and passengers in case of decompression; stress management, decision-making, crowd control and effective crew coordination, management of disruptive passengers and of security threats. When relevant, operating as single cabin crew should also be taken into account when assessing the medical fitness of cabin crew.

(b) Intervals

(1) The interval between aero-medical assessments should be determined by the competent authority. The intervals established by the competent authority apply to cabin crew/load master members who:

i. undergo aero-medical assessments by an AME, AeMC under the oversight of that competent authority; or

ii. (ii) are employed by an operator under the oversight of that competent authority.

(2) The interval between aero-medical assessments may be reduced by the AME, AeMC for medical reasons and in accordance with MED.C.035.

(3) Aero-medical assessments for the revalidation of a cabin crew medical report may be undertaken up to 45 days prior to the expiry date of the previous medical report. The validity period of the aero-medical assessment should be calculated from the expiry date of the previous aero-medical assessment.

SECTION 2 – REQUIREMENTS FOR AERO-MEDICAL ASSESSMENT OF CABIN CREW/LOAD MASTERS

AMC1 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

Aero-medical examinations and assessments of Cabin crew members/load masters should be conducted in accordance with AMC2 to AMC18 MED.C.025.

AMC2 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

CARDIOVASCULAR SYSTEM

(a) Examination

(1) A standard 12-lead resting electrocardiogram (ECG) and report should be completed on clinical indication, at the first examination, and every five years thereafter. If cardiovascular risk factors such as smoking, abnormal cholesterol levels or obesity are present, the intervals of resting ECGs should be reduced to two years.

(2) Extended cardiovascular assessment should be required when clinically indicated.

(b) Cardiovascular system - general

(1) Cabin crew members/load masters with any of the following conditions:

i. aneurysm of the thoracic or supra-renal abdominal aorta, before surgery;

ii. significant functional abnormality of any of the heart valves; or

iii. heart or heart/lung transplantation

should be assessed as unfit.

(2) Cabin crew members/load masters with an established diagnosis of one of the following conditions:

i. peripheral arterial disease before or after surgery;

ii. aneurysm of the abdominal aorta, before or after surgery;

iii. minor cardiac valvular abnormalities;

iv. after cardiac valve surgery;

v. abnormality of the pericardium, myocardium or endocardium;

vi. congenital abnormality of the heart, before or after corrective surgery;

vii. a cardiovascular condition requiring systemic anticoagulation;

viii. vasovagal syncope of uncertain cause;

ix. arterial or venous thrombosis; or

x. pulmonary embolism

should be evaluated by a cardiologist before a fit assessment may be considered.

(c) Thromboembolic disorders

Whilst anticoagulation therapy is initiated, cabin crew members/load masters should be assessed as unfit. After a period of stable anticoagulation, a fit assessment may be considered with limitation(s), as appropriate. Anticoagulation should be considered stable if, within the last 6 months, at least 5 INR values are documented, of which at least 4 are within the INR target range and the haemorrhagic risk is acceptable. In cases of anticoagulation medication not requiring INR monitoring, a fit assessment may be considered after a stabilisation period of 3 months. cabin crew members/load masters with pulmonary embolism should also be evaluated by a cardiologist. Following cessation of anticoagulant therapy, for any indication, cabin crew members/load masters should undergo a re-assessment.

(d) Syncope

(1) In the case of a single episode of vasovagal syncope which can be satisfactorily explained, a fit assessment may be considered.

(2) cabin crew members/load masters with a history of recurrent vasovagal syncope should be assessed as unfit. A fit assessment may be considered after a 6-month period without recurrence, provided cardiological evaluation is satisfactory. Neurological review may be indicated.

(e) Blood pressure

Blood pressure should be recorded at each examination.

(1) The blood pressure should be within normal limits and should not consistently exceed 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment, taking into account other risk factors.

(2) cabin crew members/load masters initiating medication for the control of blood pressure should be assessed as unfit until the absence of any significant side effects has been established and verification that the treatment is compatible with the safe exercise of cabin crew/load master duties has been achieved.

(f) Coronary artery disease

(1) cabin crew members/load masters with:

i. cardiac ischaemia;

ii. symptomatic coronary artery disease; or

iii. symptoms of coronary artery disease controlled by medication

should be assessed as unfit.

(2) cabin crew members/load masters who are asymptomatic after myocardial infarction or surgery for coronary artery disease should have fully recovered before a fit assessment may be considered. The affected cabin crew members/load masters should be on appropriate secondary prevention treatment.

(g) Rhythm/conduction disturbances

(1) cabin crew members/load masters with any significant disturbance of cardiac conduction or rhythm should undergo cardiological evaluation before a fit assessment may be considered.

(2) cabin crew members/load masters with a history of:

i. ablation therapy; or

ii. pacemaker implantation

should undergo satisfactory cardiovascular evaluation before a fit assessment may be made.

(3) cabin crew members/load masters with:

i. symptomatic sinoatrial disease;

ii. symptomatic hypertrophic cardiomyopathy

iii. complete atrioventricular block;

iv. symptomatic QT prolongation;

v. an automatic implantable defibrillating system; or

vi. a ventricular anti-tachycardia pacemaker

should be assessed as unfit.

AMC3 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

RESPIRATORY SYSTEM

(a) Cabin crew members/load masters with significant impairment of pulmonary function should be assessed as unfit. A fit assessment may be considered once pulmonary function has recovered and is satisfactory.

(b) Cabin crew members/load masters should undergo pulmonary morphological or functional tests on when clinically indicated.

(c) Cabin crew members/load masters with a history or established diagnosis of:

(1) asthma;

(2) active inflammatory disease of the respiratory system;

(3) active sarcoidosis;

(4) pneumothorax;

(5) sleep apnoea syndrome/sleep disorder; or

(6) major thoracic surgery

should undergo respiratory evaluation with a satisfactory result before a fit assessment may be considered.

(d) cabin crew members/load masters who have undergone a pneumonectomy should be assessed as unfit.

AMC4 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

DIGESTIVE SYSTEM

(a) cabin crew members/load masters with any disease or sequelae of surgical intervention in any part of the digestive tract or its adnexa likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, should be assessed as unfit.

