MESAFE
MEntal health for aviation SAFEty

EASA
European Union Aviation Safety Agency

Evidence-based recommendations

Paola Tomasello, Diederik De Rooy – 23/04/2024

What are the MESAFE recommendations?

- Evidence-based suggestions
- **Targeted to policy makers**, for updating the EU provisions for the Aeromedical Mental Health assessment

AREAS OF THE RECOMMENDATIONS	RECOMMENDATION NUMBER	RECOMMENDATION
Recommended terminology	Recommendation #1	It is recommended to focus on mental incapacitation events rather than on mental disorders.
	Recommendation #2	It is recommended to implement a risk assessment approach, in which the safety risk caused by mental incapacitation events is assessed by means of an estimation of their severity and the probability if they would occur on-duty.
	Recommendation #3	It is recommended to indicate with Mental Health Specialist the Clinical Aviation Psychologists and Aviation Psychiatrists. These professionals have expertise with mental health and the assessment and treatment of mental disorders. They also have knowledge of the aviation domain.
	Recommendation #4	It is recommended to implement a multidisciplinary collaboration, by means of the so called Aeromedical Operational Board (AMOB).
Recommendations concerning the scope of the aeromedical mental health assessment	Recommendation #5	It is recommended to identify any real or potential mental incapacitation events which the applicant could incur to in the near future. The expected output is a list of possible MIEs or the reasonable confirmation that no MIEs are foreseen in the near future.
	Recommendation	When real or potential MIEs are identified, it is recommended to

Why recommendations?

- Mismatch in the structure of Part-MED and Part-ATCO.MED
- No mandatory comprehensive mental health assessment done by a MHS at initials (it can be done by a regular AME of the AeMC), no criteria to call for the MHS advice
- Ambiguities and uncertainties in the identified mental complaints as they don’t reflect current official taxonomies of mental disorders
- The list of possible mental complaints to undergo experts’ advice is not exhaustive of all the possible mental complaints impacting operational safety
- Little guidance on how the screening examinations may be done in an environment where no certifications are available and/or non reporting of symptoms is probable
- No standard procedures, guidelines and tools to carry out the assessment

Where do the MESAFE recommendations come from?

Take-home messages

1. Mental health problems can lead to total and subtle incapacitation.
2. More than 450 mental disorders exist. They are not all the same: not all mental disorders are long-term -many of them are short-term; not all mental disorders are featured by abnormal, unpredictable and deviant behaviours -some of them are featured by maladaptive psychophysiological reactions to life changing events and stressors; not all mental disorders lead to loss of medical fitness certification.
3. Life changing events and work-related stressors have an impact on mental health.
4. Many mental disorders impede the ability to concentrate and cause sleeping difficulties, which is much more frequent than suicidal behaviour, and also an important risk for flight safety.
5. The cultural and organizational environments which individuals belong to have an impact on their possibility and willingness to self-declare mental health issues.

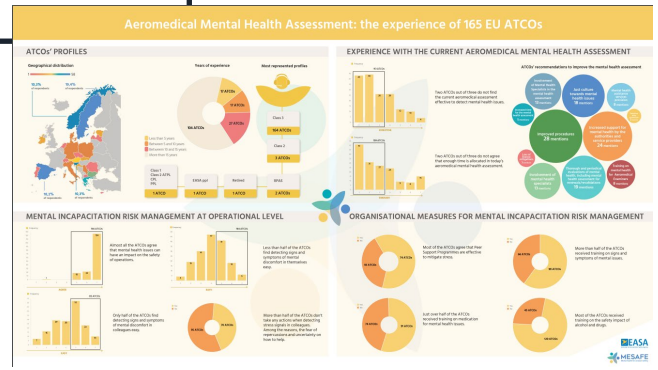
Desk research

Stakeholders engagement

The MIRAP Proof of Concept Evaluation study

Review of the current provisions

Different perspectives on the aeromedical examination



Lessons learnt

Topic	Description
MIRAP scope	Since we are looking at MIEs rather than diagnoses, the MIRAP can be useful when: • there is no agreement on a mental disorder diagnosis. • there is problematic behaviour, but it is uncertain whether this is caused by a mental disorder.
Time allocation	History taking is very important and at the same time very challenging for AMEs and should be allocated more time

Strenghts and weaknesses

ATCO.MED.B.060 Psychology

Implementing rule	Strengths	Weaknesses
(a) Applicants who present with stress-related symptoms … (b) A psychological evaluation may be required…	Good to refer to stress related symptoms	Only when indicated. No mandatory assessments for initials/renewal/revalidations.

