MESAFE
MEntal health for aviation SAFEty

Mental health and safety: the MESAFE project

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EASA
European Union Aviation Safety Agency

The content of this presentation reflects the research project, and not the opinion of EASA.

My professional profile

Aviation psychologist
(EAAP certified)

post-graduated in:

- Psychotherapy
- Work and organizational psychology

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My current positions

Lead Consultant in Deep Blue:

- **Technical Lead of the MESAFE project**
- **Senior trainer** -main clients: European Space Agency (ESA), EUROCONTROL, Leonardo

Free lance psychotherapist

deepblue

Introduction

- MESAFE - MEntal health for aviation SAFEty
- Procurement initiative of EASA awarded by Deep Blue in April 2022
- May 2022 - May 2024
- 350.000€
- Strategic aspects:
  - initiative of EASA on the topic of mental health of pilots and ATCOs
  - direct applicability of the results: the output will consist in inputs for new standards and AMC, policy making recommendations, training course

Scope of the project

The MESAFE research project assesses **new medical developments** for the **early diagnosis** as well as **treatment** of **mental health conditions** which could pose a safety risk for aviation and would consequently lead to **pilots'** and **ATCOs'** unfitness or the limitation of their medical certificate for safety purposes.

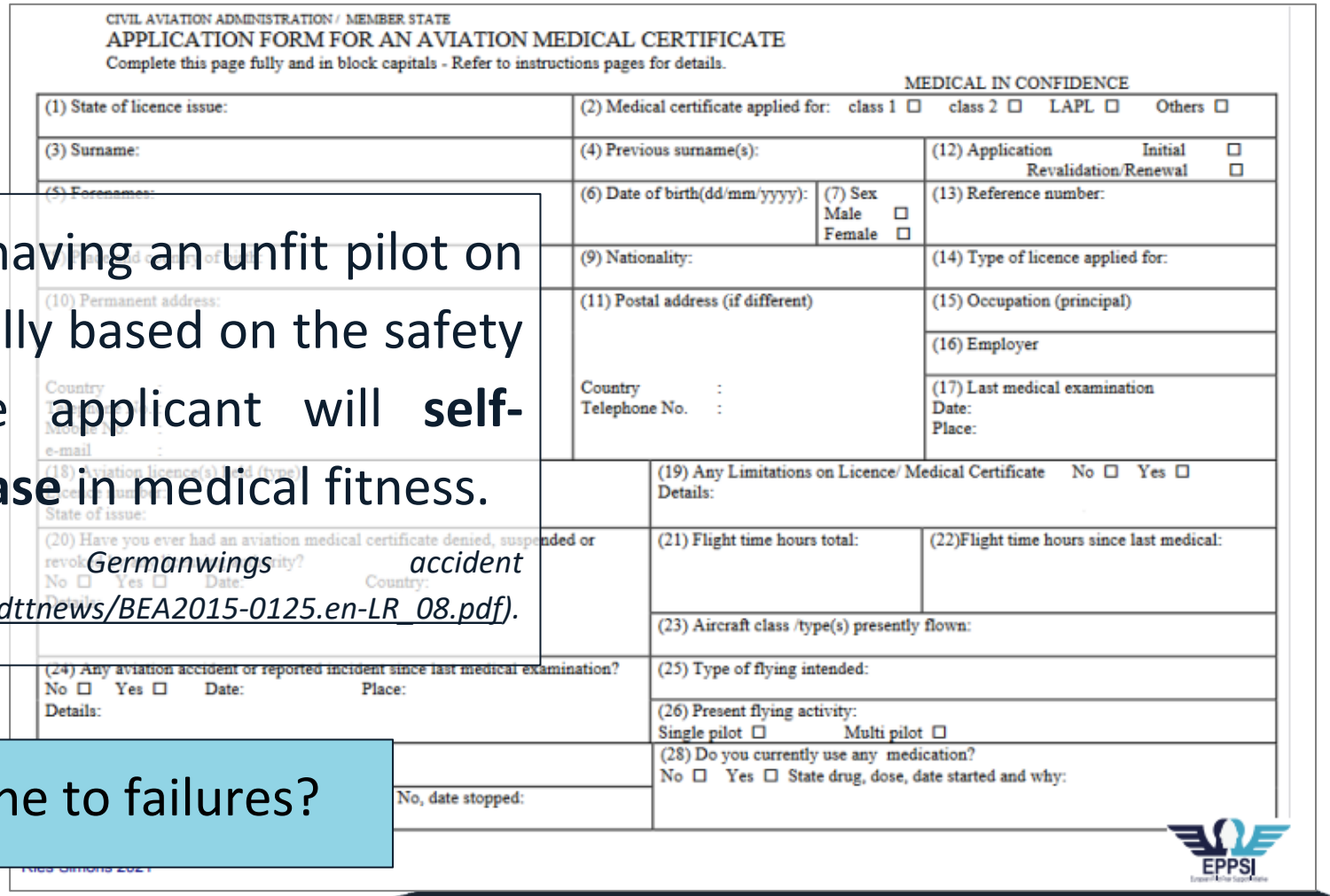
More at https://www.easa.europa.eu/en/research-projects/mesafe-mental-health

