Implementation of the EASA requirements for cabin crew medical assessment

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15 May 2013
I have the following financial relationship to disclose:

- Employee of: UK Civil Aviation Authority

I will not discuss off-label use and/or investigational use in my presentation
Objectives of this presentation

• You will understand the significant changes to the regulatory requirements for cabin crew medical assessment in Europe

• You will recognise the role of flight safety considerations in forming the basis for determining the medical standards to be applied in the UK

• You will appreciate the challenges in developing evidence-based and harmonised medical standards for cabin crew
What is the role of cabin crew?

“In commercial air transport operations, the role of cabin crew may be described as assisting in the provision of rapid, comfortable and safe travel through an environment that is potentially hostile and occasionally lethal.”

Dr Roy Maclaren
Paper for the RAeS
1986
US Airways Flight 1549 15 Jan 2009

- Multiple bird strike during initial climb out from La Guardia airport
- Forced landing on Hudson River 6 minutes after take-off
- All 155 occupants safely evacuated within 90 seconds

NTSB ACCIDENT REPORT: Contributing to the survivability of the accident was (1) the decision-making of the flight crewmembers and their crew resource management during the accident sequence; (2) the fortuitous use of an airplane that was equipped for an extended overwater flight, including the availability of the forward slide/rafts, even though it was not required to be so equipped; (3) the performance of the cabin crewmembers while expediting the evacuation of the airplane; and (4) the proximity of the emergency responders to the accident site and their immediate and appropriate response to the accident.
Air France Flight 358 2 August 2005

- Airbus A340 overran the runway at 80 knots, stopped in a ravine just short of a major highway
- Aircraft destroyed in post-crash fire
- Evacuation initiated by cabin crew – flight deck alert did not operate
- 297 passengers, including 3 wheelchair pax, 1 blind pax, 8 children, 1 infant evacuated within 90 seconds
- 2 crew members, 10 pax seriously injured, no fatalities

Accident report: The evacuation was successful due to the training and actions of the whole cabin crew

Wikipedia: Amantio di Nicolao
Should there be regulatory cabin crew medical fitness requirements?

- Fulfil a safety role
- Have to be able to perform a range of moderately physically demanding roles
- Working in a mildly hypoxic environment
- Subjected to hypobaric environment and, particularly in shorthaul, cyclical pressure change
- Shift work and trans-meridian travel

Passengers at exit row seats have to meet some regulatory requirements.
Current regulatory requirements

ICAO:
• No medical fitness standards or recommendations

Most authorities do not have regulatory requirement for cabin crew medical assessment or examination e.g. FAA, CASA

Europe:
• JAR-OPS - Has passed an initial medical examination or assessment and is found medically fit to discharge the duties specified in the Ops Manual; and
• remains medically fit to discharge the duties specified in the Ops Manual
• EU-OPS 2008 – extended requirement: “has passed a medical examination or assessment at regular intervals as required by the Authority so as to check the medical fitness to discharge his/her duties;”
• Wide variation in application e.g. Spain, Denmark – equivalent of JAA Class 2 medical examination; UK – medical assessment by questionnaire acceptable
European Aviation Safety Agency (EASA)

The Agency promotes the highest common standards of safety and environmental protection in civil aviation in Europe and worldwide. It is the centrepiece of a new regulatory system which provides for a single European market in the aviation industry.
EASA Regulations

IMPLEMENTING RULES (IR):
• The regulations – all EASA States and operators must comply

ACCEPTABLE MEANS OF COMPLIANCE (AMC):
• Not regulation, but compliance with the AMC will ensure compliance with the IR

ALTERNATIVE MEANS OF COMPLIANCE (AMC):
• Alternative means of compliance with the IR, which must provide an equivalent level of safety – may be proposed by a State or an operator

GUIDANCE MATERIAL (GM):
• Non-regulatory information provided for explanatory purposes or to give more detailed guidance

GENERAL PRINCIPLE: EASA requirements should not be more onerous than EU-OPS except where there is a clear safety case for change
MED.C.005 Aero-medical assessments

(a) Cabin crew members shall undergo aero-medical assessments to verify that they are free from any physical or mental illness which might lead to incapacitation or an inability to perform their assigned safety duties and responsibilities.

(b) Each cabin crew member shall undergo an aero-medical assessment before being first assigned to duties on an aircraft, and after that at intervals of maximum 60 months.

(c) Aero-medical assessments shall be conducted by an AME, AeMC, or by an OHMP if the requirements of MED.D.040 are complied with.
Requirements for aero-medical assessment of cabin crew

MED.C.020 General

Cabin crew members shall be free from any:
(a) abnormality, congenital or acquired;
(b) active, latent, acute or chronic disease or disability;
(c) wound, injury or sequelae from operation; and
(d) effect or side effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken that would entail a degree of functional incapacity which might lead to incapacitation or an inability to discharge their safety duties and responsibilities.
MED.C.025 Content of aero-medical assessments

(a) An initial aero-medical assessment shall include at least:
   (1) an assessment of the applicant cabin crew member’s medical history;
   (2) a clinical examination of the following:
      (i) cardiovascular system;
      (ii) respiratory system;
      (iii) musculoskeletal system;
      (iv) otorhino-laryngology;
      (v) visual system; and
      (vi) colour vision.
MED.C.025 Content of aero-medical assessments (cont.)

(b) Each subsequent aero-medical re-assessment shall include:

(1) an assessment of the cabin crew member’s medical history; and

(2) a clinical examination if deemed necessary in accordance with aero-medical best practice.

