



**GOVERNMENT OF INDIA  
O/O DIRECTOR GENERAL OF CIVIL AVIATION**

**MEDICAL CIRCULAR: 01 of 2023**

File No. AV/22025/25A/DMS/MED

22 FEBRUARY 2023  
EFFECTIVE: 31 MAY 2023

**SUBJECT: MENTAL HEALTH PROMOTION OF FLIGHT CREW AND AIR TRAFFIC CONTROL OFFICERS (ATCOs)**

1. **Introduction**

1.1 Flight crew and ATCOs are generally perceived as intelligent and strong characters, who are independent problem solvers and set high personal standards. They are accustomed to very high workloads and occupational stress situations and train regularly in techniques to stay proficient and calm in pressured and unexpected scenarios. However, the pressures and stressors at workplace and personal life, routinely cannot be addressed through these professional skills, procedures or knowledge. Furthermore, the stress coping mechanisms, often adopted as a normal human being, may fail in the demanding environs of aviation. Any perceived or real failure to cope with the stressors can have dramatic effects on their mental wellbeing and can negatively impair their professional performance.

1.2 These concerns about the mental health of flight crew and ATCOs stimulated the formation an Expert Committee at DGCA of experienced DGCA officers from Air safety, clinical aerospace medicine and mental health experts (psychologists) with an aim to provide best practices and guidance for operators and stakeholders in the field of mental health promotion. This circular provides the necessary guidance for establishing a mental health promotion programme.

2. **Applicability**

This circular is applicable to all Scheduled operators and commuters, Non-Scheduled operators, Flying Training Organisations (FTOs), Airports Authority of India (AAI),

DGCA empanelled Medical Examiners and DGCA designated Indian Air Force Boarding Centres.

### **3. Mental Health Assessment during Medical Examination by DGCA Empanelled Medical Examiners**

3.1 Rule 39B and Rule 103 of the Aircraft Rules, 1937 regarding Medical Standards of Flight Crew and Air Traffic Controllers respectively stipulates that no licence or rating required for Flight Crew and Air Traffic Controllers shall be issued or renewed unless the applicant undergoes a medical examination with an approved medical authority and satisfies the medical standards as notified by the Director General. Civil Aviation Requirement Section 7, Series C, Part 1 specify the medical requirements in accordance with the provisions of ICAO Annex 1. Accordingly, an applicant for a Medical Assessment shall undergo a medical examination based on the following requirements: -

- (a) Physical and Mental;
- (b) Visual and Colour Perception; and
- (c) Hearing.

3.2 The incidence of serious and obvious mental health illnesses like psychosis, schizophrenia etc. in pilot/ATCO population is same as that of general population, which is reasonably low. Also, it is difficult to ascertain that who is at risk and to predict the onset of a psychiatric illness or its symptoms. Therefore, an extensive clinical 'psychiatric' evaluation as part of the routine or periodic medical assessment of the DGCA licence/rating holders will neither be productive nor cost effective and is not warranted.

3.3 However, during the aeromedical assessment of flight crew and ATCOs more attention should be accorded to other mental health conditions, such as, depression, anxiety or panic disorders, alcohol or psychoactive substance abuse etc. These conditions are relatively more prevalent and are effectively treatable. Therefore, some quick and effective methods to assess mental health that can easily be performed by the DGCA empanelled medical examiners during the Class 1/2/3 medical examination are recommended. These testing instruments consist of small questionnaires and interview techniques only, hence, will not substantially impact the current medical examination process for the licence holders as well as the medical examiners.

3.4 This mental health examination will be approached in a manner that it is non-threatening and does not affect the doctor's rapport with the DGCA licence holders (flight crew or ATCOs). There may be 'barriers' affecting a frank discussion of mental health issues between a medical examiner and a licence holder. However, in the experience of other civil aviation regulators like FAA or EASA, this approach has been reasonably successful at improving the rates of reporting of mental health conditions.

3.5 During the medical evaluation, the flight crew or ATCOs may be reluctant to spontaneously disclose concerns about psychological functioning for fear of the consequences, but the likelihood of eliciting any problems may be increased by asking explicit questions. Some recommended 'general' and 'specific' questions are placed as Appendix 'A'. It is known that affirmative answers to these questions do not necessarily indicate pathology (as memory lapses are common in everyday life). Rather, these questions are useful prompts for triggering conversations about cognitive function in everyday life of flight crew or ATCO.

#### 4. **Mental Health Promotion by the Organisations**

The flight crew, ATCOs and the organizations (Scheduled and non-scheduled operators, FTOs and AAI) should be more aware of mental health issues in aviation. Mental health awareness beyond their company doctors and DGCA medical examiners will have a larger impact in the form of early recognition, reporting and its management.

