



## Overview of the ICAO Aviation Medicine Section and the outcomes of the 41st ICAO Assembly

December 2022

Dr Ansa Jordaan,  
Chief Aviation Medicine Section



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## ICAO: UN specialized agency – 1944

- Safe & orderly development of international civil aviation
- Headquarters in Montréal, Canada
- 7 Regional offices
- 193 Contracting States
- International Convention
- 19 Annexes with Standards and Recommended Practices (SARPs)
- Additional guidance material, implementation assistance and audits





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Medical specialty which combines aspects of **preventive**, **occupational**, **environmental** and **clinical** medicine with the **physiology** and **psychology** of man in flight





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## Aviation Medicine complexity

- Standards generating and oversight: ICAO
- Regulatory and oversight: National Aviation Authorities
- Medical assessment: aviation medical examiners and medical assessors
- Assessment for certification vs. clinical assessment
- Individual crew vs public safety
- Technical, operational & human elements
- Multiple hazards: physiological, physical disease, psychological, chemical, environmental, behavioural
- Objective vs subjective assessments



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## Application of Aviation Medicine

- Health promotion
- Medical fitness
  - evidence-based medicine
  - operational environment
- Apply safety risk management principles
- Human Performance considerations
- Remote operations

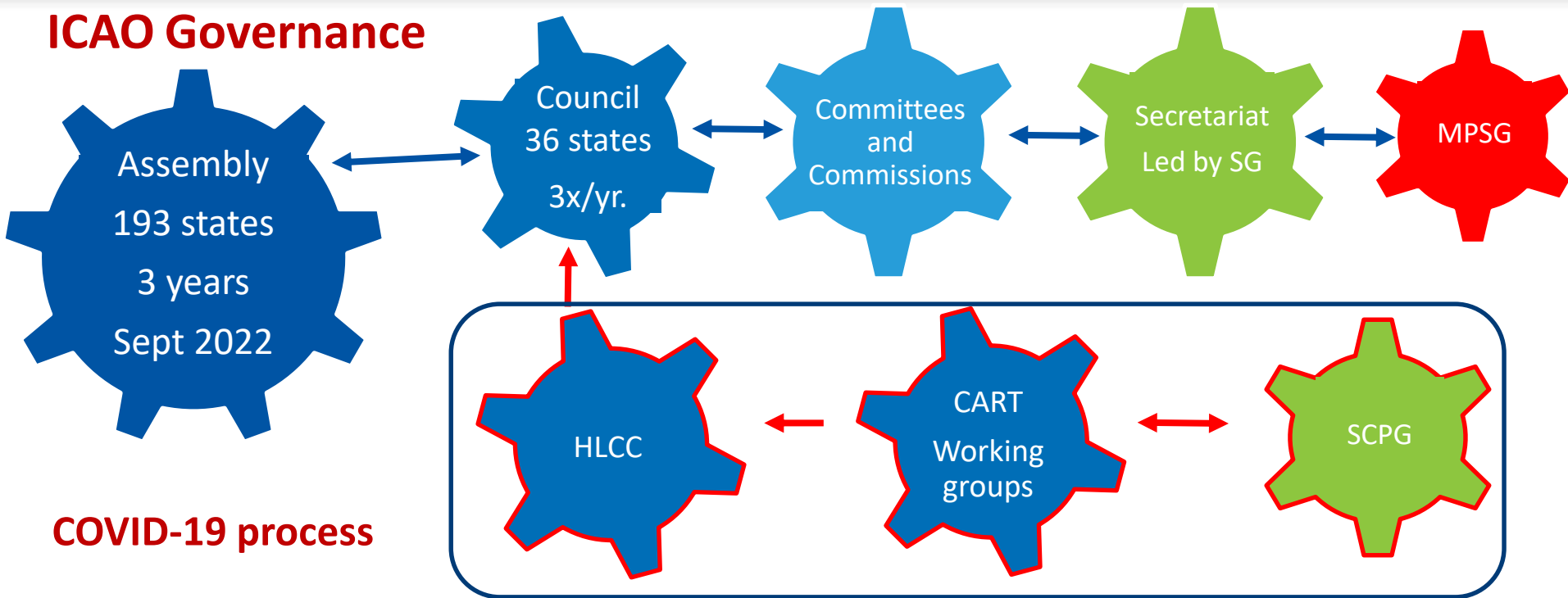


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## ICAO Governance





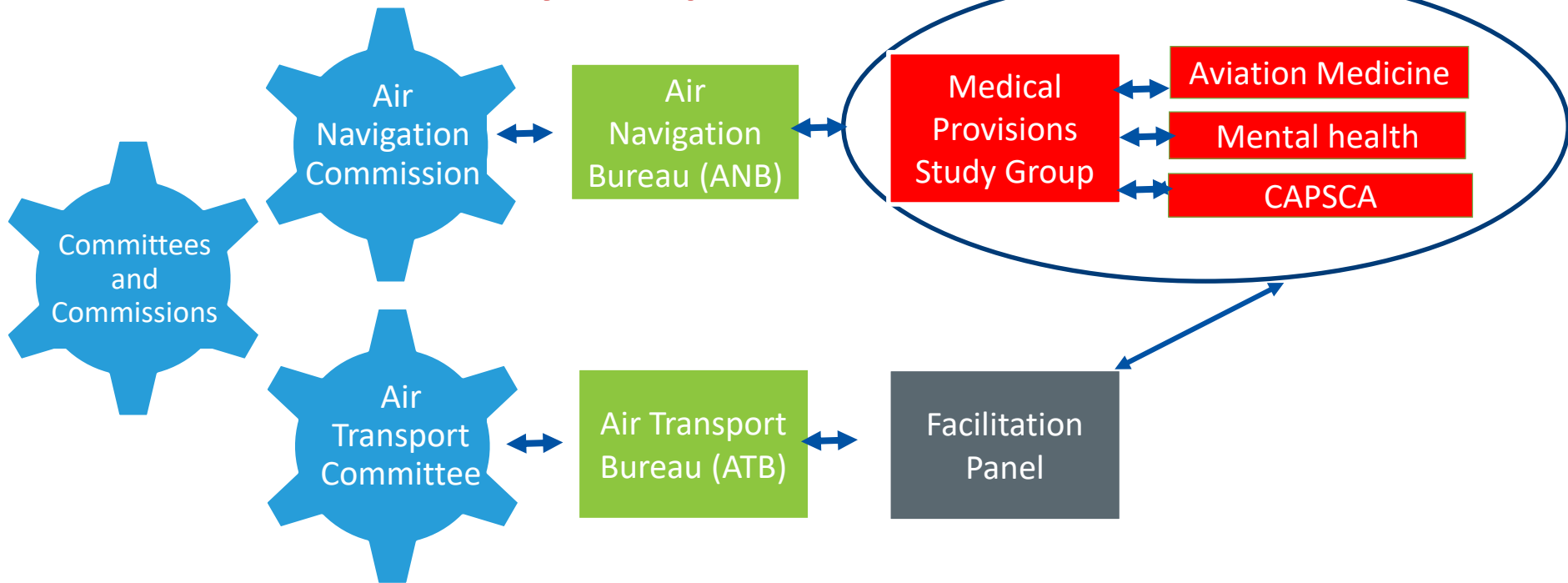


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## Medical Provisions Study Group





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## MPSG and SARPs

### **Aviation Medicine**

Regulatory

Health promotion

Occupational health

Annex 1: Personnel Licensing

Annex 6: Operation of Aircraft

Annex 13: Accident Investigation

Annex 19: Safety Management

Manual of Civil Aviation Medicine (8984)

Manual: Substance use (9654)

Manual: Safety Management (9859)

Manual: Laser Emitters





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## MPSG and SARPs

**Mental health and  
Human performance**

Annex 1: Personnel Licensing  
Annex 13: Accident Investigation  
Annex 19: Safety Management  
Manual: Civil Aviation Medicine (8984)  
Manual: Alcohol & substances (9654)  
Manual: Human Performance (10151)  
Manual: Safety Management (9859)



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## MPSG and SARPs

**Public Health**

Convention Article 14

Annex 6: Operation of Aircraft

Annex 9: Facilitation

Annex 11: Air Traffic Services

Annex 14: Aerodromes

Annex 18: Dangerous Goods

PANS-ATM (4444)

