

THE ROLE OF PSYCHOLOGICAL PROVISION OF RECRUITMENT, TRAINING AND PROFESSIONAL ACTIVITIES OF CA PILOTS IN CONNECTION WITH FLIGHT SAFETY MEASURES IN THE RUSSIAN FEDERATION



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SHARING THE SKY SAFELY

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Disclosure

- There is no conflict of interest
- The review contains the selection of the material open to public use in the Russian Federation



Content

- Regulations
- Structure of psychological provision/specialists
- Requirements of psychological status for licensing
- Established procedure of psychological assessment
- New approaches



Regulatory documents

ICAO



“Manual on psychological provision of recruitment, training and professional activities of CA personnel”

«Medical assessment of flight crew members, air traffic controllers, flight attendants, student pilots and candidates entering educational institutions of CA”

The Air Code of the Russian Federation

The Rules for the Investigation of Accidents and Incidents with Civil Aircrafts in the RF

“Certification of Legal Entities Performing Medical Examination of Aviation Personnel”

“Methodological recommendations on qualification requirements for medical experts and psychologists of medical flight expert commissions of civil aviation”

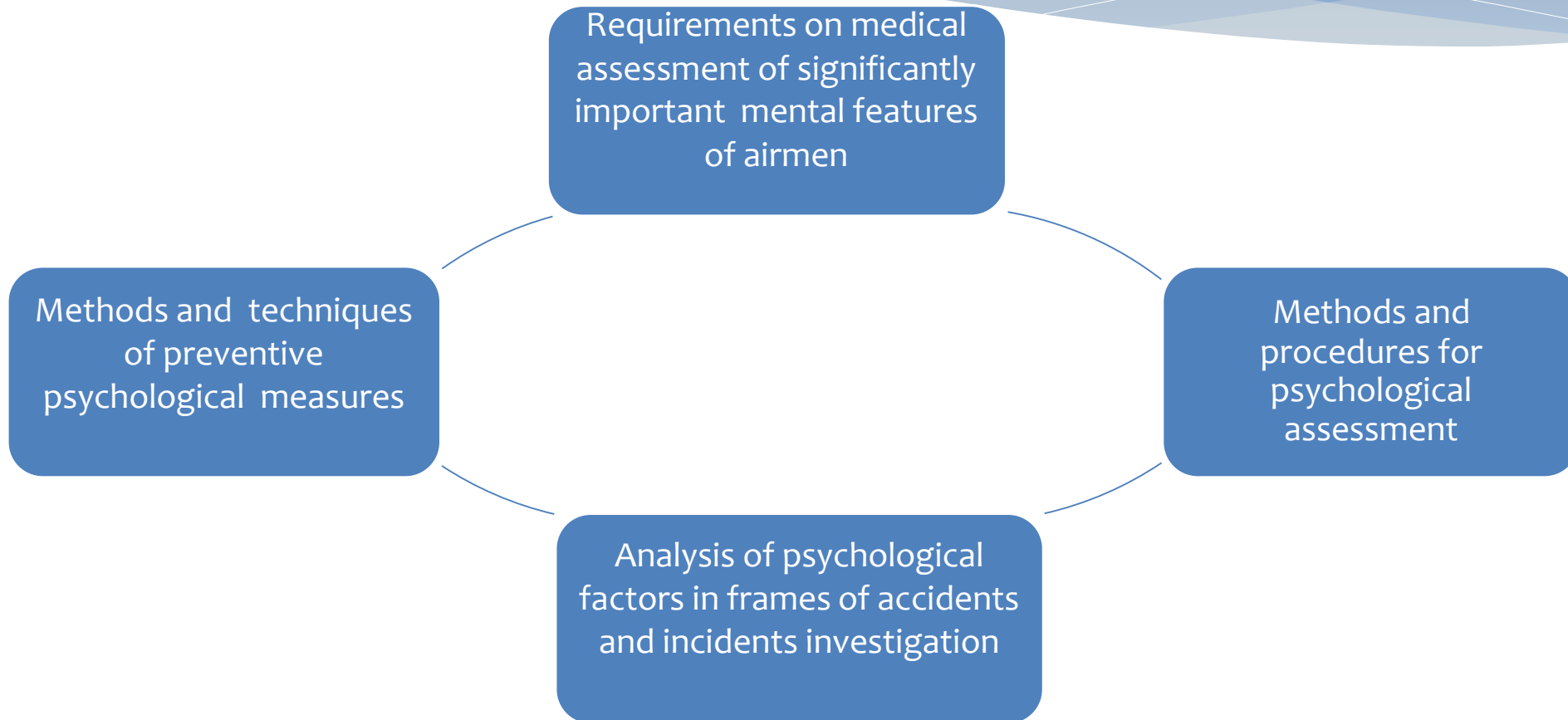


Regulation and provision

- The quality of assessment is ensured and controlled by the Air Transport Certification System of Russia (ATCSR)
- The assessment procedure is conducted by FEMC of Civil Aviation (CFEMC CA), designated by the Licensing Authority (ATCSR)
- FEMC CA consists of the following members: the chair of the commission, experts (physician, neurologist, surgeon, otolaryngologist, ophthalmologist) and psychologist