##### 4.1 **Training of Flight crew/ATCOs**

A separate, standalone and customised training capsule for the flight crew/ATCOs to recognise and manage the adverse effects of mental health conditions is to be introduced. In order to have a deeper penetration, these training sessions should be imparted by a trained clinical psychologist and should include topics on Personality, Inter-personal relations, Mental Health Problems, Counselling and Human Factors. Its duration, periodicity, lesson plan, instructors and record keeping (including its 'check') may be finalised by the each organisation and submitted to DGCA for acceptance (*in order to standardize the awareness training across the aviation sector as much as possible*).

##### 4.2 **Peer Support Programme**

4.2.1 The organizations (scheduled and non-scheduled operators, FTOs and AAI) to have a 'Peer Support Programme' (PSP) in place for its employees. The organisations may enable, facilitate and ensure access to this **proactive and non-punitive programme** that will assist and support flight crew/ATCOs in recognising, coping with and overcoming any problem, which might negatively affect their ability to safely exercise the privileges of their licence. The access to the programme should be made available to all flight crew and ATCOs. The protection of 'confidentiality' shall be a precondition for an effective support programme. Also, the personnel, who are enrolled in the support programme should be handled in a non-stigmatising and safe environment. In the context of a support programme, a 'peer' is a trained person, who shares a common professional qualifications and experience and has encountered similar situations, problems or conditions with the person seeking assistance from a

support programme. A peer's involvement in a support programme can be beneficial due to similar professional backgrounds between the peer and the person seeking support. However, a mental health professional should support the peer when required, e.g. in cases where intervention is required to prevent endangering safety.

4.2.2 Access to this support programme should enable self-declaration or referral in case of a decrease in a flight crew member's or ATCO's medical fitness with an emphasis on prevention and early support and (if appropriate) allow the member to receive temporary relief from flight or controlling duties and be referred for professional advice. A culture of mutual trust and cooperation to be maintained so that the flight crew or ATCO is less likely to hide a condition and more likely to report and seek help. Notwithstanding the above, an agreement with related procedures should be in place between the organisation and the peer support programme on how to proceed in case of a serious safety concern.

#### 4.2.3 **Elements of Peer Support Programme**

The Peer Support Programme is a 'proactive' programme applying the principles of 'just culture', whereby senior management of the organisation, mental health professionals, trained peers (where available) and representative of crew members, work together to enable self-declaration, referral, advice, counselling and/or treatment, where necessary, in case of a decrease in medical fitness due to mental health problems. The Peer Support Programme should contain as a minimum the following elements: -

- (a) Essential trust between management and crew is the foundation for a successful support programme. This trust can be facilitated by: -
  - (i) Establishing a platform for multi-stakeholder participation and partnership in the governance process, involving flight crew/ATCOs and representatives of the organisation.
  - (ii) A formal agreement between management and flight crew/ATCOs, identifying the procedures for the use of data, its protection and confidentiality.
  - (iii) Involvement of persons with appropriate expertise when advising crews (for example, pilot peers with similar cultural backgrounds and professional staff with appropriate training in e.g. psychology, etc.);
- (b) Procedures including education of flight crew/ATCOs regarding self-awareness and facilitation of self-referral. The following are the basic elements of the training and awareness programme: -

- (i) Positive impacts of a support programme
  - (ii) Awareness of job stressors and life stressors - mental fitness and mental health
  - (iii) Coping strategies
  - (iv) Potential effects of psychoactive substances and their use or misuse
  - (v) Medication use (prescribed and over-the-counter medication) to ensure the safe exercise of the privileges of the licence whilst taking medication
  - (vi) Early recognition of mental unfitness
  - (vii) Principles and availability of a support programme; and data protection and confidentiality principles.
  - (viii) Mental health professionals involved in the support programme should be trained on psychological first aid, applicable legal requirements regarding data protection and cases where information should be disclosed due to an immediate and evident safety threat and in the interest of public safety.
  - (ix) Peers involved in the support programme should receive practically oriented basic training in psychological first aid and regular refresher trainings.
- (c) Assistance provided by professionals, including mental and psychological health professionals with relevant knowledge of the aviation environment; and the involvement of trained peers (*where trained peers are available*).
- (d) Support the process of 'returning to duty' and management of risks resulting from fear of loss of licence.
- (e) Referral system to DGCA Medical Directorate for clearly defined cases raising serious safety concerns.
- (f) Professionals, including mental health professionals, as well as peers, where trained peers are available, that are involved in the peer support programme, should receive initial and recurrent training related to their role and function within the support programme.