(b) cabin crew members/load masters should be free from herniae that might give rise to incapacitating symptoms.

(c) cabin crew members/load masters with disorders of the gastro-intestinal system, including:

(1) recurrent severe dyspeptic disorder requiring medication;

(2) peptic ulceration;

(3) pancreatitis;

(4) symptomatic gallstones;

(5) an established diagnosis or history of chronic inflammatory bowel disease;

(6) after surgical operation on the digestive tract or its adnexa, including surgery involving total or partial excision or a diversion of any of these organs;

(7) morphological or functional liver disease; or

(8) after surgery, including liver transplantation

may be assessed as fit subject to satisfactory gastroenterological evaluation.

AMC5 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

METABOLIC AND ENDOCRINE SYSTEMS

(a) cabin crew members/load masters should not possess any functional or structural metabolic, nutritional or endocrine disorder which is likely to interfere with the safe exercise of their duties and responsibilities.

(b) cabin crew members/load masters with metabolic, nutritional or endocrine dysfunction may be assessed as fit, subject to demonstrated stability of the condition and satisfactory aero-medical evaluation.

(c) Diabetes mellitus

(1) cabin crew members/load masters with diabetes mellitus requiring insulin may be assessed as fit:

i. if it can be demonstrated that adequate blood sugar control has been achieved and hypoglycaemia awareness is established and maintained; and

ii. in the absence, within the preceding 12 months, of any;

A. hospitalisation related to diabetes; or

B. hypoglycaemia that resulted in a seizure, loss of consciousness, impaired cognitive function or that required the intervention by another party; or

C. episode of hypoglycaemia unawareness.

(2) Limitations should be imposed as appropriate. A limitation to undergo specific medical examinations (SIC) and a restriction to operate only in multi-cabin crew operations (MCL) should be placed as a minimum.

(3) Cabin crew/load master members with diabetes mellitus not requiring insulin may be assessed as fit if it can be demonstrated that adequate blood sugar control has been achieved and hypoglycaemia awareness, if applicable considering the medication, is achieved.

AMC6 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

HAEMATOLOGY

Cabin crew members/load masters with a haematological condition, such as:

(a) abnormal haemoglobin including, but not limited to, anaemia, erythrocytosis or haemoglobinopathy;

(b) coagulation, haemorrhagic or thrombotic disorder;

(c) significant lymphatic enlargement;

(d) acute or chronic leukaemia; or

(e) splenomegaly

may be assessed as fit subject to satisfactory aero-medical evaluation. If anticoagulation is being used as treatment, refer to AMC2 MED.C.025(c).

AMC7 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

GENITOURINARY SYSTEM

(a) Urine analysis should form part of every aero-medical examination and assessment. The urine should not contain any abnormal element(s) considered to be of pathological significance.

(b) cabin crew members/load masters with any disease or sequelae of surgical procedures on the kidneys or the urinary tract, in particular any obstruction due to stricture or compression likely to cause incapacitation should be assessed as unfit.

(c) cabin crew members/load masters with a genitourinary disorder, such as:

(1) renal disease; or

(2) a history of renal colic due to one or more urinary calculi

may be assessed as fit subject to satisfactory renal/urological evaluation.

(d) cabin crew members/load masters who have undergone a major surgical operation in the genitourinary apparatus involving a total or partial excision or a diversion of its organs should be assessed as unfit and be re-assessed after recovery before a fit assessment may be made.

(e) cabin crew members/load masters who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and tolerated with only minimal immuno-suppressive therapy after at least 12 months. A requirement to undergo specific medical examinations (SIC) and a restriction to operate only in multi-cabin crew operations (MCL) should be considered.

(f) cabin crew members/load masters requiring dialysis should be assessed as unfit.

AMC8 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

INFECTIOUS DISEASE

cabin crew members/load masters who are HIV positive may be assessed as fit if investigation provides no evidence of clinical disease and subject to satisfactory aero-medical evaluation.

AMC9 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

OBSTETRICS AND GYNAECOLOGY

(a) cabin crew members/load masters who have undergone a major gynaecological operation should be assessed as unfit until after recovery.

(b) Pregnancy

(1) A pregnant cabin crew/load master member may be assessed as fit only during the first 16 weeks of gestation following review of the obstetric evaluation by the AME.

(2) A limitation not to perform duties as single cabin crew member should be considered.

(3) The AME should provide written advice to the cabin crew/load masters member and supervising physician regarding potentially significant complications of pregnancy resulting from flying duties.

AMC10 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

MUSCULOSKELETAL SYSTEM

(a) Cabin crew members/load masters should have sufficient standing height, arm and leg length and muscular strength for the safe exercise of their duties and responsibilities.

(b) Cabin crew members/load masters should have satisfactory functional use of the musculoskeletal system. Particular attention should be paid to emergency procedures and evacuation, and related training.

(c) Cabin crew members/load masters with any significant sequelae from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery require full evaluation prior to a fit assessment.

(d) Cabin crew members/load masters with inflammatory, infiltrative, traumatic or degenerative disease of the musculoskeletal system may be assessed as fit provided the condition is in remission or is stable and the affected cabin crew member is not taking any medication that may lead to unfitness.

AMC11 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

MENTAL HEALTH

(a) Cabin crew members/load masters with a mental or behavioural disorder due to use or misuse of alcohol or other psychoactive substances should be assessed as unfit pending recovery and freedom from psychoactive substance use or misuse and subject to satisfactory psychiatric evaluation after successful treatment.

(b) Cabin crew members/load masters with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder should be assessed as unfit.

(c) Cabin crew members/load masters with a psychiatric condition such as:

(1) mood disorder;

(2) neurotic disorder;

(3) personality disorder; or

(4) mental or behavioural disorder

should undergo satisfactory psychiatric evaluation before a fit assessment may be considered.

(d) Cabin crew members/load masters with a history of a single or repeated acts of deliberate self-harm should be assessed as unfit. Cabin crew members/load masters should undergo satisfactory psychiatric evaluation before a fit assessment may be considered.

(e) Where there is established evidence that a cabin crew members/load masters has a psychological disorder, he/she should be referred for psychological opinion and advice.

(f) The psychological evaluation may include a collection of biographical data, the review of aptitudes, and personality tests and psychological interview.