The self-declaration principle

Managing the risk of having an unfit pilot on board / ATCO is partially based on the safety assumption that the applicant will **self-declare** her/his **decrease** in medical fitness.

(BEA, Report of Germanwings accident https://bea.aero/uploads/tx_elyextendttnews/BEA2015-0125.en-LR_08.pdf).

Is this principle prone to failures?



CIVIL AVIATION ADMINISTRATION / MEMBER STATE

APPLICATION FORM FOR AN AVIATION MEDICAL CERTIFICATE

Complete this page fully and in block capitals - Refer to instructions pages for details.

MEDICAL IN CONFIDENCE

(1) State of licence issue:

(2) Medical certificate applied for: class 1 ☐ class 2 ☐ LAPL ☐ Others ☐

(3) Surname:

(4) Previous surname(s):

(12) Application Initial ☐ Revalidation/Renewal ☐

(5) Forenames:

(6) Date of birth(dd/mm/yyyy):

(7) Sex Male ☐ Female ☐

(13) Reference number:

(9) Nationality:

(14) Type of licence applied for:

(10) Permanent address:

(11) Postal address (if different)

(15) Occupation (principal)

(16) Employer

Country :
Telephone No. :

(17) Last medical examination
Date:
Place:

e-mail :

(18) Aviation licence(s) held (type)

State of issue:

(19) Any Limitations on Licence/ Medical Certificate No ☐ Yes ☐
Details:

(20) Have you ever had an aviation medical certificate denied, suspended or revoked? No ☐ Yes ☐ Date: Country:

(21) Flight time hours total:

(22)Flight time hours since last medical:

(23) Aircraft class /type(s) presently flown:

(24) Any aviation accident or reported incident since last medical examination?
No ☐ Yes ☐ Date: Place:
Details:

(25) Type of flying intended:

(26) Present flying activity:
Single pilot ☐ Multi pilot ☐

No, date stopped:

(28) Do you currently use any medication?
No ☐ Yes ☐ State drug, dose, date started and why:

Reliability of self-declaration

- There is **evidence** that Andreas Lubitz (the co-pilot who intentionally made the Germanwings aircraft crash) was **aware of his decreased fitness**
- In spite of his awareness of unfitness to fly, he did not seek any advice from an AME

BEA, Report of Germanwings accident
https://bea.aero/uploads/tx_elyextendttnews/BEA2015-0125.en-LR_08.pdf

The Germanwings accident: a dramatic wake-up call for the European aviation industry

Failures of the self-declaration principle

- Altered mental abilities and decision making capacity
- Financial consequences of loss of license
- Review of professional ambitions
- Decreased self-esteem and social recognition

BEA, Report of Germanwings accident
https://bea.aero/uploads/tx_elyextendttnews/BEA2015-0125.en-LR_08.pdf

The safety assumption stating that “the pilot will self-declare his unfitness” failed in this event

Missed self-declaration

- Mental health problems **may be undetectable** to AMEs because applicants are sometimes reluctant to disclose them.
- This reluctance is **independent** of the AME's ability to:
  - treat information confidentially
  - keep the applicant fly/control air traffic as long as possible