4.2.4 As soon as all the elements of the PSP are in place and the 'Peers' have completed their initial training, the organisations should launch the programme. However, it is recommended (*in the best traditions of under-promising and over-delivering*), that let there be a soft launch first very much like a 'proof of concept' phase.

4.2.5 Further, the mental health promotion to be embedded within the **Safety Management System (SMS)** of the AOP holder/AAI (for ATCOs), subject to maintenance of confidentiality. It is encouraged that similar guidelines may be used for other safety-critical roles such as cabin crew and maintenance engineers as well.

### 4.3 **Pre-Employment Psychological Assessment of Flight Crew/ATCOs**

4.3.1 Based on the international better practices, some of the AOP holders in India undertake 'Psychological Assessment' of all pilots prior to their commencement of flying duties. In addition, there are certain foreign agencies like NATS, UK's leading provider of air traffic control services that undertake pre-employment psychological assessment of their applicants designed to test Cognitive Skills, Decision Making Skills, Situational Judgement Test and Personality Traits that are important to ATCOs. In order to help pilots and ATCOs to perform at their best in the particular environment of the respective organisations and also to have better quality and cost-effective recruitment decisions, it is recommended that each organisation may have their own customized 'Psychological Assessment' process using valid and reliable tools to match its organizational requirements and the available resources.

4.3.2 The pre-employment psychological assessment should be customized to the complexity and the challenges of the operational environment that the flight crew/ATCO is likely to be exposed to, as defined by a job analysis identifying the safety-critical dimensions related to the their function and role within the operator and should include at least the following assessment criteria: -

(a) **Knowledge.** Licence holders clearly need to have the domain knowledge and have the ability to solve problems using the knowledge.

(b) **Skills and Abilities.**

(i) Spatial and situational awareness

(ii) Multitasking/ timesharing

(iii) Analysis and decision making

(iv) Leadership

(v) Stick and rudder skills/Traffic conflict resolution

(vi) Communication skills

(c) **Personality Traits.** This personality assessment is aimed at characterizing the applicants with respect to basic personality traits which are known to be predictors of their performance. Various components of Five Factor Model (FFM) of personality that have been shown to play a role in being a successful flightcrew/ATCO are as follows: -

(i) Conscientiousness

(ii) Openness

(iii) Neuroticism

(iv) Agreeableness

(v) Extroversion

(d) In addition to the above, a **passion for flying or air traffic controlling is a critical asset.** There are stresses and unattractive aspects of this work. An applicant must derive joy from the act of doing their work well and taking pride in it, or some of the negative aspects of the work can detract from the engagement in the work and satisfaction in doing that job well. A bored pilot/ATCO, detached from the routine activities of flight operations, is dangerous.

(e) The psychological assessment tools should be validated and performed or overseen by a clinical psychologist with acquired knowledge in aviation relevant to the operating environment. The **norms applied should be based on the applicant group whenever possible to avoid biased picture. Baseline for personality and cognitive functions must be assessed and maintained for each flight crew/ATCO throughout their career in the form of a database.** The following psychological tests are recommended for use for pilots: -

(i) **Cognitive Tests.** Raven's Advanced Progressive Matrices and Computerized Pilot Aptitude Screening System (COMPASS) which can assesses aptitude, verbal reasoning and comprehension. This battery is being used in European Pilot Selection as well as by certain operators in India.

(ii) **Personality.** NEO PI-R measures many of the dimensions on the five factor model (FFM), e.g., conscientiousness, openness, personal resilience etc. this test is most commonly used in aviation and has given evidence for pilot personality profile.

(iii) **Assessing Psychopathology.** Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is the most commonly used measure of psychopathology, though it offers 'little predictive' value of flight performance. It can be used during selection and for mental health assessment.

4.3.3 The pre-employment psychological assessment should have the following additional requirements: -

(a) It should be validated and performed or overseen by a clinical psychologist with acquired knowledge in aviation operating environment.

(b) It should be undertaken at least within the past 24 months before commencing line flying or ATCO duties, unless the operator can demonstrate that the psychological assessment undertaken more than 24 months ago is still adequate for the risk mitigation.

(c) A psychological assessment performed by one operator may subsequently be accepted by a different operator, provided that the latter is satisfied with the report.

(d) A psychological assessment conducted by or on behalf of an operator should **not** be considered as a **clinical psychological evaluation**.

(e) When establishing the policy on psychological assessment, the operator may refer to recognised industry standards and best practices in this field of selection, aptitude testing and psychological assessment.

