SUPPORTING STATEMENT – PART B

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Description of the Activity

The purpose of the proposed study is to conduct a qualitative study of US Air Force active-duty pilots, US Air Force trainee pilots, civilian collegiate aviation students, and commercial airline pilots. Data collection will focus on the following: (1) factors that negatively influence healthcare utilization and aeromedical disclosure during screening, (2) factors that support healthcare utilization and aeromedical disclosure during screening, and (3) factors that can be modified to address pilot healthcare avoidance from a pilot's perspective to inform future prospective research.

Sampling will take place through a snowball strategy with IRB approved study enrollment posters and online publications available with flight medicine clinics at approved military treatment facilities, military flying unit common spaces (such as a briefing room), online listservs of the approved civilian aviation university. Enrollment will take place on an online forum and the qualitative interview will take place via an approved video conferencing software.

We anticipate up to 100 participants in the online enrollment platform and the same number participating in the online virtual interviews. We expect a response rate of 25% for the online enrollment platform based on informal discussions with relevant stakeholder leaders.

2. Procedures for the Collection of Information

The present study is a qualitative descriptive study. No statistical methods or sampling strategies are anticipated to be employed.

3. Maximization of Response Rates, Non-response, and Reliability

To maximize response rates to the online enrollment platform, all IRB approved study recruitment materials will state the general purpose of the study and a statement encouraging potential participant enrollment. Stakeholders to include flying unit leaders (for USAF populations) and university faculty will be asked to distribute recruitment materials for their respective populations.

4. Tests of Procedures

Audio-recordings of the interviews will be transcribed verbatim for analysis. Qualitative analyses will be conducted using NVivo Version 12 (QSR International Pty Ltd.) or other approved similar software. Qualitative analysis of the interviews will entail thematic content analysis, including the constant comparative method, which involves deriving basic concepts from data and comparing them with other data to facilitate meaningful categorization (1-2). To ensure rigor in this process, two researchers will independently code a subset of the interviews and then compare their subcodes, resolving any coding discrepancies through discussion until reaching consensus to finalize the codebook. Both researchers will then use the codebook to code the entire dataset. Subsequently, a series of meetings will be held with members of the larger research team to identify further themes. Semi-structured interviews will allow for a novel, in-depth investigation into the issues surrounding pilots' perceived barriers to seeking medical services, as well as recommended strategies for overcoming these barriers. We expect the cited number of interviews from each group will be sufficient to reach thematic saturation, where little to no new information is uncovered (3).

5. <u>Statistical Consultation and Information Analysis</u> (1-4 sentences)

No additional consultation apart from soliciting public comments through the Federal Register was conducted for this submission.

1. Lindlof R: Qualitative Communication Research Methods. Thousand Oaks, CA, Sage Publications, 1995.
2. Strauss A, Corbin JM: Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory, Ed 4. Thousand Oaks, CA, Sage Publications, 2014.
3. Morse JM, Barrett M, Mayan M, Olson K, Spiers J. Verification strategies for establishing reliability and validity in qualitative research. International Journal of Qualitative Methods 2002;1(2):1-19.