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Scope

This document aims to provide clear and practical guidelines for Aero Medical Examiners regarding cardiovascular and obesity risk assessments. These guidelines are designed to help AMEs identify, assess, and manage potential health risks related to cardiovascular conditions and obesity, ensuring safety and well-being in the aviation industry.

1.0 Cardiovascular

AMC 1 MED.B.010
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.

The above AMC outlines the requirement of further cardiovascular evaluation for applicants who exhibit an accumulation of risk factors. To this effect, cardiovascular risk assessments are to be conducted by AMEs as follows:

For Class 1 medicals:

- **For applicants at age 40**: Lipid testing and Qrisk assessments shall be conducted.
- **For applicants between the age of 40 and 49** : A Qrisk assessment is to be performed every 5 years with lipid testing where available or if clinically indicated.
- **For applicants aged 50 years and older**: A Qrisk assessment is to be performed every 2 years with lipid testing where available or if clinically indicated.

Note: QRisk Assessments are to be forwarded to the AMS units together with all other medical reports and documentation of the applicant.

Applicants with a Qrisk of over 10% are to be referred to a cardiologist for an extended cardiological evaluation. The applicant will be able to maintain his medical certificate with a TML limitation for a period of a maximum 3 months. Within this 3-month period, the cardiologist decides what further tests and investigations are to be conducted and issues a report whereby mitigation of the risks affecting the applicant is established and a plan for case management is provided. The AME is to alert the Chief Medical Assessor with such cases.

2.0 Single-Pilot HEMS Operations

All elements outlined in section 1.0 are equally applicable to Single-Pilot HEMS operations. Additionally, the below must be followed:

Med B 010 (a) (3)
For a class 1 medical certificate, an extended cardiovascular assessment shall be completed at the first revalidation or renewal examination after the age of 65 and every 4 years thereafter. For applicants involved in single-pilot HEMS operations, an extended cardiovascular assessment shall be completed at the first revalidation or renewal examination after the age of 60 and subject to a cardiovascular risk factor assessment thereafter.

In accordance with the above part, for a Class 1 medical certificate, an extended cardiovascular assessment must be completed at the first revalidation or renewal examination after the age of 65, and every 4 years thereafter. Furthermore, for applicants engaged in single-pilot Helicopter Emergency Medical Services (HEMS) operations, this assessment is required at the first revalidation

or renewal examination after the age of 60, with further cardiovascular risk factor assessments conducted as needed thereafter.

For applicants involved in the single-pilot HEMS operations who have reached the age of 60, the extended cardiovascular assessment should include at least the following elements:

a) Resting ECG;
b) Exercise ECG;
c) Serum lipids;
d) Glycosylated haemoglobin test (HbA1c)
e) Echocardiography
f) Arterial doppler ultrasound carotid arteries, and at clinical indication thoracic or abdominal aorta could be considered.

Med B 015
For class 1 medical certificate holders involved in single-pilot HEMS operations, pulmonary functional tests and obstructive sleep apnoea (OSA) screening shall be completed at the first revalidation or renewal examination after the age of 60.

In line with the above, for Class 1 medical certificate holders involved in single-pilot Helicopter Emergency Medical Services (HEMS) operations, pulmonary functional tests and obstructive sleep apnoea (OSA) screening are required at the first revalidation or renewal examination after the age of 60. This ensures that older pilots engaged in critical operations are thoroughly assessed for respiratory health and sleep-related issues that may impact their ability to perform safely. Evaluation for OSA can be conducted as per section 3.0 (2) of this document.

3.0 Obesity

AMC1 MED.B.025
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.

The above AMC addresses the assessment of applicants with a Body Mass Index (BMI) of 35 or higher. While a high BMI can increase the risk of various health conditions, applicants with a BMI ≥ 35 may still be considered fit for duty if their excess weight does not interfere with the safe exercise of the applicable license(s).

These applicants must undergo a risk assessment, which includes:

1. **Evaluation of the Cardiovascular System**: This helps to determine whether any cardiovascular risks are present, as individuals with a high BMI are at an increased risk of heart-related issues. A QRisk Assessment should be conducted in these cases.

2. **Evaluation of the Possibility of Sleep Apnoea**: As sleep apnoea is commonly associated with higher BMI, and it can significantly affect a person's ability to function safely, an assessment such as the **Epworth Sleepiness Scale** or the **STOP-Bang score** is to be performed by the AME.

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Conclusion

In conclusion, the guidelines outlined in this document are essential for Aero Medical Examiners to effectively assess cardiovascular and obesity-related risks among applicants. By adhering to the protocols set forth in AMC 1 MED.B.010 and AMC 1 MED.B.025, AMEs can ensure a comprehensive evaluation of applicants who present risk factors such as high BMI and cardiovascular conditions. A timeline is being provided in Annex 1 to this document for ease of reference.

These assessments ultimately contribute to the safety and well-being of both the individuals and the aviation community, promoting responsible decision-making in the medical certification process. By following these guidelines, AMEs can effectively manage potential health risks while ensuring applicants remain fit for duty and capable of safely performing their roles in the aviation industry.

AEROMEDICAL SECTION

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Annex 1

Timeline as part of Cardiovascular Risk Assessment

Age	Class 1	HEMS Pilots
40	QRisk and Lipids	QRisk + Lipids
45	QRisk + / - Lipids	QRisk + / - Lipids
50	QRisk + / - Lipids	QRisk + / - Lipids
52	QRisk + / - Lipids	QRisk + / - Lipids
54	QRisk + / - Lipids	QRisk + / - Lipids
56	QRisk + / - Lipids	QRisk + / - Lipids
58	QRisk + / - Lipids	QRisk + / - Lipids
60	QRisk + / - Lipids	Extended CVR
62	QRisk + / - Lipids	Extended CVR
64	QRisk + / - Lipids	Extended CVR
65	Extended CVR	
66		Extended CVR
67	QRisk + / - Lipids	
69	Extended CVR	Extended CVR
70	QRisk + / - Lipids	

Note: The above is pattern is to be followed age 70