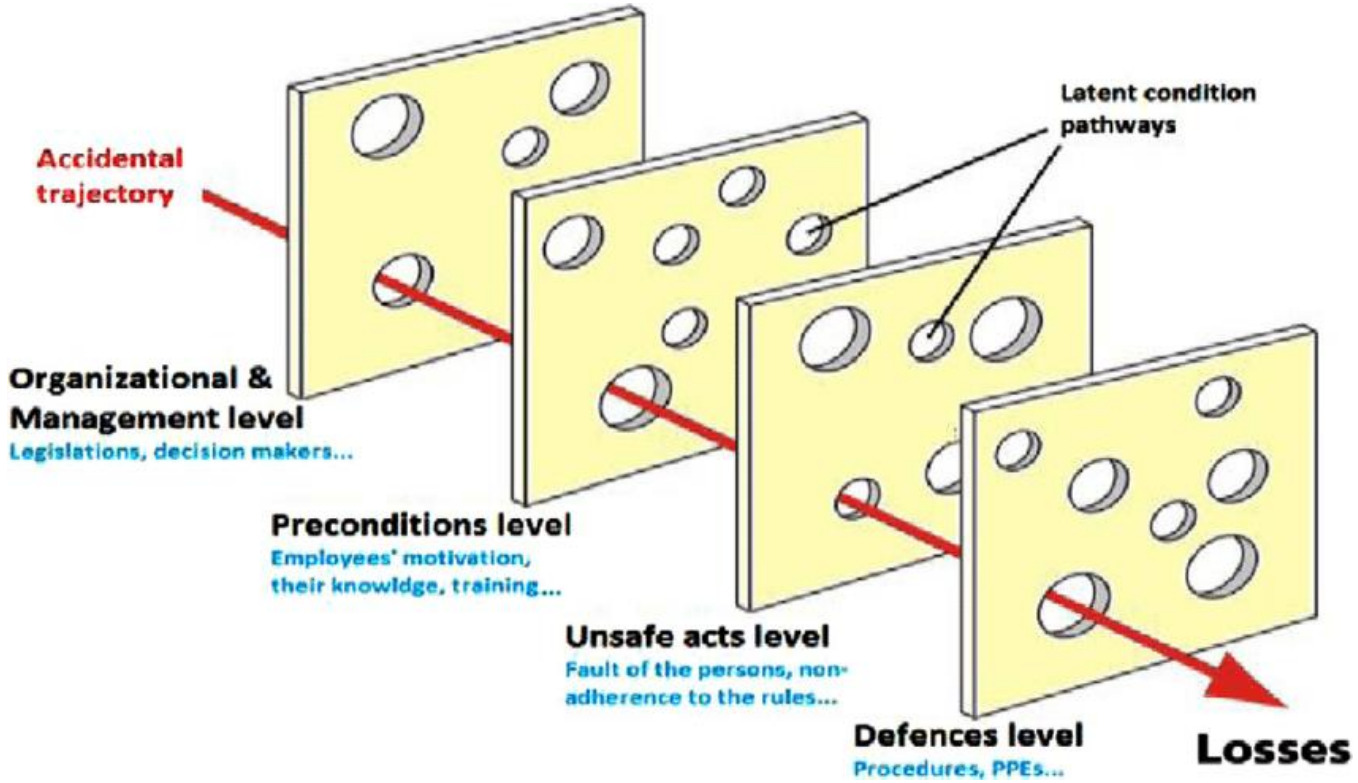
Bor R., Eriksen C., Oakes M., Scragg P. (2017), Pilot Mental Health assessment and support, Routledge

When is the self-declaration principle weakened?

- When the applicants perceives **threats** to their **careers** / financial status by medical licensing requirements
- When there is **stigma** and **blame-culture** towards temporary/permanent mental health problems in the organisation
- When it applies to people consuming psychoactive substances or suffering from **mental disorders**

System’s weaknesses

It is just a natural self-protective behaviour among applicants and a system with **inherent structural weaknesses**



https://www.researchgate.net/figure/Reasons-Swiss-cheese-model-2_fig1_325224114

The MESAFE expected results

AEROMEDICAL MENTAL HEALTH RISK ASSESSMENT PROCESS

- evidence-based **recommendations** for the definition of the **acceptable incapacitation risk levels** for **each type of aeromedical certification** and for **mental health assessment methods and treatment** options suitable for **aeromedical fitness assessments**
- **mitigation measures** for temporary and permanent **loss of license**
- **guidance material** on the updates to the **fitness assessment of applicants**

POLICY MAKING RECOMMENDATIONS

- evidence-based **recommendations** for updating the **mental health requirements in Part-MED** and **Part-ATCO.MED** in line with the medical developments & **impact assessment**

HUMAN CENTERED TOOLKIT

- innovative **strategies for proactive monitoring** and **management** of **pre-clinical signs** and **symptoms** of **psychological discomfort**
- evidence-based **recommendations** for **stress management** at individual and group levels
- **guidance material** on **mental health assessment** and the **updates** to the **fitness assessment**

