



WORKING PAPER

ASSEMBLY — 42ND SESSION

TECHNICAL COMMISSION

Agenda Item 24: Aviation Safety and Air Navigation Priority Initiatives

**ADVANCING EVIDENCE-BASED POLICY THROUGH STANDARDIZED DATA
COLLECTION FOR AVIATION PERSONNEL**

(Presented by Canada and co-sponsored by Australia, New Zealand and
the United Kingdom)

EXECUTIVE SUMMARY

The Aviation Medicine Survey presented in State letter AN5/16.1-24/77 revealed a lack of consistent and meaningful data for licenced aviation personnel. This working paper explores potential next steps to advance evidence-based decision-making in the development of ICAO Standards and Recommended Practices (SARPs), including the collection of a minimal data set in a standardized format for aviation personnel. Collecting consistent data would unlock opportunities for policy and regulatory change based on real-world data and trends, including the upper age limit of pilots.

Action: The Assembly is invited to request the ICAO Council to:

- a) request ICAO to direct existing expert groups, such as the Aviation Medicine Working Group, to define a core set of essential data points needed to support evidence-based decisions related to pilot licensing and medical fitness;
- b) request ICAO to create a standardized and user-friendly process for collection of these data points from Member States, having regard to State requirements governing the collection and dissemination of such information; and;
- c) request Member States to participate, in a manner consistent with applicable State requirements, in the collection and submission of the determined data points on a schedule to be established by ICAO.

<i>Strategic Goals:</i>	This working paper relates to Strategic Goals <i>Every Flight is Safe and Secure</i> .
<i>Financial implications:</i>	The ICAO activities referred to in this paper are expected to be undertaken within the resources available in the 2026-2028 Regular Programme Budget.
<i>References:</i>	State letter AN 5/16. 1-24/77

1. INTRODUCTION

1.1 Evidence-based decision-making bridges the gap between research and practice to ensure the civil aviation community is progressing with relevant, effective and reliable policies and regulations.

1.2 In the formulation of Standards and Recommended Practices (SARPs) for Personnel and Licencing, ICAO and its Member States are fortunate for the wealth of knowledge possessed by subject-matter experts; however, in some areas, there is a lack of sufficient real-world data to inform decision-making.

1.3 State Letter AN 5/16.1-24/77, *Review of the upper age limit for pilots engaged in commercial air transport operations*, sought medical data from Member States to review the upper age limit for pilots conducting international commercial air transport operations. The State Letter requested Member States to complete an Aviation Medicine Survey that examined methods of data collection/record keeping, processes for medical assessment, and medical outcome data classified by pilot age.

1.4 The survey results concluded that there was insufficient consistent data to proceed with recommendations for a change in the global upper age limit for commercial pilots. Although the intended outcome of the survey was not achieved, this exercise presented ICAO with an opportunity to consider data collection recommendations to support future policy work as it pertains to Annex 1.

2. OPPORTUNITIES AND CHALLENGES FOR DATA COLLECTION

2.1 ICAO has the potential to gather a vast amount of data related to licensed aviation personnel from its Member States; however, as the Aviation Medicine Survey demonstrated, there are issues with the consistency of data collection and the corresponding significant effort required to transform available data into meaningful, actionable insights. To modernize licencing and aviation medicine SARPs using an evidence-informed approach, ICAO requires a broad base of meaningful data to understand the aviator population, including data related to demographic and aviation medicine trends. Defining standardized data collection points will significantly improve the quality and breadth of information available to ICAO.

2.2 To support effective data collection and analysis, the development of a minimal data set in a standardized format must be paired with a simplified, practical collection method as well as a data transmission mechanism. Respecting the privacy laws of Member States and collecting only the agreed upon, aggregate and de-identified information will need to be considered.

3. MINIMAL DATA SET FOR POLICY DEVELOPMENT AND A REGULATORY SANDBOX

3.1 A minimal data set for aviation personnel should focus on two key priorities: 1) addressing the data gaps identified in the Aviation Medicine Survey, particularly those related to pilot age, and 2) supporting future work on licensing SARPs. ICAO's existing expert groups are well positioned to define these data points.

3.2 The Aviation Medicine Survey highlighted several relevant data categories, including age distribution, medical conditions, reasons for disqualification, and incapacitation, and which were organized by licence type. These areas offer a strong foundation for creating a standardized data set.

3.3 Establishing a consistent and widely adopted data set will empower ICAO and Member States to explore innovative policy approaches, such as regulatory sandboxes, with greater confidence and clarity. This would allow for pilot age to be re-examined after a few years of data collection in an informed way, helping to ensure that civil aviation policy continues to evolve in a data-informed and forward-looking manner.

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