

SAFETY INFORMATION 13/2022

21 September 2022



MITIGATING MEDICAL INCAPACITATION RISK

Purpose:

As CAAM has been receiving mandatory occurrence reports with regards to medical incapacitation, this Safety Information (SI) is published to highlight the importance of medical fitness to operate a flight and control air traffic. This SI also recommended actions for the management of Decrease in Medical Fitness (DMF).

Background:

Medical incapacitation is defined by the ICAO as:

“Any reduction in medical fitness to a degree or of a nature that is likely to jeopardise flight safety”. (ICAO Doc 8984, Third Edition – 2012).

Medical incapacitation can also occur in a medically fit individual, e.g. smoke inhalation or effects of a laser beam on vision. A study has indicated the most common cause of incapacitation are as follow:

Rank	Condition	Percentage (%)
1	Other gastrointestinal symptoms	54
2	Uncontrolled bowel action	19
3	Earache/block ear	7
4	Faintness/general weakness	7
5	Headache, including migraine	6
6	Vertigo/disorientation	4

** Buley, 1969 and James and Green, 1991*

Medical incapacitation can be categorised into following types:

1. Origin
 - a. Physical
 - b. Mental
2. Onset
 - a. Sudden (e.g. acute myocardial infraction)
 - b. Slow or gradual (e.g. slowly evolving stomachache)
3. Degree
 - a. Complete (e.g. seizure)
 - b. Partial (e.g. small cut on forearm)

4. Picture
 - a. Overt (e.g. loss of consciousness)
 - b. Subtle (e.g. disorganised thought process, change of behaviour)
5. Duration
 - a. Permanent (e.g. permanent paralysis)
 - b. Temporary (e.g. brief dizziness episode)

A simple faint (or syncope), for example, might result in an obvious, temporary, sudden onset, and complete incapacitation while a small stroke or Transient Ischemic Attack (TIA –mini stroke) might result in a subtle and partial incapacitation that only effects complex calculations. Although these two examples describe very different types of medical incapacitation they are both likely to result in a reduction in aviation safety. The risk of medical incapacitation is therefore an important matter that must be considered before undertake safety sensitive duty.

Discussion:

Pursuant to the Regulation 62 (for flight crew) and Regulation 155 (for air traffic controller) of the Civil Aviation Regulations 2016 ([MCAR 2016](#)), a licence holder not to act as member of flight crew when unfit, if: –

- (a) suffers any personal injury involving incapacity to undertake the function to which the licence relates;
 - (b) suffers any illness involving incapacity to undertake those functions throughout the period of more than twenty-one days;
 - (c) knows or has reason to believe that she is pregnant;
 - (d) requires continued treatment with any medical prescription; or
 - (e) has received medical treatment requiring hospitalisation,
- shall –
- (A) as soon as possible inform the CAAM in writing of the injury, illness, pregnancy or treatment or as soon as possible after the period of twenty-one days has elapsed in the case of the illness referred to in paragraph (b); and
 - (B) not exercise the privileges of the licence and ratings until he has satisfied the medical examiner that his medical fitness has been restored to the standard as may be determined by the CAAM.

Civil Aviation Directives 1004 – Medical Requirement, paragraph 2.8 Decrease in Medical Fitness (DMF) and Licence Holder’s Responsibilities also further explains the regulation.

Recommended Action:

1. Responsibility of licence holders

The reporting obligation of the licence holder is contained in the [MCAR 2016](#). The attending Designated Medical Examiner (DME) and the employer may notify CAAM on behalf of the licence holder. The licence holder shall report his DMF condition if his medical conditions, or their treatment, have the potential to interfere with aviation safety in a variety of ways. It may be:

- (a) result in behavioural changes;
- (b) lead to an increased risk of incapacitation (sudden, gradual, profound, subtle, partial etc);
- (c) result in a reduction or impairment in functional capacity (physical, cognitive etc);
- (d) lead to a reduction in the capacity for decision-making, attention, or concentration (abnormal psychological or psychiatric state);
- (e) drug addiction and drug dependence; or
- (f) pregnancy or termination of pregnancy.

Licence holders shall not exercise the licence privileges if he or she is aware of, or has reasonable grounds to suspect, any change in his or her medical condition or the existence of any previously undetected medical condition that may interfere with the safe exercise of the privileges to which his or her medical assessment relates. If a licence holder has any concerns that his or her condition could potentially affect flight safety, he or she shall consult, or seek clarification without delay from a DME before exercising licence privileges.

A useful pre-flight self-assessment is encouraged using the I'M SAFE checklist to determine the fitness to fly:

- I - Illness (Free of illness and symptoms)
- M - Medication (Taking any unsafe medication, check with your DME)
- S - Stress (Free of any distracting stress)
- A - Alcohol or Drugs (When was the last drink? 8 hours? 24 hours? On any drug?)
- F - Fatigue (Adequate sleep and rest?)
- E - Eating (adequate meal?) Emotion (emotional stable)

1.1 Conditions that do not require DMF notification.

Medical conditions which are common, minor and self-limiting do not usually required DMF notification. However, the licence holder must report sick and do not assume aviation duty due to the elevated incapacitation risk. Resumption of duty can be done after the licence holder

has fully recovered. The following are conditions that do not require DMF notification; the list is non-exhaustive.

- Upper respiratory tract infection
- Influenza, coryza
- COVID-19 Stage I, II and III
- Sinusitis
- Occasional, mild headaches
- Uncomplicated urinary tract infection
- Uncomplicated Gastroenteritis
- Uncomplicated haemorrhoid(s) if not bleeding and requiring only symptomatic treatment
- Mild allergic rhinitis (hayfever), and no antihistamine treatment required
- Minor soft tissue injuries without residual pain
- Muscular pain of short duration not requiring long-term medication and not related to any significant underlying chronic illness
- Dysmenorrhoea (period pain)
- Dental extractions
- Blood donation
- Scuba diving

2. Responsibility of employer

- a. Remove the licence holder from flying roster and ensure they do not exercise the privilege of the licence immediately once the licence holder's medical fitness is decreased.
- b. Ensure notification to CAAM in a timely manner. If licence holder has yet to notify CAAM, the employer is obliged to notify the CAAM on behalf of licence holder.
- c. Support the licence holder in terms of welfare, insurance, sick leave, mental and etc.

3. Responsibility of DME

- a. Advise the licence holder's 'fitness to fly'
- b. Ensure notification to CAAM in a timely manner. If licence holder has yet to notify CAAM, the DME is obliged to notify the CAAM on behalf of licence holder.
- c. Licence holder can contact DME ([refer to latest list of approved DMEs](#)) for further information and discuss your situation.

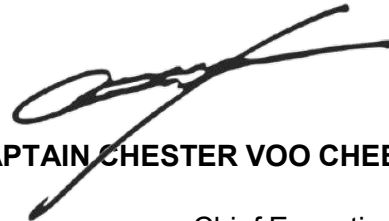
4. Seek advice and notification to CAAM.

Notify your Decrease in Medical Fitness to CAAM via DMF Notification online form accessible at the link below.

DMF Notification Online Form:

https://docs.google.com/forms/d/1xODj9beSwHeX9ib8KGYebHfswjuB_V2mF5ciRJKXbTQ/e_dit

For any inquiry, please contact Chief Medical Assessor's office at e-mail: av.med@caam.gov.my



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