(g) The psychologist should submit a report to the AME, detailing the results and recommendation.

AMC12 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

NEUROLOGY

(a) Cabin crew members/load masters with an established history or clinical diagnosis of:

(1) epilepsy; or

(2) recurring episodes of disturbance of consciousness of uncertain cause

should be assessed as unfit.

(b) Cabin crew members/load masters with an established history or clinical diagnosis of:

(1) epilepsy without recurrence after 5 years of age and without treatment for more than 10 years;

(2) epileptiform EEG abnormalities and focal slow waves;

(3) progressive or non-progressive disease of the nervous system;

(4) inflammatory disease of the central or peripheral nervous system;

(5) migraine;

(6) a single episode of disturbance of consciousness of uncertain cause;

(7) loss of consciousness after head injury;

(8) penetrating brain injury; or

(9) spinal or peripheral nerve injury

should undergo further evaluation before a fit assessment may be considered.

(c) Cabin crew members/load masters with a disorder of the nervous system due to vascular deficiencies including haemorrhagic and ischaemic events should be assessed as unfit. A fit assessment may be considered if neurological review and musculoskeletal assessments are satisfactory.

AMC13 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

VISUAL SYSTEM

(a) Examination

(1) a routine eye examination should form part of the initial and all further examinations and assessments; and

(2) an extended eye examination should be undertaken by an eye specialist when clinically indicated.(Refer to GM2 MED.B.070)

(b) Distant visual acuity, with or without correction, should be with both eyes 6/9 (0,7) or better.

(c) Cabin crew members/load masters should be able to read an N5 chart (or equivalent) at 30–50 cm, with correction if prescribed (Refer to GM1 MED.B.070).

(d) The binocular visual field or, in the case of monocularity, the monocular visual field should be acceptable.

(e) Cabin crew members/load masters who have undergone refractive surgery may be assessed as fit subject to satisfactory ophthalmic evaluation.

AMC14 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

COLOUR VISION

Cabin crew members/load masters should be able to correctly identify 9 of the first 15 plates of the 24-plate edition of Ishihara pseudoisochromatic plates. Alternatively, Cabin crew members/load masters should demonstrate the ability to readily perceive those colours of which the perception is required for the safe performance of their duties.

AMC15 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

OTORHINOLARYNGOLOGY (ENT)

(a) Hearing should be satisfactory for the safe exercise of cabin crew members/load masters duties and responsibilities. Cabin crew members/load masters with hypoacusis should demonstrate satisfactory functional hearing abilities.

(b) Examination

(1) An ear, nose and throat (ENT) examination should form part of all examinations and assessments. A tympanometry or equivalent should be performed at the initial examination and when clinically indicated.

(2) Hearing should be tested at all examinations and assessments:

i. the cabin crew member should understand correctly conversational speech when tested with each ear at a distance of 2 metres from and with the cabin crew/load master member's back turned towards the examiner;

ii. notwithstanding (b)(2)(i), hearing should be tested with pure tone audiometry at the initial examination and when clinically indicated;

iii. at initial examination the cabin crew member should not have a hearing loss of more than 35 dB at any of the frequencies 500 Hz, 1 000 Hz or 2 000 Hz, or more than 50 dB at 3 000 Hz, in either ear separately.

(3) If the hearing requirements can be met only with the use of hearing aid(s), the hearing aid(s) should provide optimal hearing function, be well-tolerated, and suitable for aviation purposes.

(c) Cabin crew members/load masters with:

(1) an active pathological process of the internal or middle ear;

(2) unhealed perforation or dysfunction of the tympanic membrane(s);

(3) disturbance of vestibular function;

(4) significant restriction of the nasal passages;

(5) sinus dysfunction;

(6) significant malformation or significant infection of the oral cavity or upper respiratory tract;

(7) significant disorder of speech or voice

should undergo further examination to establish that the condition does not interfere with the safe exercise of their duties and responsibilities.

AMC16 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

DERMATOLOGY

In cases where a dermatological condition is associated with a systemic illness, full consideration should be given to the underlying illness before a fit assessment may be made.

AMC17 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

ONCOLOGY

(a) After treatment for malignant disease, Cabin crew members/load masters should undergo satisfactory oncological and aero-medical evaluation before a fit assessment may be considered.

(b) Cabin crew members/load masters with an established history or clinical diagnosis of intracerebral malignant tumour should be assessed as unfit. Considering the histology of the tumour, a fit assessment may be considered after successful treatment and recovery.

GM1 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

(a) When conducting aero-medical examinations and assessments, typical cabin crew/load master duties as listed in

(b) and (c), particularly those to be performed during abnormal operations and emergency situations, and cabin crew/load master responsibilities to the travelling public should be considered in order to identify:

(1) any physical and/or mental conditions that could be detrimental to the performance of the duties required from cabin crew/load master; and

(2) which examination(s), test(s) or investigation(s) should be undergone to complete an appropriate aero-medical assessment.

(b) Main cabin crew/load master duties and responsibilities during day-to-day normal operations

(1) During pre/post-flight ground operations with/without passengers on board:

i. monitoring of situation inside the aircraft cabin and awareness of conditions outside the aircraft including observation of visible aircraft surfaces and information to flight crew of any surface contamination such as ice or snow;

ii. assistance to special categories of passengers (SCPs) such as infants and children (accompanied or unaccompanied), persons with disabilities or reduced mobility, medical cases with or without medical escort, and inadmissible persons, deportees and passengers in custody;

iii. observation of passengers (any suspicious behaviour, passengers under the influence of alcohol and/or drugs, mentally disturbed), observation of potential able-bodied persons, crowd control during boarding and disembarkation;

iv. safe stowage of cabin luggage, safety demonstrations and cabin secured checks, management of passengers and ground services during re-fuelling, observation of use of portable electronic devices;

v. preparedness to carry out safety and emergency duties at any time, and security alertness.

(2) During flight:

i. operation and monitoring of aircraft systems, surveillance of the cabin, lavatories, galleys, crew areas and flight crew compartment;

ii. coordination with flight crew on situation in the cabin and turbulence events/effects;

iii. management and observation of passengers (consumption of alcohol, behaviour, potential medical issues), observation of use of portable electronic devices;

iv. safety and security awareness and preparedness to carry out safety and emergency duties at any time, and cabin secured checks prior to landing.