The system of psychological provision in Civil Aviation includes:



The system involves the following specialists in aviation psychology:

- a psychologist of FEMC
- a psychologist of an airline
- a psychologist of a civil aviation educational institution



Obligatory psychological examination

- among candidates entering educational institutions

(to be trained as pilots, navigators, engineers, ATCOs) as well as to student pilots if a break from studies is longer than 4 months

- among airmen after 50 years old

- in case of a break from work longer than 4 months

- when being retrained or promoted for a new position

(a pilot-in-command, pilot instructor, ATCO instructor, senior ATCO, flight director)

- when assigned to take part in Polar expeditions and countries with hot climate

- when taking an in-patient examination

- under referral



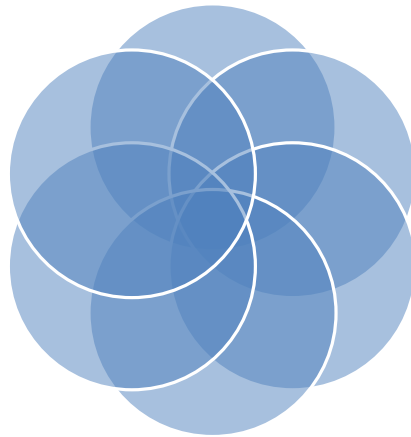
Medical grounds for referral for Psychological Assessment :

Medical conditions

suspected epilepsy

psychopathy,
personality and
behavioral
disorders, neurosis

short-term
somatogenous
psychiatric
disorders



residual signs of
central nervous
system diseases

various degrees of
sustained traumatic
brain injury

signs of
atherosclerosis and
hypertension

Suspected alcohol and
psychoactive substances abuse

Reinstatement to work after
treatment for alcohol addiction

* Additional medical examinations, including psychological: after illness or trauma, long-term vacations, incidents or accidents, and temporal grounding at pre-flight medical check-ups

* All pilots take obligatory additional psychiatric examination (complimentary to FEMC) at specialized psychiatric institutions when being initially employed and once in 5-year period

Established procedure

conversation

observation

personal
profile data
analysis

psychological
tests

conclusion

Two main types (standard approved methods)

- Assessment of cognitive skills and higher mental functions
- Assessment of personal psychological traits