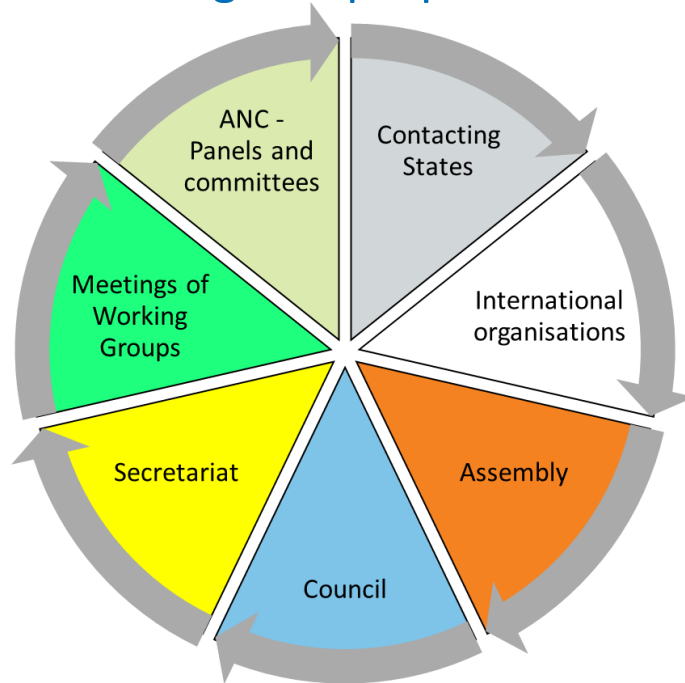
COVID Risk Management Manual

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## Developing SARPs

Origin of proposal



### 1: Development phase

Secretariat develop technical proposal

Preliminary review by ANC

### 2: Review phase

Contracting States, international organizations

Secretariat analysis

ANC final review

### 3: Adoption phase

ANC approval/ recommendation

Council approval/ adoption

### 4: Publication phase

States can disapprove or file a difference

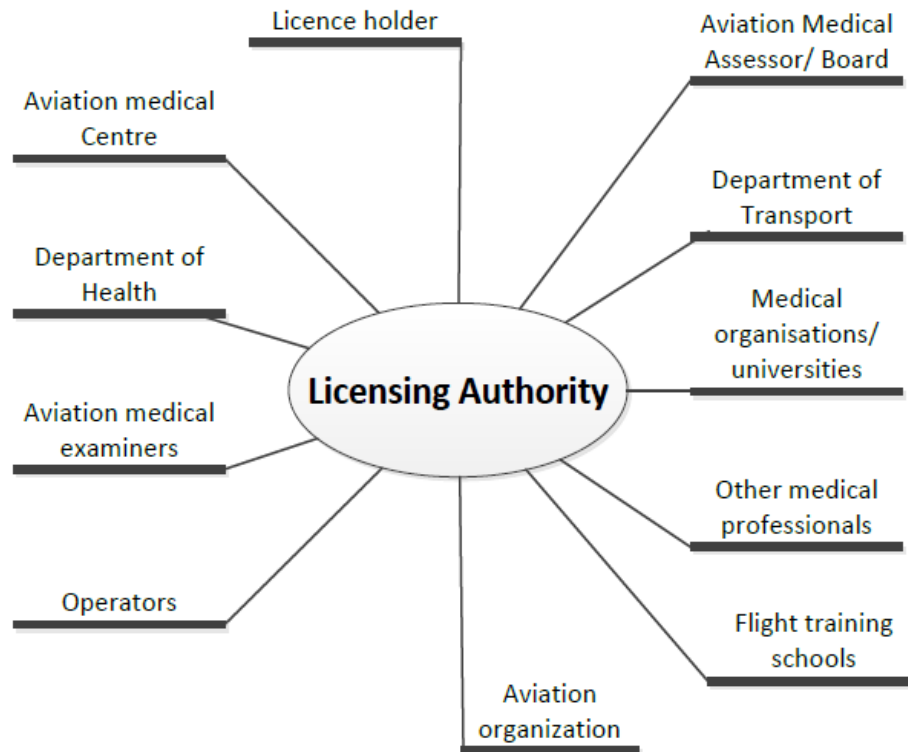
Applicability date



## Licensing Authority

### Rationale for regulations and protocols

- Safety
- Preservation of health
- Operational efficiency
- Economical sustainability
- Reputation