(c) Main cabin crew/load master duties and responsibilities during abnormal and emergency operations

(1) In case of planned or unplanned emergency evacuation: briefing and/or commands to passengers including SCPs and selection and briefing to able-bodied persons; crowd control monitoring and evacuation conduct including in the absence of command from the flight crew; post-evacuation duties including assistance, first aid and management of survivors and survival in particular environments; activation of applicable communication means towards search and rescue services.

(2) In case of decompression: checking of crew members, passengers, cabin, lavatories, galleys, crew rest areas and flight crew compartment, and administering oxygen to crew members and passengers as necessary.

(3) In case of pilot incapacitation: secure pilot in his/her seat or remove from flight crew compartment; administer first aid and assist operating pilot as required.

(4) In case of fire or smoke: identify source/cause/type of fire/smoke to perform the necessary required actions; coordinate with other cabin crew members and flight crew; select appropriate extinguisher/agent and fight the fire using portable breathing equipment (PBE), gloves, and protective clothing as required; management of necessary passengers' movement if possible; instructions to passengers to prevent smoke inhalation/suffocation; give first aid as necessary; monitor the affected area until landing; preparation for possible emergency landing.

(5) In case of first aid and medical emergencies: assistance to crew members and/or passengers; correct assessment and correct use of therapeutic oxygen, defibrillator, first-aid kits/emergency medical kit contents as required; management of events, of incapacitated person(s) and of other passengers; coordination and effective

communication with other crew members, in particular when medical advice is transmitted by frequency to flight crew or by a telecommunication connection.

(6) In case of disruptive passenger behaviour: passenger management as appropriate including use of restraint technique as considered required.

(7) In case of security threats (bomb threat on ground or in-flight and/or hijack): control of cabin areas and passengers' management as required by the type of threat, management of suspicious device, protection of flight crew compartment door.

(8) In case of handling of dangerous goods: observing safety procedures when handling the affected device, in particular when handling chemical substances that are leaking; protection and management of self and passengers and effective coordination and communication with other crew members.

GM2 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

DIABETES MELLITUS TREATED WITH INSULIN

When considering a fit assessment for cabin crew with diabetes mellitus requiring insulin, account should be taken of the IATA Guidelines on Insulin-Treated Diabetes (Cabin Crew/Load Master), as last amended.

GM3 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

COLOUR VISION – GENERAL

Examples of colours of which the perception is required for the safe performance of cabin crew/load master members' duties are: cabin crew/load master indication panels, pressure gauges of emergency equipment (e.g. fire extinguishers) and cabin door status.

GM4 MED.C.025 CONTENT OF AERO-MEDICAL ASSESSMENTS

OTORHINOLARYNGOLOGY (ENT) – PURE TONE AUDIOGRAM

The pure tone audiogram may also cover the 4 000 Hz frequency for early detection of decrease in hearing.

SECTION 3 – ADDITIONAL REQUIREMENTS FOR APPLICANTS FOR, OR HOLDERS OF, A CABIN CREW/LOAD MASTER LICENCE

AMC1 MED.C.030 CABIN CREW/LOAD MASTER MEDICAL REPORT

The cabin crew/load master medical report to be provided in writing to the applicants for, and holders of, a cabin crew/load master licence:

(a) should be issued in Azerbaijani and in English; and

(b) should include the following elements:

(1) The State where the aero-medical assessment of the Cabin Crew/Load Master (CC/LML) applicant/holder was conducted (I);

(2) Last and first name of the CC/LML applicant/holder (IV);

(3) Date of birth of the CC/LML applicant/holder (dd/mm/yyyy) (XIV);

(4) Nationality of the CC/LML applicant/holder (VI);

(5) Signature of the CC/LML applicant/holder (VII);

(6) Aero-medical assessment result (fit or unfit) (II);

(7) Expiry date of the previous cabin crew medical report (dd/mm/yyyy);

(8) Date of issue (dd/mm/yyyy) and signature of the AeMC or AME(X);

(9) Date of the aero-medical assessment (dd/mm/yyyy);

(10) Seal or stamp of the AeMC or AME(XI);

(11) Limitation(s), if applicable (XII);

(12) Expiry date of medical report (*dd/mm/yyyy*) (IX).

GM1 MED.C.030(B) CABIN CREW/LOAD MASTER MEDICAL REPORT

GENERAL

The format of the cabin crew/load master medical report may be as shown in the example below, with the size of each sheet being 1/8 of A4.

AZƏRBAYCAN RESPUBLİKASI
REPUBLIC OF AZERBAIJAN

BORT BƏLƏDÇİSİNİN/BORT OPERATORUNUN ŞƏHADƏTNAMƏSİ ÜÇÜN
TİBBİ HESABAT

CABIN CREW/LOAD MASTER MEDICAL REPORT
FOR CABIN CREW/LOAD MASTER LICENCE (CCL/LML)

AAR-MED

AZN№000001CC

Məhdudiyyət şifrələri və izahı *Limitation code and description*	
MCL	çox bort bələdçisi/bort operatoru olan heyət istismar məhdudiyyəti *restriction to operate only in multi-cabin crew/load master operation*
OAL	xüsusi təyyarə növünə(lərinə) məhdudiyyət *restriction to specified aircraft type(s)*
OOL	xüsusi əməliyyat növünə(lərinə) məhdudiyyət *restriction to a specified type of operation*
TML	erkən növbəti aviasiya-tibbi qiymətləndirmə *earlier date of the next aero-medical assessment*
SIC	xüsusi tibbi müayinə(lər) *specific medical examination(s)*
CVL	görmə itiliyi korreksiyası *visual correction*
CCL	kontakt linzalarla korreksiya *correction by means of contact lenses*
HAL	eşitmə aparatlarından istifadə *use hearing aids*
SSL	müəyyən olunmuş xüsusi məhdudiyyətlər *special restriction as specified*

I **Hansı ölkə tərəfindən verilib:**
State of issue:

III **Bort bələdçisinin/bort operatorunun şəhadətnaməsinin nömrəsi:**
Cabin crew/Load master Licence number:

IV **Sahibin adı və soyadı:**
First and Last name of holder:

XIV **Doğum tarixi: (gün/ay/il)**
Date of birth: (dd/mm/yyyy)

VI **Vətəndaşlığı**
Nationality:

VII **Sahibin imzası:**
Signature of holder:

II **Aviasiya-tibbi qiymətləndirmənin nəticəsi(yaralı/yararsız):**
Aero-medical assessment result(fit/unfit):

Əvvəlki Tibbi Hesabatın etibarlılıq müddəti:
Expiry date of the previous cabin crew/ Load master medical report (dd/mm/yyyy):

Aviasiya-tibbi qiymətləndirmənin tarixi:
Date of aero-medical assessment (dd/mm/yyyy):

X **Verilmə tarixi:**
Date of issue* (dd/mm/yyyy):

X **ATE-nin imzası:**
Signature of the AeMC or AME:

XI
Möhür:
Stamp:

XII **Məhdudiyyətlər:**
Limitation(s), if applicable:

Şifrə/ Code:
İzah:
Description:

Şifrə/ Code:
İzah:
Description:

Şifrə/ Code:
İzah:
Description:

IX **Tibbi Hesabatın etibarlılıq müddəti (gg/aa/iiii):**
Expiry date of this medical report (dd/mm/yyyy):

	Last (dd/mm/yyyy)	NEXT (dd/mm/yyyy)
ECG		

Qeydlər:
Remarks:

MED.A.020 TİBBİ YARARLIĞIN AZALMASI

a.Aşağıdakı hallarda şəhadətnamə sahibləri şəhadətnamənin, ixtisas qeydlərinin və ya sertifikatın imtiyazlarından yararlana bilməzlər...:
1.şəhadətnamənin imtiyazlarından təhlükəsiz şəkildə yararlanmasına mane ola biləcək xəstəlik barədə xəbərdar olduqda;
2.şəhadətnamənin imtiyazlarından təhlükəsiz şəkildə yararlanmasına təsir edə bilən, təyin olunmuş yaxud olunmamış dərman vasitələrinin qəbulu və ya istifadəsi zamanı;
3.uçuşların təhlükəsizliyini təhdid edə biləcək hər hansı tibbi, cərrahi və digər müdaxilələrə məruz qaldıqda.
b.Bundan əlavə, şəhadətnamə sahibləri, hər hansı gecikməyə yol vermədən, şəhadətnamənin imtiyazlarından istifadə etməzdən əvvəl aşağıdakı hallarda aviasiya-tibb məsləhəti üçün ATM, ATE ya ÜİH-yə müraciət etməlidirlər:
1.cərrahi müdaxiləyə yaxud invaziv müalicəyə məruz qaldıqda;
2.hər hansı dərman preparatının müntəzəm istifadəsinə başladıqda;
3.uçuş heyəti üzvü funksiyalarının yerinə yetirilməsinə mane olan hər hansı əhəmiyyətli zədəyə məruz qaldıqda;
4.uçuş heyəti üzvü funksiyalarının yerinə yetirilməsinə mane olan hər hansı əhəmiyyətli xəstəlikdən əziyyət çəkdikdə;
5.hamilə olduqda;
6.xəstəxana yaxud tibbi klinikaya qəbul olunduqda;
7.görmə itiliyini korreksiya edən linzaların taxılması ilk dəfə tələb olunduqda

MED.A.020 DECREASE IN MEDICAL FITNESS

a. Licence holders shall not exercise the privileges of their licence and related ratings or certificates, at any time when they:
1. are aware of any decrease in their medical fitness which might render them unable to safely exercise those privileges;
2. take or use any prescribed or non-prescribed medication which is likely to interfere with the safe exercise of the privileges of the applicable licence;
3. receive any medical, surgical or other treatment that is likely to interfere with the safe exercise of the privileges of the applicable licence.
b. In addition, holders of a medical certificate shall, without undue delay and before exercising the privileges of their licence, seek aero-medical advice from the AeMC, AME or GMP, as applicable, when they:
1. have undergone a surgical operation or invasive procedure;
2. have commenced the regular use of any medication;
3. have suffered any significant personal injury involving incapacity to function as a member of the flight crew;
4. have been suffering from any significant illness involving incapacity to function as a member of the flight crew;
5. are pregnant;
6. have been admitted to hospital or medical clinic;
7. first require correcting lenses

AMC1 MED.C.035 LIMITATIONS

When assessing whether the holder of a cabin crew/load master licence may be able to perform cabin crew/load master duties safely if complying with one or more limitations, the following possible limitations should be considered:

(a) a restriction to operate only in multi-cabin crew operations (MCL);

(b) a restriction to specified aircraft type(s) (OAL) or to a specified type of operation (OOL);

(c) a requirement to undergo the next aero-medical examination and assessment at an earlier date than required by MED.C.005(b) (TML);

(d) a requirement to undergo specific medical examination(s) (SIC);

(e) a requirement for visual correction (CVL), or by means of contact lenses that correct for defective vision (CCL);

(f) a requirement to use hearing aids (HAL); and

(g) special restriction as specified (SSL).

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SUBPART D – AERO-MEDICAL EXAMINERS (AME), GENERAL MEDICAL PRACTITIONERS (GMP)

SECTION 1 – AERO-MEDICAL EXAMINERS

AMC1 MED.D.020 TRAINING COURSES IN AVIATION MEDICINE

BASIC TRAINING COURSE

(a) Basic training course for AMEs

The basic training course for AMEs should consist of 60 hours of theoretical and practical training, including specific examination techniques.

(b) The learning objectives to acquire the necessary competencies should include theoretical knowledge, risk management, and decision-making principles in the following subjects. Demonstrations and practical skills should also be included, where appropriate.

(1) Introduction to aviation medicine;

(2) Basic aeronautical knowledge;

(3) Aviation physiology;

(4) Cardiovascular system;

(5) Respiratory system;

(6) Digestive system;

(7) Metabolic and endocrine systems;

(8) Haematology;

(9) Genitourinary system;

(10) Obstetrics and gynaecology;

(11) Musculoskeletal system;

(12) Psychiatry;

(13) Psychology;

(14) Neurology;

(15) Visual system and colour vision;

(16) Otorhinolaryngology;

(17) Oncology;

(18) Incidents and accidents escape and survival;

(19) Medication and flying;

(20) Legislation, rules and regulations;

(21) Cabin crew/Load Masters working environment;

(22) In-flight environment; and

(23) Space medicine.