Battery tests

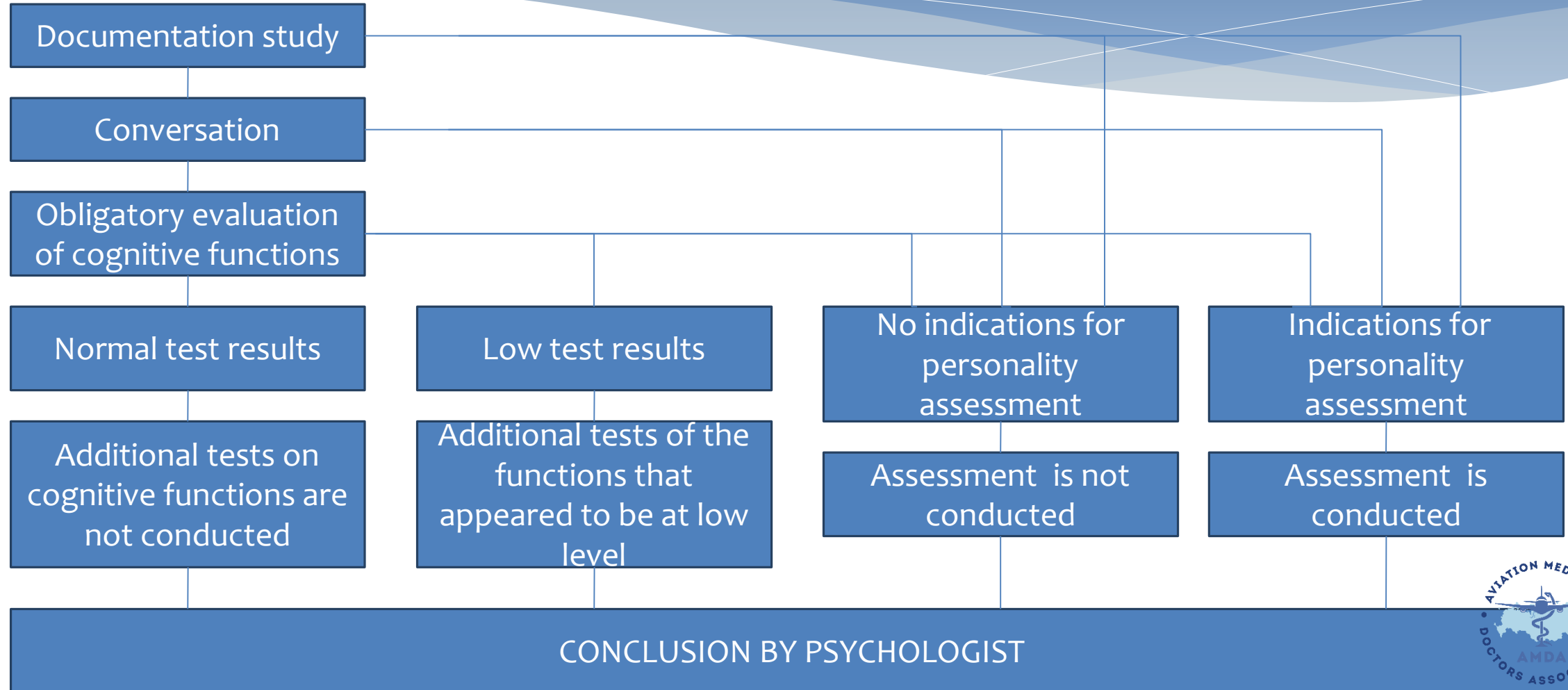
-Printed forms
-Automated versions
(e.g Cogscreen)

-Group
-Individual

-Obligatory
-Additional



OVERVIEW OF PSYCHOLOGICAL ASSESSMENT PROCEDURE



New Paradigm of Psychological Provision

Directions of psychological provision

Corporate Culture Development	Psycho diagnostic Assessment	Training	Follow-up Support	Analytical Activities
Developing the sense of commitment, positive thinking, team spirit; increasing the level of self-awareness	Evaluation on compliance of psychological features of aviation personnel with the operational requirements. Building-up professional forecasts	Psychological training. Development of professionally significant personal features through psychological methods	Psychological support of personnel activities, their mental health and high performance. Conflict Management	Psychological evaluation of mistakes, disruption, causes of accidents and incidents in aviation. Analysis of moral and psychological state



Influence of using the distracting types of activities on speed of switching into hand-on controlled flight

Feature of failure	Time of reaction (sec)	Speed of switching into "hand-on" controlled flight
Hydraulic system failure	1.7±0.21	1.9±0.35
Hydraulic system failure + studying FCOM	2.5±0.5	3±0.28
Low pump pressure + game	3.9 ±0.76	10.8±1.32
non-signaled FGS failure + conversation making	0.78±0.4	1.2±0.08

1. 89% of pilots report the deterioration of attention and emerging monotony during horizontal flight;
2. 72% of pilots practice different types of parallel activities to stay alert, including:
 - * - 19 % read FCOM (Flight Crew Operating Manuals)
 - * - 37% play games
 - * - 8% do special physical exercise
 - * - 21% read fiction books
 - * - 15% have conversation on every day topic

An airline operator psychologist responsible for

- providing psychotherapeutic, rehabilitation measures and checking examinations if necessary
- organizing psychotherapeutic assistance to the personnel who have experienced psychological stress at work or during off-duty circumstances
- keeping records of primary data and conclusions of psychological testing as well as providing those data for generalizations and scientific research
- interacting with the psychologist or the chairperson of the FEMC on provision of additional information to be used for proper diagnostic and relevant assessment of license holders
- collaborating with the airline administration on psychological selection when hiring new employees as well as in nominating employees for retraining, appointment to superior and instructor positions
- providing recommendations for administration on improvement of a psychological environment, selection and preparation of psychologically compatible crews (shifts)
- identifying fatigue risks among the crews on flights (charter flights), recommending additional measures on flight safety
- participating in investigation commissions
- providing psychological training for aviation personnel



Ways to improve: Proposal for the Russian Federation

- Peer Support Programme
- Collaboration with aviation specialists from around the world and sharing ideas and experience



Ways to improve



Thank you for your attention!



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