## General ICAO expectations from CAAs

- Compliance with SARPs - file a difference with ICAO if unable to comply
- Report significant safety concerns
- Comply with actions required in State Letters
- Consider information communicated in Electronic Bulletins for potential implementation
- Participate in global and regional meetings
- Contribute to panel and study group meetings
- Report information requested from ICAO
- Establish national coordination frameworks and consult with other sectors
- Consider aviation bilateral/ multilateral agreements with other States



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## Medical Assessments: apply basic safety management principles

- analysis of in-flight incapacitation events
- analysis of medical findings during medical assessments
- identify areas of increased medical risk
- health promotion/ communication of identified areas
- continuous re-evaluation of the process to address areas of increased medical risk





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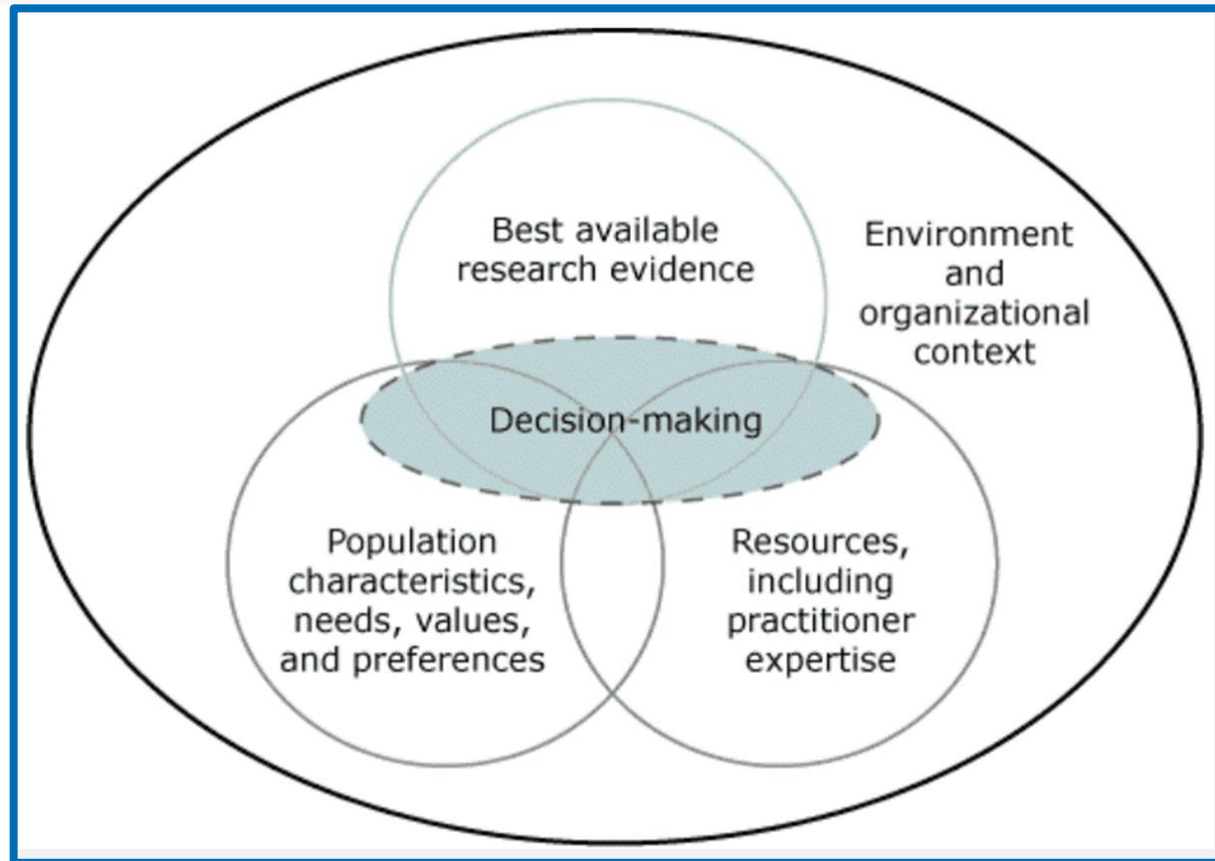