Desk research

	Available at
review of the state-of-the art about mental health and mental disorders	D1.1 Report on the review of diagnostic measures
review of the state-of-the art about psychodiagnostic methods and tools	D2.1 Report on the analysis of the availability of diagnostic tests
review of the state-of-the art about screening and confirmation tests for misuse of alcohol and drugs	D3.1 Report on the analysis of the suitability of screening and confirmation tests for misuse of alcohol and drugs
review of the state-of-the art about treatment options to protect mental health	D1.2 - Report on the review of treatment options

Stakeholders' engagement

the individual experience with the current aeromedical mental health assessment of 102 AMEs and MAs	Details at D1.1 Report on the review of diagnostic measures and Booklet of survey results
the individual experience with the current aeromedical mental health assessment of 166 pilots and 165 ATCOs	Details at MESAFE - D-4.1 - Report on the risk of incapacitation and limitation of licence privileges and Booklet of surveys' results
the European Medical Expert Group (MEG)'s advice	Details to be published in MESAFE D5.1/D6.1 upon EASA approval
the feedback by relevant stakeholders on the overall MESAFE strategy and objectives	

The MESAFE recommendations

44 recommendations, clustered by 11 areas:

1. terminology;
2. scope of the aeromedical mental health assessment;
3. acceptable level of the mental incapacitation risk;
4. procedures for the aeromedical mental health assessment;
5. professionals to be involved;
6. frequency of the aeromedical mental health assessment;
7. application form;
8. assessment tools;
9. sources of information;
10. limitations;
11. documentation of the results.

Recommendations format

Recommendation #2	**It is recommended to implement a risk assessment approach, in which the safety risk caused by mental incapacitation events is assessed by means of an estimation of their severity and the probability if they would occur on-duty.**
Description	*[description of the risk assessment approaches]*
Rationale and explanation	*[why this recommendation]*

Scope of the assessment: selected recommendations -1

Recommendation #5	It is recommended to identify any real or potential mental incapacitation events which the applicant could incur to in the near future. The expected output is a list of possible MIEs or the reasonable confirmation that no MIEs are foreseen in the near future.
Recommendation #6	When real or potential MIEs are identified, it is recommended to assess their safety risk by identifying their severity and probability of occurrence.
Recommendation #7	To address the severity and probability of the MIEs, it is recommended to address underlying mental disorders, comorbidities among mental disorders, risk of recurrence/relapse, benefits and side-effects of mental disorders' treatment (including biological treatment and psychopharmaceuticals), life and work-related stressors, incidents and accidents.

Scope of the assessment: selected recommendations -2

Recommendation #11	To describe mental disorders, it is recommended to use accredited schemes, such as the latest versions of the International Classification of Diseases (ICD) or the Diagnostic and Statistic Manual of Mental Disorders (DSM).
Recommendation #12	Potential incidents/accidents should be taken into account in any aeromedical assessment of mental health.
Recommendation #13	It is recommended to carry out a thorough evaluation of biological treatment, when present.
Recommendation #14	When limitations/ suspension are necessary, it is recommended to include in the scope of the assessment the mitigation of the post-traumatic stress effects of such decisions.
Recommendation #15	It is recommended to include a preventive approach in the scope of the aeromedical examination. A larger focus on prevention, positive communication, more education on mental health and highlighting the importance of early diagnosis may be helpful in supporting a lower threshold of reporting mental health issues.

Procedures: selected recommendation

Recommendation #18	To address the safety risk posed by mental issues, it is recommended that the Aeromedical Examiners and Assessors follow a stepped approach, that we have called Mental Incapacitation Risk Assessment Process (MIRAP).

Professionals to be involved: selected recommendations

Recommendation #19	It is recommended that Mental Health Specialists support the aeromedical mental fitness certification process in four ways, namely help AMEs to carry out the MIRAP, develop support tools for the aeromedical mental health assessment, meet the requirements to carry out the MIRAP and foster the AME-applicants communication.
Recommendation #20	It is recommended to include instructors in the AMEs' network to support the aeromedical mental health assessment.
Recommendation #21	When the evaluation of the mental incapacitation risks is difficult, in cases that are not clearly unfit or fit, it is recommended to set up an Aeromedical Operational Board (AMOB).
Recommendation #22	It is recommended to bridge the gap between Aeromedical Examiners and Assessors and Peer Support Groups (PSGs), so as to create mitigation barriers against the mental incapacitation risk occurring in between two aeromedical examinations.