(c) For the purpose of (a) and (b), in case of any doubt or if clinically indicated, a cabin crew member’s aero-medical assessment shall also include any additional medical examination, test or investigation that are considered necessary by the AME, AeMC or OHMP.
Outcome of cabin crew medical assessment

• Crew member may be assessed as fit, fit with one or more limitations, or unfit

• Crew member is issued with a Medical Report, signed by the AME or OHMP

• The Medical Report is not a medical certificate and cabin crew hold an attestation, not a licence

Limitations (AMC):

<table>
<thead>
<tr>
<th>AMC</th>
<th>Description</th>
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<tbody>
<tr>
<td>MCL</td>
<td>multi-cabin crew operations only</td>
</tr>
<tr>
<td>OAL / OOL</td>
<td>specific aircraft types / type of operation only</td>
</tr>
<tr>
<td>TML</td>
<td>valid for specified time only – less than regulatory minimum 5 years</td>
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<tr>
<td>SIC</td>
<td>required to undergo periodic specific medical examinations</td>
</tr>
<tr>
<td>CVL / CCL</td>
<td>visual correction required / with contact lenses only</td>
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<tr>
<td>HAL</td>
<td>hearing aid required</td>
</tr>
<tr>
<td>SSL</td>
<td>special restriction as specified</td>
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EASA Aircrew Regulation Part-MED AMC & GM: selected highlights (1)

- A standard 12-lead resting electrocardiogram (ECG) and report should be completed on clinical indication, at the first examination after the age of 40 and then at least every five years after the age of 50. 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.
- Blood pressure should be recorded at each examination.
- Cabin crew members with an established history or clinical diagnosis of epilepsy should be assessed as unfit;
- Cabin crew members with an established history or clinical diagnosis of epilepsy without recurrence after five years of age and without treatment for more than ten years should undergo further evaluation before a fit assessment can be considered.
• A routine eye examination should form part of the initial and all further assessments and/or examinations
• A cabin crew member should be able to read an N5 chart (or equivalent) at 30–50 cm
• Cabin crew members should be required to have normal fields of vision and normal binocular function
• Cabin crew members 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 should demonstrate that they are colour safe
• An ear, nose and throat (ENT) examination should form part of all examinations and/or assessments
• Hearing should be tested at all assessments and/or examinations; hearing should be tested with pure tone audiometry at the initial examination
UK basis for implementation

• We must comply with the IRs, although it is our view that there is no safety case to justify a regulatory requirement for cabin crew medical assessments
• No safety case has been demonstrated that would justify more onerous requirements than those of EU-OPS
• EASA AMC not acceptable to UK, therefore Alternative Means of Compliance should be developed
• UK AMC should mirror previous UK requirements under EU-OPS as far as possible
• In the interests of harmonisation, the UK would retain those elements of the EASA AMC and GM which do not conflict with the aims above
Evidence-based regulation

“Despite the growth and acceptance of evidence-based practice throughout most fields of medicine, we still find ourselves routinely using the lowest level of evidence (expert opinion, unsupported by a systematic review) for regulatory aeromedical decisions. Such decisions are often not based on the explicit acceptance of any particular level of aeromedical risk.”

Evans A, et al. Safety Management as a Foundation for Evidence-Based Aeromedical Standards and Reporting of Medical Events. ASEM 2009; 80: 511-513
What is an acceptable level of aeromedical risk for cabin crew?

• JAA Class One (commercial air transport pilot)?
• JAA Class Two (private pilot licence)?
• EASA Light Aircraft Pilot’s Licence – unrestricted / restricted?
• DVLA Group 2 (LGV/PSV)?
• DVLA Group 1 (car)?

- in all of the above, incapacitation of the pilot / driver results in an immediate threat to the safety of the aircraft or vehicle
Requirements for cabin crew employed by UK operators

- All cabin crew require EU-OPS fitness assessment up to 7 April 2014 – maximum validity to 7 April 2019
- From 8 Apr 2014, all cabin crew require either a valid EU-OPS fitness assessment or an EASA Medical Report with a ‘fit’ assessment (+/- limitations)
- From 8 Apr 2019, all cabin crew require an EASA Medical Report with a ‘fit’ assessment (+/- limitations)

NB:
- from 8 Apr 2014, a crew member who holds an EASA Medical Report with a ‘fit’ assessment (+/- limitations) issued in any EASA State would be able to operate with any UK operator
- From 8 Apr 2014, a crew member who holds an EASA Medical Report with a ‘fit’ assessment (+/- limitations) issued in the UK would be able to operate with an operator of any EASA State
Requirements for cabin crew employed by UK operators

New requirements (specified in IRs):

- Initial medical examination – by an AME, AeMC or OHMP
- Assessment of colour vision – colour vision test or functional assessment (bearing in mind that no colour vision critical cabin crew tasks)
- Medical Report completed after each examination / assessment, signed by the AME or OHMP responsible

AMC & GM:

- Focus on functional capability
- Application of aeromedical knowledge / principles e.g. in relation to working environment with relative hypoxia and cyclical changes in barometric pressure
- Standard (risk of sudden incapacitation) equivalent to Group 1 DVLA
- Retain EU-OPS visual acuity standard of 6/9, with correction if required
Anticipated impact of UK AMC & GM

• Compliant with EASA Part MED Implementing Rules
• Minimal additional burden on industry c.f. EU-OPS requirements
• Provide equivalent level of flight safety to EASA AMC & GM
• Consistent with aero-medical best practice (depending on what you consider to be ‘best practice’)

But,
• No uniform basis for assessment of cabin crew fitness across EASA States (c.f. 1% rule for pilots)
• Will perpetuate inconsistency of State requirements for assessment of cabin crew medical fitness across the EASA States
• Will allow cabin crew to be assessed as ‘fit’ who would be assessed as ‘unfit’ in another State – but that ‘fit’ assessment allows the crew member to work for an operator in any EASA State
Questions?