## Medical Assessments: Issue or renew medical certificates

- applicant meets all requirements
- applicant fails requirement, but accredited medical conclusion indicates that is not likely to jeopardize flight safety (type of licence applied for)
- ability, skill and experience of the applicant & operational conditions have been considered
- the licence is endorsed with any special limitation or limitations to enable safe performance



## Considerations





## Psycho-social safe environment to AMEs and applicants

- Transparent certification process
- Based as far as possible on scientific evidence
- Applicants treated fairly by the Authority
- Make efforts to keep the applicant operating wherever possible by those having decision-making authority
- Accredited medical conclusion



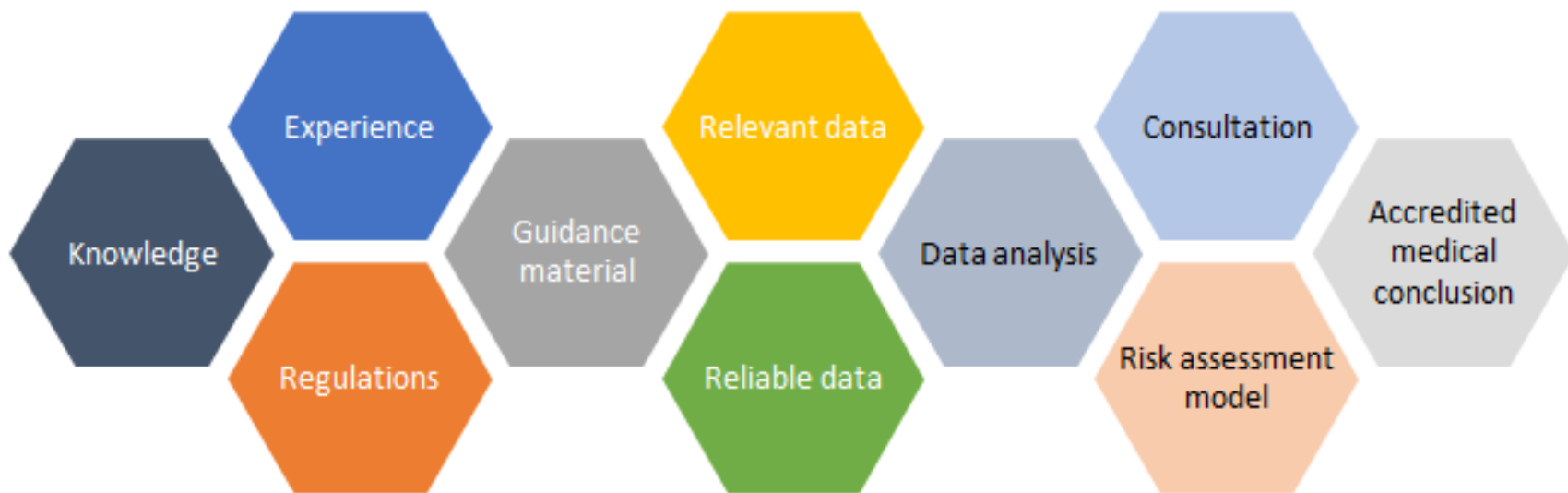
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## Accredited medical conclusion

The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.





## Accredited medical conclusion

- Flexibility may be exercised only in the exceptional case.
- Decision should be documented in each individual case, and it should show how a particular decision was arrived at
- The provision of a degree of flexibility must not lead to a situation where its use becomes the rule rather than the exception.
- When evidence indicates that flexibility is being discussed repeatedly in a particular area, then the appropriateness of regulations defining the medical requirements needs to be reviewed



## Practical testing

- Should have resources or arrangements to do special practical testing (includes simulators)
- May be necessary to restrict licence to the type of aircraft in which the applicant has demonstrated competence
- Medical flights or other practical tests can be utilized in a number of areas
- The presence of a medically qualified pilot on the check flight adds significant value (including subsequent assessments and reporting)
- Operational restrictions should only be established after consultation with flight operations experts