AMC2 MED.D.020 TRAINING COURSES IN AVIATION MEDICINE

ADVANCED TRAINING COURSE

(a) Advanced training course for AMEs

The advanced training course for AMEs should consist of 66 hours of theoretical and practical training, including specific examination techniques.

(b) The learning objectives to acquire the necessary competencies should include theoretical knowledge, risk management, and decision-making principles in the following subjects. Demonstrations and practical skills should also be included, where appropriate.

(1) Pilot working environment;

(2) Aerospace physiology;

(3) Clinical medicine;

(4) Cardiovascular system;

(5) Neurology;

(6) Psychiatry/psychology;

(7) Visual system and colour vision;

(8) Otorhinolaryngology;

(9) Dentistry;

(10) Human factors in aviation;

(11) Incidents and accidents, escape and survival; and

(12) Tropical medicine.

(c) Practical training in an AeMC should be under the guidance and supervision of the head of the AeMC.

(d) After the successful completion of the practical training, a report of demonstrated competency should be issued.

GM1 MED.D.020 TRAINING COURSES IN AVIATION MEDICINE

BASIC TRAINING COURSE

(a) Basic training course in aviation medicine — 60 hours

(1) Introduction to aviation medicine — 2 hours

i. History of aviation medicine

ii. Specific aspects of civil aviation medicine

iii. Different types of recreational flying

iv. AME and pilots relationship

v. Responsibility of the AME in aviation safety

vi. Communication and interview techniques

(2) Basic aeronautical knowledge — 2 hours

i. Flight mechanisms

ii. Man-machine interface, informational processing

iii. Propulsion

iv. Conventional instruments, ‘glass cockpit’

v. Recreational flying

vi. Simulator/aircraft experience

(3) Aviation physiology — 9 hours

i. Atmosphere

A. Functional limits for humans in flight

B. Divisions of the atmosphere

C. Gas laws — physiological significance

D. Physiological effects of decompression

ii. Respiration

A. Blood gas exchange

B. Oxygen saturation

iii. Hypoxia signs and symptoms

A. Average time of useful consciousness (TUC)

B. Hyperventilation signs and symptoms

C. Barotrauma

D. Decompression sickness

iv. Acceleration

A. G-Vector orientation

B. Effects and limits of G-load

C. Methods to increase Gz-tolerance

D. Positive/negative acceleration

E. Acceleration and the vestibular system

v. Visual disorientation

A. Sloping cloud deck

B. Ground lights and stars confusion

C. Visual autokinesis

vi. Vestibular disorientation

A. Anatomy of the inner ear

B. Function of the semicircular canals

C. Function of the otolith organs

D. The oculogyral and coriolis illusion

E. 'Leans'

F. Forward acceleration illusion of 'nose up'

G. Deceleration illusion of 'nose down'

H. Motion sickness — causes and management

vii. Noise and vibration

A. Preventive measures

(4) Cardiovascular system 3 hours

i. Relation to aviation; risk of incapacitation

ii. Examination procedures: ECG, laboratory testing and other special examinations

iii. Cardiovascular diseases:

A. Hypertension, treatment and assessment

B. Ischaemic heart disease

C. ECG findings

D. Assessment of satisfactory recovery from myocardial infarction, interventional procedures and surgery

E. Cardiomyopathies; pericarditis; rheumatic heart disease; valvular diseases

F. Rhythm and conduction disturbances, treatment and assessment

G. Congenital heart disease: surgical treatment, assessment

H. Cardiovascular syncope: single and repeated episodes

Topics (5) to (11) inclusive, and (17) 10 hours

(5) Respiratory system

i. Relation to aviation, risk of incapacitation

ii. Examination procedures: spirometry, peak flow, x-ray, other examinations

iii. Pulmonary diseases: asthma, chronic obstructive pulmonary diseases

iv. Infections, tuberculosis

v. Bullae, pneumothorax

vi. Obstructive sleep apnoea

vii. Treatment and assessment

(6) Digestive system

i. Relation to aviation, risk of incapacitation

ii. Examination of the system

iii. Gastro-intestinal disorders: gastritis, ulcer disease

iv. Biliary tract disorders

v. Hepatitis and pancreatitis

vi. Inflammatory bowel disease, irritable colon/irritable bowel disease

vii. Herniae

viii. Treatment and assessment including post-abdominal surgery

(7) Metabolic and endocrine systems

i. Relation to aviation, risk of incapacitation

ii. Endocrine disorders

iii. Diabetes mellitus Type 1 & 2

A. Diagnostic tests and criteria

B. Anti-diabetic therapy

C. Operational aspects in aviation

D. Satisfactory control criteria for aviation

iv. Hyper/hypothyroidism

v. Pituitary and adrenal glands disorders

vi. Treatment and assessment

(8) Haematology

i. Relation to aviation, risk of incapacitation

ii. Blood donation aspects

iii. Erythrocytosis; anaemia; leukaemia; lymphoma

iv. Sickle cell disorders

v. Platelet disorders

vi. Haemoglobinopathies; geographical distribution; classification

vii. Treatment and assessment

(9) Genitourinary system

i. Relation to aviation, risk of incapacitation

ii. Action to be taken after discovery of abnormalities in routine dipstick urinalysis, e.g. haematuria; albuminuria

iii. Urinary system disorders:

A. Nephritis; pyelonephritis; obstructive uropathies

B. Tuberculosis

C. Lithiasis: single episode; recurrence

D. Nephrectomy, transplantation, other treatment and assessment

(10) Obstetrics and gynaecology

i. Relation to aviation, risk of incapacitation

ii. Pregnancy and aviation

iii. Disorders, treatment and assessment

(11) Musculoskeletal system

i. Vertebral column diseases

ii. Arthropathies and arthroprosthesis

iii. Pilots with a physical impairment

iv. Treatment of musculoskeletal system, assessment for flying

(12) Psychiatry 2 hours

i. Relation to aviation, risk of incapacitation

ii. Psychiatric examination

iii. Psychiatric disorders: neurosis; personality disorders; psychosis; organic mental illness

iv. Alcohol and other psychoactive substance(s) use

v. Treatment, rehabilitation and assessment

(13) Psychology 2 hours

i. Introduction to psychology in aviation as a supplement to psychiatric assessment

ii. Methods of psychological examination

iii. Behaviour and personality

iv. Workload management and situational awareness

v. Flight motivation and suitability

vi. Group social factors

vii. Psychological stress, stress coping, fatigue

viii. Psychomotor functions and age

ix. Mental fitness and training

(14) Neurology 3 hours

i. Relation to aviation, risk of incapacitation

ii. Examination procedures

iii. Neurological disorders

A. Seizures — assessment of single episode

B. Epilepsy

C. Multiple sclerosis

D. Head trauma

E. Post-traumatic states

F. Vascular diseases

G. Tumours

H. Disturbance of consciousness — assessment of single and repeated episodes

iv. Degenerative diseases

v. Sleep disorders

vi. Treatment and assessment

(15) Visual system and colour vision 4 hours

i. Anatomy of the eye

ii. Relation to aviation duties

iii. Examination techniques

A. Visual acuity assessment

B. Visual aids

C. Visual fields — acceptable limits for certification

D. Ocular muscle balance

E. Assessment of pathological eye conditions

F. Glaucoma

iv. Monocularity and medical flight tests

v. Colour vision

vi. Methods of testing: pseudoisochromatic plates, lantern tests, anomaloscopy

vii. Importance of standardisation of tests and of test protocols

viii. Assessment after eye surgery

(16) Otorhinolaryngology 3 hours

i. Anatomy of the systems

ii. Clinical examination in ORL

iii. Functional hearing tests

iv. Vestibular system; vertigo, examination techniques

v. Assessment after ENT surgery

vi. Barotrauma ears and sinuses

vii. Aeronautical ENT pathology

viii. ENT requirements

(17) Oncology

i. Relation to aviation, risk of metastasis and incapacitation

ii. Risk management

iii. Different methods of treatment and assessment

(18) Incidents and accidents, escape and survival 1 hour

i. Accident statistics

ii. Injuries

iii. Aviation pathology, post-mortem examination, identification

iv. Aircraft evacuation

A. Fire

B. Ditching

C. By parachute

(19) Medication and flying 2 hours

i. Hazards of medications

ii. Common side effects; prescription medications; over-the-counter medications; herbal medications; 'alternative' therapies

iii. Medication for sleep disturbance

(20) Legislation, rules and regulations 4 hours

i. ICAO Standards and Recommended Practices, European provisions (e.g. Implementing Rules, AMC and GM)

ii. Incapacitation: acceptable aero-medical risk of incapacitation; types of incapacitation; operational aspects

iii. Basic principles in assessment of fitness for aviation

iv. Operational and environmental conditions

v. Use of medical literature in assessing medical fitness; differences between scientific study populations and licensed populations

vi. Flexibility

vii. Annex 1 to the Chicago Convention, paragraph 1.2.4.9

viii. Accredited Medical Conclusion; consideration of knowledge, skill and experience

ix. Trained versus untrained crews; incapacitation training

x. Medical flight tests

(21) Cabin crew working environment 1 hour

i. Cabin environment, workload, duty and rest time, fatigue risk management

ii. Cabin crew safety duties and associated training

iii. Types of aircraft and types of operations

iv. Single-cabin crew and multi-cabin crew operations

(22) In-flight environment 1 hour

i. Hygiene aboard aircraft: water supply, oxygen supply, disposal of waste, cleaning, disinfection and disinsection

ii. Catering

iii. Crew nutrition

iv. Aircraft and transmission of diseases

(23) Space medicine 1 hour

i. Microgravity and metabolism, life sciences

(24) Practical demonstrations of basic aeronautical knowledge 8 hours

(25) Concluding items 2 hours

i. Final examination

ii. De-briefing and critique

GM2 MED.D.020 TRAINING COURSES IN AVIATION MEDICINE

ADVANCED TRAINING COURSE

(a) Advanced training course in aviation medicine 66 hours

(1) Pilot working environment 6 hours

i. Commercial aircraft flight crew compartment

ii. Business jets, commuter flights, cargo flights

iii. Professional airline operations

iv. Fixed wing and helicopter, specialised operations including aerial work

v. Air traffic control

vi. Single-pilot/multi-pilot

vii. Exposure to radiation and other harmful agents

(2) Aerospace physiology 4 hours

i. Brief review of basics in physiology (hypoxia, rapid/slow decompression, hyperventilation, acceleration, ejection, spatial disorientation)

ii. (ii) Simulator sickness

(3) Clinical medicine 5 hours

i. Complete physical examination

ii. Review of basics with relationship to commercial flight operations

iii. Class 1 requirements

iv. Clinical cases

v. Communication and interview techniques

(4) Cardiovascular system 4 hours

i. Cardiovascular examination and review of basics

ii. Class 1 requirements

iii. Diagnostic steps in cardiovascular system

iv. Clinical cases

(5) Neurology 3 hours

i. Brief review of basics (neurological and psychiatric examination)

ii. Alcohol and other psychoactive substance(s) use

iii. Class 1 requirements

iv. Clinical cases

(6) Psychiatry/psychology 5 hours

i. Brief review of basics (psychiatric/psychological evaluation techniques)

ii. Alcohol and other psychoactive substance(s) use

iii. Class 1 requirements

iv. Clinical cases

(7) Visual system and colour vision 5 hours

i. Brief review of basics (visual acuity, refraction, colour vision, visual fields, night vision, stereopsis, monocularity)

ii. Class 1 visual requirements

iii. Implications of refractive and other eye surgery

iv. Clinical cases

(8) Otorhinolaryngology 4 hours

i. Brief review of basics (barotrauma — ears and sinuses, functional hearing tests)

ii. Noise and its prevention

iii. Vibration, kinetosis

iv. Class 1 hearing requirements

v. Clinical cases

(9) Dentistry 2 hours

i. Oral examination including dental formula

ii. Oral cavity, dental disorders and treatment, including implants, fillings, prosthesis, etc.