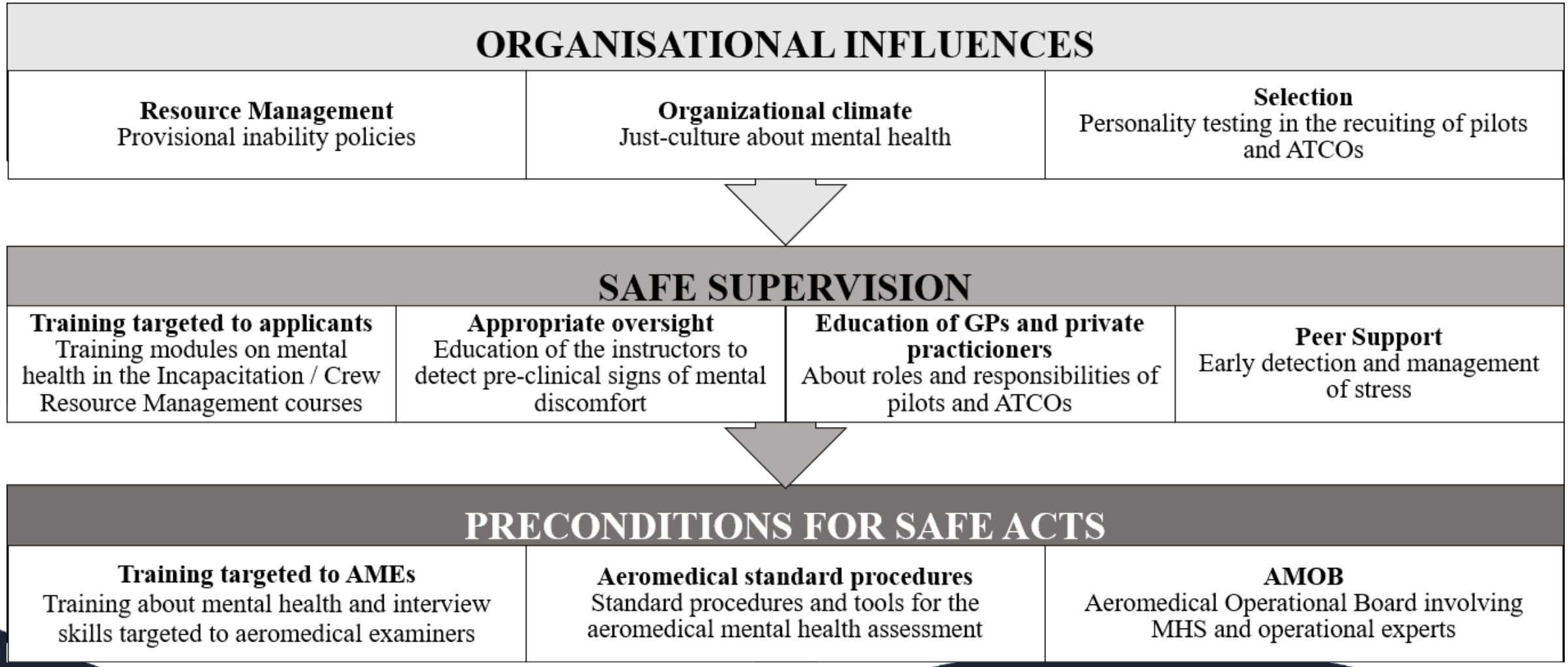
Assessment frequency: selected recommendations

Recommendation #26	It is recommended to assess mental health both at initial and at renewal/revalidation applications.
Recommendation #27	There are no sound arguments for using entirely different sources of information in initial or renewal examinations. The same information and information sources of initial examinations are applicable to renewal/revalidations. Information that is already available does not need to be obtained again for each renewal. For renewal/revalidation applications, it may be considered to follow-up red-flags, challenges, or advice identified in previous aeromedical visits and ask whether changes in personal or professional life have happened.

Sources of information: selected recommendation

Recommendation #42	It is not assumed that the interview can cover all relevant aspects, especially when non-reporting is probable. For example, if there is no previous mental disorder's certification and there are no mental health concerns mentioned by the applicant this does not necessarily mean there are no problems. One important way to get around possible underreporting is to have access to previous history as well as previous reports by AMEs, other practitioners and MHSs, if any. If the AME's suspicion is raised during the interview, such information should be sought in understanding and collaboration with consensus of the pilot/ATCO herself to avoid a breach of trust.

The MESAFE systemic view on mental incapacitation risk management



WE ARE MESAFE

PAOLA LANZI

MESAFE Project Manager
paola.lanzi@dblue.it

PAOLA TOMASELLO

AVIATION PSYCHOLOGIST & PSYCHOTHERAPIST
MESAFE Technical Lead
paola.tomasello@dblue.it

FRANCOIS BRAMBATI

PSYCHOLOGIST
MESAFE Deputy Technical Lead
francois.brambati@dblue.it

ANTHONY WAGSTAFF

MD AEROSPACE MEDICINE
MESAFE Expert
a.s.wagstaff@flymed.uio.no

RIES SIMONS

MD CONSULTANT AEROSPACE MEDICINE
MESAFE Expert
simons-aeromed@ziggo.nl

DIEDERIK DE ROOY

LLM, MD, PHD, AVIATION PSYCHIATRIST
MESAFE Expert
derooy@outlook.com

VERA FERRAIUOLO

MESAFE Dissemination Manager
vera.ferraiuolo@dblue.it

MARTA CECCONI

MESAFE Deputy Dissemination Manager
marta.cecconi@dblue.it

MORENA UGULINI

MESAFE Graphic Designer
morena.ugulini@dblue.it

EASA
European Union Aviation Safety Agency

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Website
https://www.easa.europa.eu/en/research-projects/mesafe-mental-health

MESAFE project