Achieved so far

- **LINK WITH KEY STAKEHOLDERS ESTABLISHED**
  - participation in the **ICAM** conference and other relevant events
  - creation of the **stakeholders group**
  - online **survey** targeted to AMEs
- **GLOSSARY OF PSYCHOLOGICAL TERMS**
- **RELEASE OF 3 TECHNICAL DOCUMENTS**
  - D-1.1 Report on the review of diagnostic measures
  - D-1.2 Report on the review of treatment options
  - D-3.1 Report on the analysis of the suitability of screening and confirmation tests

The MESAFE stakeholders' group

STAKEHOLDER	ORGANISATION
Airlines	**IATA** - International Air Transport Association
ANSPs	**CANSO** - Civil Air Navigation Services Organisation
	ASPReT - the ATM Social. Partners Regulatory Taskforce
ATCOs	**IFATCA** - International Federation of Air Traffic Controllers' Associations
	ATCEUC - Air Traffic Controllers European Unions Coordination
Pilots	**IFALPA** - International Federation of Air Line Pilots' Associations
	ECA - European Cockpit Association
Policy makers	**ICAO** - International Civil Aviation Organization
	EASA - European Union Aviation Safety Agency
	EUROCONTROL - European Organisation for the Safety of Air Navigation
Scientific Community	**ESAM** - European Society of Aerospace Medicine
	EPPSI - European Pilot Peer Support Initiative
	EAAP - European Association for Aviation Psychology
Other	**ETF** - European Transport Workers' Federation

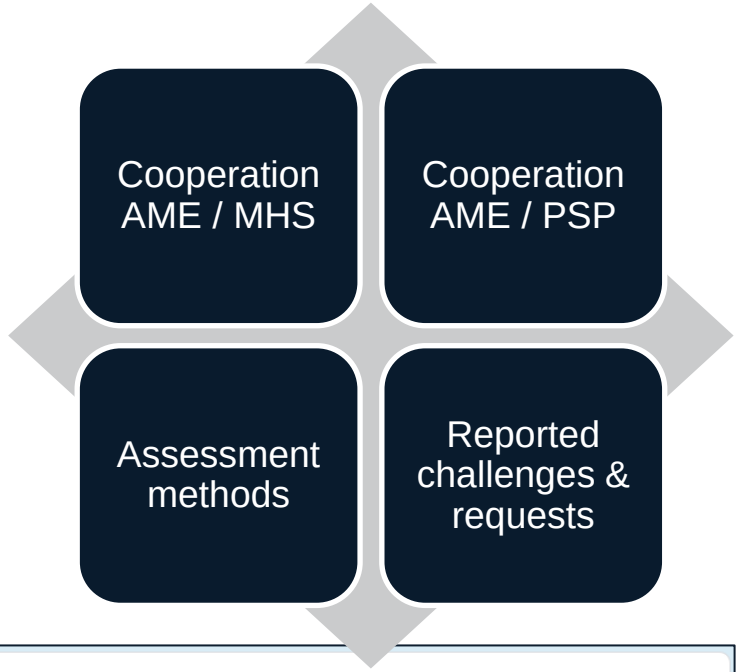
The MESAFE online survey targeted to AMEs

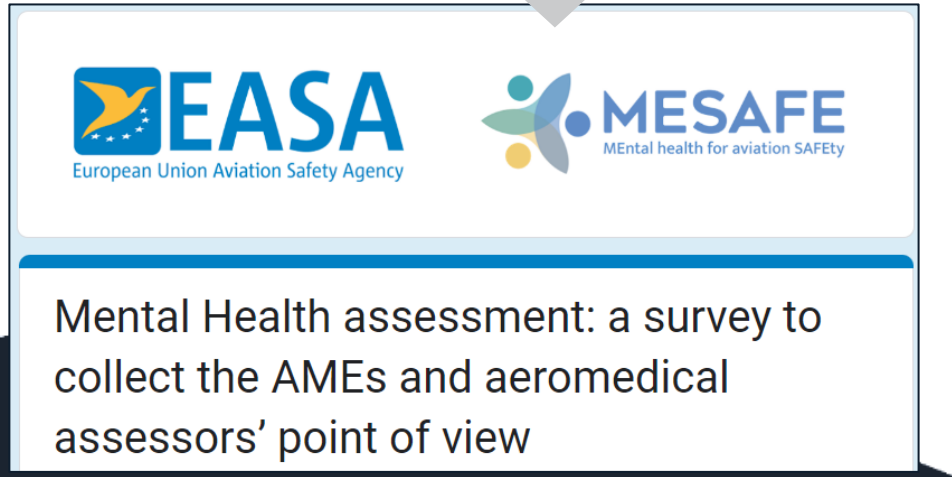
Objectives:

- Identify misalignments between the knowledge, skills and competencies obtained during education/training and the knowledge, skills and competencies required for a satisfactory aeromedical examination;
- Determine the factors that obstruct or facilitate the assessment of the mental health of applicants.

