

**Supporting Statement B**  
**Survey of Airmen Satisfaction with Aerospace Medical Certification Services**

---

**B. Statistical Methods**

**1. Describe the potential respondent universe.**

- CAMI personnel initiate the survey biennially by first compiling a pool of potential survey participants from a subset of applicants from AMCS using the non-PII and PII criteria below:
  - o Domestic, non-military pilots only.
  - o Applied for medical certification:
    - First class medical - applied within past 7 months.
    - Second class medical - applied within past 13 months.
    - Third class medical - applied within past 25 months.
  - o Application Status (issued, denied, or deferred).
- CAMI via an authorized contractor (Cherokee Federal; Cherokee) receives data about potential respondents from AMCS and:<sup>1</sup>
  - o Stratifies the data to ensure participants are representative across the different types of medical certifications (i.e., ensure that airmen of all medical classes are surveyed) and on Certification Issued (i.e., issued, denied, or deferred).
  - o Selects airmen from the stratifications to contact for participation (i.e., sample a smaller set of airmen to be surveyed).
- Potential respondents will be invited to participate by e-mail and/or postal mail.
- The potential universe of potential respondents is listed in the table below. Student and recreational airmen (pilots) are not included in the population of interest for this survey.

**Universe of Potential Respondents**

<b>Airman Certificate Privilege Level</b>	<b>Medical Certificate Class All Applicants</b>			
	<b>1st Class</b>	<b>2nd Class</b>	<b>3rd Class</b>	<b>TOTAL</b>
Airline Transport Pilot	198,601	11,624	3,805	<b>214,030</b>
Commercial Pilot	101,730	25,675	8,853	<b>136,258</b>
Private Pilot	47,897	7,255	63,204	<b>118,356</b>
<b>TOTAL</b>	<b>348,228</b>	<b>44,554</b>	<b>75,862</b>	<b>468,644</b>

*Note:* based on estimates from the 2021 and 2023 administrations projected to 2025.

- The table below outlines the number of surveys that need to be received from each of the nine groups using a 95% confidence level and  $\pm 3\%$  margin of error.
  - o A total of 5,572 surveys will need to be received from all groups combined.

**Returns Required for 95% Confidence Interval and  $\pm 3\%$  Margin of Error**

<b>Airman Certificate Privilege Level</b>	<b>Medical Certificate Class All Applicants</b>			
	<b>1st Class</b>	<b>2nd Class</b>	<b>3rd Class</b>	<b>TOTAL</b>
Airline Transport Pilot	747	450	501	<b>1,698</b>
Commercial Pilot	735	617	594	<b>1,946</b>

---

<sup>1</sup> See the Privacy Threshold Assessment (PTA) associated with this data collection for further details.

Private Pilot	717	464	747	<b>1,928</b>
<b>TOTAL</b>	<b>2,199</b>	<b>1,531</b>	<b>1,842</b>	<b>5,572</b>

*Note:* based on estimates from the 2021 and 2023 administrations projected to 2025.

- The values provided in the table above were used to determine how many surveys would need to be distributed to reflect the population of each Medical Certificate class applied for and each Airman Certificate privilege level.
- The table below outlines the number of surveys that need to be distributed to each of the groups to achieve a 95% confidence interval,  $\pm 3\%$  margin of error, and an expected 35% response rate.
  - o Previous administrations of this survey indicated a response rate of approximately 35% for the 2025 collection. The response rates for the last 3 administrations were:
    - 2018: 48.2%
    - 2021: 45.9%
    - 2023: 39.5%

**Sample Required for 95% Confidence Interval,  
3% Margin of Error, and Expected 35% Response Rate**

	<b>Medical Certificate Class All Applicants</b>			
<b>Airman Certificate Privilege Level</b>	<b>1<sup>st</sup> Class</b>	<b>2<sup>nd</sup> Class</b>	<b>3<sup>rd</sup> Class</b>	<b>TOTAL</b>
Airline Transport Pilot	2,134	1,034	1,186	<b>4,354</b>
Commercial Pilot	2,100	1,660	1,634	<b>5,394</b>
Private Pilot	2,048	1,098	2,134	<b>5,280</b>
<b>TOTAL</b>	<b>6,282</b>	<b>3,792</b>	<b>4,954</b>	<b>15,028</b>

*Note:* based on estimates from the 2021 and 2023 administrations projected to 2025.

- A sample of approximately 15,028 participants will be required.

## **2. Describe the procedures for the collection of information.**

*Statistical methodology for stratification and sample selection:* A random stratified sampling strategy will be used in this information collection. The stratification variables will be class of Medical Certificate applied for by the airman (i.e., Class 1, 2, or 3) and the Airman Certificate level (i.e., Air Transport Pilot, Commercial Pilot, or Private Pilot) as reported in the Airman Medical Certification System (AMCS). The sample will be additionally stratified by outcome: whether the airman's Medical Certificate was Issued, Denied, or Deferred.

Stratification by Airman Certificate will be based on the highest privilege level held by the airman at the time of application for a Medical Certificate. Stratification by Medical Certificate will be based on the class for which the airman applied.

*Estimation procedure:* The estimated sample size was based on the population of each cell. Sample estimates were developed to achieve a 95% confidence level and  $\pm 3\%$  margin of error.

*Degree of accuracy needed:* A margin of error of  $\pm 3\%$  will meet the requirements of this project.

*Unusual problems requiring specialized sampling procedures:* None.

*Any use of periodic (less than annual) data collection cycles to reduce burden:* To reduce burden, the survey will be conducted every two years.

### **3. Describe methods to maximize response rates.**

#### *Methods to maximize response rates:*

- The notification/invitation message will include a message worded to engage the airmen's interest, the reasons for the survey, and the benefits that they will receive from participating.
- The survey will be made available online to better match popular communication modes (e.g., computers, tablets, smartphones) when compared to other modes such as phone or postal mail.
  - o Airmen have generally moved to electronic flight bags (EFBs; e.g., Apple iPads) to contain their flight documents, supporting the idea of increased general comfort level with online forms and surveys.
- Email reminders ( $n=4$ ) of the survey will be sent to all airmen who have not completed the survey. Reminder emails will be sent to nonresponders at two-week intervals during the data collection period.

#### *Methods to assess generalizability:*

- Non-response analyses will be conducted using demographic data available in the AMCS system, including: Medical Certificate class applied for, status of application, Airman Certificate privilege level, gender, and geographic region.
- If survey respondents differ significantly from the population, weighted sample procedures will be used to mitigate the bias.

### **4. Describe tests of procedures and methods to be undertaken.**

No beta testing will be conducted as the survey has been administered before.

### **5. Provide the names of consultants and the person who will collect and analyze the information.**

The survey development and analysis will be conducted under the direction of Dr. Katrina Avers, a Branch Manager at the FAA at the Civil Aerospace Medical Institute, Oklahoma City, Oklahoma, phone (405) 954-6299 ([Katrina.Avers@faa.gov](mailto:Katrina.Avers@faa.gov)).

The survey will be distributed and the data will be collected by a survey contractor, Cherokee Federal. The point of contact for this data collection will be Suzanne Thomas ([Suzanne.CTR.Thomas@faa.gov](mailto:Suzanne.CTR.Thomas@faa.gov)).