## Medical Assessor (MA)

- A physician, qualified and experienced in the practice of aviation medicine
- Expected to maintain the currency of their professional knowledge
- Normally have advanced training in the specialty of aviation medicine
- Extensive experience in regulatory and clinical civil aviation medicine
- Desirable, as a minimum, at least ten hours per year of flight deck time
- Employees of/ or consultants for the Licensing Authorities
- Supervise Aviation Medical Examiners



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## Medical Assessor (MA)

- Competent in evaluating and assessing medical conditions of flight safety significance
- Evaluate medical reports submitted by medical examiners
  - Audit of medical reports by designated medical examiners
  - Final assessments in borderline cases
  - Will normally be in charge of Accredited Medical Conclusions
- Refresher training of medical examiners usually within their remit

Note: Significance = to a degree or of a nature that is likely to jeopardize flight safety



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## Aviation Medical Examiner (AME): Requirements

- A physician with training in aviation medicine
- Practical knowledge and experience of the aviation environment
  - examples: flight experience, simulator experience, on-site observation or any other hands-on experience considered acceptable by CAA
  - include, whenever possible, actual flight deck experience in aircraft engaged in commercial operation
  - Include experience in the operational working conditions of air traffic controllers



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## Question for discussion

What are the expectations from MAs and AMEs from CAA and ICAO?



## The outcomes of the High Level COVID Conference and the 41st ICAO Assembly





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- 1,786 representatives from 129 Member States and 38 international organizations
- 56 Ministers and Deputy Ministers from 52 Member States, 24 heads of international organizations
- Safety Stream: 152 papers and 147 recommendations
- Facilitation Stream: 73 papers and 79 recommendations
- Aviation Medicine under Item 1.4: The impact of COVID-19 on operational fitness





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## Ministerial Plenary:

Declaration adopted that demonstrates the solidarity and determination in confronting COVID-19 challenges, and conveys a strong political “message” to international communities and world economies



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## Recommendations to ICAO

- expedite the work on mental health issues to support its awareness, education and training initiatives ; and
- consider the need for additional guidance for aviation stakeholders, and specifically for aviation medical examiners and medical assessors, regarding COVID-19 fitness for duty protocols based on risk assessment.



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## Recommendations to States

- implement a “culture of open disclosure” for substance use disorders and mental health issues;
- recognize and investigate the potential impact of the COVID-19 pandemic on the physical and mental health well-being of aviation safety personnel and share relevant data and findings
- make resources available, in conjunction with aviation stakeholders, aviation medical departments and industry, for a variety of wellness programmes, such as employee assistance programmes (EAP) and peer support programmes for all aviation employees;

## Recommendations to States

- in collaboration with aviation stakeholders, make wellness programmes, EAP and peer support programmes accessible to all categories of aviation employees;
- collaborate with aviation stakeholders to make wellness programmes accessible to operators who might not be able to implement their own;
- support awareness, education and training initiatives to address mental health issues as part of a comprehensive health and well-being programme;
- consider the guidance of ICAO on the medical or psychological assessment of licence-holders who have been infected with COVID-19;
- promote return-to-work practices that include addressing all aspects of fitness for duty.



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## Recommendations from the Assembly

- Possible development of a lower tier, fit-for-purpose, set of medical provisions for remote pilots
- Review the approach to medical certification due to mental illness
- Develop a standardized approach to surveys relating to medical fitness for aircraft maintenance personnel.
- Develop and support implementation of appropriate aviation-related health promotion for licence holders





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## Proposed Aviation Health Management Plan

- Developed under the direction of the MPSG
- Comprehensive management of health in aviation
  - medical certification of aviation licence holders
  - safeguarding the health and safety of aviation personnel and passengers
  - supporting aviation personnel in the performance of their duties
  - supporting the continuous, safe, and orderly operation of global air services during public health events



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## Proposed PANS - Health

- A comprehensive aviation health resource with relevant processes and procedures
- *Procedures for Air Navigation Services (PANS) – Health* document
- Supplementing the ICAO SARPs
- Supported by a digitized information sharing platform
- Several parts/ modules e.g. Health Risk Assessment Models in aviation, Occupational Health Principles in aviation, Health Promotion in aviation, Mental Health in aviation, Passenger health during the journey, etc.



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Thank you for your attention