Target: The Medical Expert Group (MEG)

Google Form as administration method





The top 7 challenges mentioned by AMEs

1. Applicants' opposing attitudes to disclose information (N=26)
2. Too little time allocated to assess mental fitness of applicants. (N=20)
3. Absence of clear, robust, and validated questionnaires and interviews (N=17)
4. Insufficient cooperation among AMEs and mental health specialists (N=12)
5. Impossibility to access the applicant psychosocial and medical history; no access to earlier AME's record (N=11)
6. Insufficient training on mental health (N=9)
7. Difficulties in identifying symptoms. (N=5)

What problems do AMEs face today?

- 47.1% (N=48) find difficult collecting information about MH
- 44.1% (N=45) find difficult detecting signs and symptoms of mental illness during the aeromedical examination

Requests

What are the needs identified by AMEs?

- Standardized questionnaires and interviews
- Possibility to access the applicant psychosocial and medical history
- Shared procedures among Member States
- EASA guidelines on how to perform the assessment
- Multidisciplinary collaboration with MHS and peer support groups
- Periodical evaluation performed by MHS
- Trainings and educational material both for AMEs and MHS on their collaboration

The glossary of psychological terms

👇What is mental health?

As the World Health Organization reminds us, #MentalHealth is an indispensable component of overall health. So let's take care of our mental well-being and support others in doing the same! 💪

#MentalHealthMatters #WellBeing #WHO #MESAFE

Follow us on LinkedIn and Twitter!

Short-list of take-home messages from the first documents

ID	Take away message	Key issues to follow-up in the next tasks of the MESAFE project
2.1	Mental health problems can lead to total and subtle incapacitation (mental health problems accounted for the 21% of reasons for grounding pilots)	Training on mental health for AMEs and peers
3.1	More than 540 mental disorders exist. They are not all the same. Not all mental disorders are featured by abnormal/ unpredictable/ deviant behaviours. Some of them are featured by maladaptive psychophysiological reactions to life changing events and stressors.	Training on mental health for AMEs (customised training based on the needs and specialization of the AMEs?) Awareness campaign on mental health and issues Training targeted to Peers on how AMEs work & mental issues signs and symptoms detection
3.4	Life changing events and work-related stressors have an impact on mental health.	Assessment of life changing events in the aeromedical mental health examination

Short-list of take-home messages from the first documents

ID	Take away message	Key issues to follow-up in the next tasks of the MESAFE project
3.5	To make decisions about the certification of mental fitness in case a mental disorder is present, it is important to evaluate: • Comorbidities • Incapacitation risk (i.e., impairment in performing flight duties) • The level of social dangerousness associated to that condition • The presence of life changing events • Risks related to the treatment – if that leads to suicidal ideation, depression or to slow reaction times that may be a risk for flight safety even if the condition itself is not anymore. • The risk of relapse after recovery	Development of mental health risk assessment process Involvement of Aviation Psychologists and Psychiatrists in the process

Short-list of take-home messages from the first documents

Take away ID	Take away message	Key issues to follow-up in the next tasks of the MESAFE project
4.1	Psychodiagnostic tests taken as standalone assessment measures do not enable a psychological diagnosis. Still tests and questionnaires might be useful to support the part of the interview addressing mental complaints.	Development of Aviation Mental Health questionnaires and interviews
4.4	Tests and questionnaires hardly predict the mental health status in between two medical examinations.	Involvement of peer support groups Training targeted to peers on how to detect signs and symptoms of mental health issues

Next steps

- Development of a mental incapacitation risk assessment methodology, resulting into:
  - Review of the incapacitation risk levels related to mental disorders
  - List of mental disorders with higher risk of incapacitation
  - Recommendations to AMEs on how to identify that risk
- Mental fitness certification process, resulting into:
  - Eligible mental disorders
  - Assessment measures
  - Professional profiles involved
  - Limitations and mitigation measures
- Online surveys targeted to pilots & ATCOs

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