

The Mental Incapacitation Events (MIEs)

Paola Tomasello – 23/04/2024



Safety, mental health and mental disorders

- Is depression hazardous for safety?
- Is anxiety hazardous for safety?
- What about the Asperger syndrome?
- What about obsessive-compulsive disorder?
- Personality disorders?



The 5 pitfalls of diagnoses

- Too high variability in symptoms within the same diagnosis
- Stigma
- Misdiagnoses, overdiagnoses, undiagnoses
- No agreement among experts even when the same taxonomies are used
- No clear link with reduced performance and safety hazards!



Applicants don't come with diagnoses

- Applicants come with their lives, challenges, expectations, concerns and complaints
- When they are experiencing mental issues, they come with **signs and symptoms**.
- A symptom is a **subjective feeling of change in personal well-being** (such as pain or an unusually intense emotional experience).



What is the demand for mental health assessment?

AMC1 MED.B.055 Mental health

ED Decision 2019/002/R

- (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.

identifying **symptoms of mental disorders** and **effects of psychoactive medication** that might pose a threat to flight safety.

What do we want to identify?

- Mental health complaints or functional impairments?
- Mental disorders?
- A classification of symptoms according to the DSM or ICD?
- Safety risks caused by mental disorders?

All of the above?

- (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).



What are MIE?

- MIE stands for Mental Incapacitation Events
- MIEs are mental disorders' **symptoms** potentially affecting the individual's behaviour, emotional regulation, or cognitive functioning to the extent that the safety of flight or air traffic control operations is compromised.

Definition according to ICAO (ICAO, 2012): “incapacitation” means any reduction in medical fitness to a degree or of a nature that is likely to jeopardize flight safety. For aircrew, this generally means that the incapacitation occurs in-flight and for ATCOs it means that the incapacitation occurs during their ATC duties.



Mental incapacitation data

In 2016, ICAO sent a survey to its Member States requesting information on medical causes of medium and long-term loss of licence (grounding six months to two years and two years or more) of professional pilots, general aviation pilots and air traffic controllers (Jordaan, 2017).

Calculating the mean of the percentages of medium term and the long-term loss of licence, it was found that among professional pilots' cardiovascular causes accounted for 23.5% of the cases, mental health for 22.5%, and neurology for 11.5%.

[More details at MESAFE - D-1.1 - Report on the review of diagnostic measures-01.01](#)



Examples of MIEs

The proposed list of MIEs is based on some alterations of mental functions, and includes:

- Suicide
- Murder-suicide
- Aggressive behaviour
- Agitation
- Intrusive thoughts - compulsions
- Depersonalization - derealisation
- Reduced alertness and executive functioning
- Panic attack
- Somatic symptoms (not caused by an unrelated physical disease)
- Hallucinations
- Delusions

MIEs are NOT mental disorders' diagnoses-based. Rather, they are based on psychological functions' alterations and consequent hazardous behaviours.



4 reasons to use MIE

- Focus on mental functions
- Link between mental issues and reduced performance-safety hazards
- Better compliance with applicants
- Reduced stigma



Do we need diagnoses, then?

- Yes, to ease communication among professionals
- Yes, to address severity and probability of MIEs



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Website

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



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