iii. Barodontalgia

iv. Clinical cases

(10) Human factors in aviation, including 8 hours demonstration and practical experience 22 hours

i. Long-haul flight operations

A. Flight time limitations

B. Sleep disturbance

C. Extended/expanded crew

D. Jet lag/time zones

ii. Human information processing and system design

A. Flight Management System (FMS), Primary Flight Display (PFD), datalink, fly by wire

B. Adaptation to the glass cockpit

C. Crew Coordination Concept (CCC), Crew Resource Management (CRM), Line Oriented Flight Training (LOFT) etc.

D. Practical simulator training

E. Ergonomics

iii. Crew commonality

A. Flying under the same type rating, e.g. A-318, A-319, A-320, A-321

iv. Human factors in aircraft incidents and accidents

v. Flight safety strategies in commercial aviation

vi. Fear and refusal of flying

vii. Psychological selection criteria

viii. Operational requirements (flight time limitation, fatigue risk management, etc.)

(11) Incidents and accidents, escape and survival 2 hours

i. Accident statistics

ii. Types of injuries

iii. Aviation pathology, post-mortem examination related to aircraft accidents, identification

iv. Rescue and emergency evacuation

(12) Tropical medicine 2 hours

i. Endemicity of tropical disease

ii. Infectious diseases (communicable diseases, sexually transmitted diseases, HIV etc.)

iii. Vaccination of flight crew and passengers

iv. Diseases transmitted by vectors

v. Food and water-borne diseases

vi. Parasitic diseases

vii. International health regulations

viii. Personal hygiene of aviation personnel

(13) Concluding items 2 hours

i. Final examination

ii. De-briefing and critique

GM3 MED.D.020 TRAINING COURSES IN AVIATION MEDICINE

GENERAL

(a) Principles of training:

To acquire knowledge and skills for the aero-medical examination and assessment, the training should be:

(1) based on regulations;

(2) based on general clinical skills and knowledge necessary to conduct relevant examinations for the different medical certificates;

(3) based on knowledge of the different risk assessments required for various types of medical certification;

(4) based on an understanding of the limits of the decision-making competences of an AME in assessing safety-critical medical conditions for when to defer and when to deny;

(5) based on knowledge of the aviation environment; and

(6) exemplified by clinical cases and practical demonstrations.

(b) Training outcomes:

The trainee should demonstrate a thorough understanding of:

(1) the aero-medical examination and assessment process:

i. principles, requirements and methods;

ii. ability to investigate all clinical aspects that present aero-medical risks, the reasonable use of additional investigations;

iii. the role in the assessment of the ability of the pilot or cabin crew/load masters member to safely perform their duties in special cases, such as the medical flight test;

iv. aero-medical decision-making based on risk management;

v. medical confidentiality; and

vi. correct use of appropriate forms, and the reporting and storing of information;

(2) the conditions under which the pilots and cabin crew carry out their duties; and

(3) principles of preventive medicine, including aero-medical advice in order to help prevent future limitations.

(c) The principles and training outcomes stated at (a) and (b) should also be taken into consideration for refresher training programmes

AMC1 MED.D.030 VALIDITY OF AME CERTIFICATES

REFRESHER TRAINING

(a) It is the responsibility of the AME to continuously maintain and improve their competencies.

(b) During the period of validity of the AME certificate, an AME should attend a minimum of 20 hours of refresher training.

(c) An AME exercising class 1 privileges should attend at least 10 hours of refresher training per year.

(d) A proportionate number of refresher training hours should be provided by, or conducted under the direct supervision of, the competent authority or the medical assessor.

(e) The curricula of refresher training hours referred to in (c) should be decided by the competent authority following a risk-based assessment.

(f) Attendance at scientific meetings and congresses, and flight deck experience may be credited by the competent authority for a specified number of hours against the training obligations of the AME, provided the competent authority has assessed it in advance as being relevant for crediting purposes.

(g) In case of renewal of an AME certificate, the practical training should include at least 10 aero-medical assessments, in accordance with the type of the requested AME certificate.

GM1 MED.D.030 VALIDITY OF AME CERTIFICATES

REFRESHER TRAINING

(a) The curricula for the refresher training hours that should be provided by, or conducted under the direct supervision of, the competent authority or the medical assessor may include but are not limited to subjects such as:

(1) Psychiatry

i. Relation to aviation, risk of incapacitation;

ii. Psychiatric examination;

iii. Psychiatric disorders: neurosis, personality disorders, psychosis, organic mental illness;

iv. Alcohol and other psychoactive substance(s) use; and

v. Treatment, rehabilitation and assessment.

(2) Psychology

i. Introduction to psychology in aviation as a supplement to psychiatric assessment;

ii. Methods of psychological examination;

iii. Behaviour and personality;

iv. Workload management and situational awareness;

v. Flight motivation and suitability;

vi. Group social factors;

vii. Psychological stress, stress coping, fatigue;

viii. Psychomotor functions and age; and

ix. Mental fitness and training.

(3) Communication and interview techniques

(b) Scientific meetings, congresses or flight deck experience that may be credited by the competent authority:

International Academy of Aviation and Space Medicine Annual Congresses (ICASM)	10 hours credit
European Conference of Aerospace Medicine (ECAM)	10 hours credit
Aerospace Medical Association Annual Scientific Meetings (AsMA)	10 hours credit
Other scientific meetings (A minimum of 6 hours to be under the direct supervision of the medical assessor of the competent authority)	10 hours credit

Flight crew compartment experience (a maximum of 5 hours credit per 3 years):

i.	Jump seat credit	5 sectors — 1 hour
ii.	Simulator	4 hours — 1 hour credit
iii.	Aircraft piloting	4 hours — 1 hour credit

GM2 MED.D.030 VALIDITY OF AME CERTIFICATES

AME PEER SUPPORT GROUPS

(a) The competent authority should promote better performance of AMEs by supporting the establishment of AME peer support groups that could provide both professional support and educational enhancement.

(b) Attendance to AME peer support group meetings may be credited by the competent authority as refresher training. The competent authority should determine a maximum of hours that can be credited as refresher training during the period of authorisation.

(c) AME peer support groups may be established as part of, or complementary to, national associations of aerospace medicine.