(f) The following should be documented as regards the psychological assessment: -

(i) The procedures followed

(ii) The personnel involved

(iii) The assessment criteria and instruments used in the assessment

(h) **The commercial aircraft operators that have a full-time equivalents (FTEs) workforce of 20 or less flight crew, may replace this detailed psychological assessment with an internal assessment of the psychological attributes of the flight crew/ATCO.** The internal assessment for these organisations/operators should as far as possible apply the same principles as the psychological assessment.

## 5. **Clinical Psychology and Psychiatry Evaluation**

5.1 Whenever, there arises concerns regarding the mental state of a flight crew or ATCO that has direct or indirect effect on his or her performance and ability to operate safely (such as after an incident or accident or as assessed by the peer support programme), a detailed clinical mental health assessment needs to be undertaken at one of the Indian Air Force Boarding Centres. Such cases shall be referred by the organisation to DGCA Medical Directorate for permission for 'Special' medical examination.

5.2 In the event of the below mentioned circumstances, the organisation (scheduled or non-scheduled operator, FTO or AAI) must refer the employee for further evaluation at DGCA designated boarding centres through DGCA Medical Directorate: -

(a) If the organisation after due assessment by company doctor/ clinical psychologist have concerns about the mental health.

(b) Detecting something during routine medical assessment that may impact his/her cognitive functioning.

(c) In case a flight crew or ATCO 'self-reports' prolonged sleep disturbance, undue stress etc. or has recently experienced stressful life events like divorce, death of family member etc. after due assessment by peer group/company doctor/ psychologist.

(d) If the flight crew or ATCO reports symptoms of any cognitive impairment.

5.4 **Questionnaires and Checklists.** At IAF Boarding Centres, the following questionnaires and checklists may be administered/used for further mental health screening. These are standardized and abridged versions used extensively world over by doctors and aviation psychologists. The tests indicate the need for referral to seek professional help i.e. psychiatrist/ psychologist:-

(a) Warwick Edinburgh Mental Well-being scale

- (b) Patient Health Questionnaire (PHQ-9)
- (c) The Altman Self-Rating Mania Scale
- (d) Ask Suicide-screening Questions (ASQ)
- (e) NIDA Quick Screen
- (f) Generalized Anxiety Disorder Assessment (GAD-7)

5.5 **Assessing Psychopathology**. Computerized tests and structured interviews can be very good at measuring the capabilities of an individual but they cannot assess the mental or emotional health. This requires the use of standardized mental health screening tools combined with a clinical psychological interview. Psychologists, who are experienced with the MMPI-2 and also have substantial knowledge of airline or ATC operations are key to using this inventory effectively. The flight crew/ATCOs may present themselves more favourably than the normal population. Because of this, the norms have to be adjusted to this population and strategies developed to deal with a group that may have elevated scores on the validation scales. The psychologist will not take any decision on fitness for return to flying or ATCO duties in isolation. It will be a combined decision of the Clinical Specialists, Psychiatrist and Aerospace Medicine Specialist at the DGCA Boarding Centre.

Sd/-  
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**Recommended 'general' and 'specific' questions about psychological functioning to be asked by the medical examiner during the medical examination of the flight crew or ATCOs**

<b>'General' Questions</b>	
1.	Have you had any difficulty concentrating recently?
2.	Do you read something and then have to re-read several times because you find you have not been concentrating?
3.	Do you struggle to follow TV programmes or the storylines in books and magazine articles?
4.	Do start a task then get distracted and forget to return to it?
5.	Have you noticed any problems with your memory recently?
6.	Do you frequently forget where you have put things?
7.	Do you have to go back and check whether you have done something?
8.	Do you leave appliances on or doors unlocked?
9.	Do you forget where you have placed things?
10.	Do you forget what people have told you?
11.	Do you repeat to others things you have just told them?
12.	Do you get lost in places you have been to many times before?
13.	Do you have difficulty picking up new skills?
14.	Do you forget appointments?
15.	Do you forget to pass on messages to people?
16.	Do you have difficulty making decisions?
17.	Do you get lost more often?
18.	Do you have difficulty finding your way around?

19.	Do you feel mentally slowed down?
20.	How would you describe your mood? Happy, sad, worried?

<b>'Specific' Questions</b>	
1.	Have you had any difficulty recalling instructions from air traffic control?
2.	Do you struggle to do things in the correct order/sequence?
3.	Do you forget which items have been completed & need to refer to checklists?
4.	Do you have difficulty doing more than one task at a time or switching between tasks?
5.	Have you forgotten whether you have completed certain tasks on the flight deck, e.g. whether the undercarriage has been lowered?
6.	Are you struggling to keep pace at work?
7.	Do you forget the names of colleagues you are working with?
8.	Do you forget information given to you by colleagues?
9.	Do you have difficulty navigating?