

REPORT  
OF  
THE NATIONAL INSTITUTE ON AGING  
PANEL ON THE EXPERIENCED PILOTS STUDY

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## AN APPROACH TO CHANGING THE AGE 60 RULE

### INTRODUCTION

The members of the NIA Panel on the Experienced Pilots Study are grateful to those members of the Congress who provided clarifying comments concerning Public Law 96-1/1 during the course of the Panel's deliberations. In the previous sections of this report, the Panel has attempted to be responsive to the questions posed in the Act. In doing so, it has been mindful of the interest of the Congress in the best possible interpretation of available data even though these data are not entirely adequate to answer the questions posed by the legislation.

In its attempt to propose a rational program for ongoing surveillance of older pilots while always keeping in mind the need to insure the highest level of safety, the Panel encountered serious problems. The data for this type of endeavor simply do not exist. Furthermore, the Panel must emphasize that neither it nor the IOM Committee was able to do more than conduct a careful, objective evaluation of data already compiled. The Panel, therefore, discusses in this final section of its report an approach that it believes will provide data that could serve as a basis for a decision on modification of the age 60 rule.

### JUSTIFICATION

Precise, reliable, longitudinal medical and performance data on older pilots are lacking. Also missing are data concerning the validity, with respect to piloting, of currently available tests of perceptual and cognitive function. This type of information on individual pilots is necessary: trends are to be identified and used to predict a given individual's future health status and performance ability as well as for detecting population trends among pilots as a group.

Therefore, the Panel proposes a "program of options" designed to gather the best available medical and performance data, using state-of-the-art techniques, on pilots who wish to fly beyond their 60th birthday. These data, collected during a minimum of four annual examinations prior to age 60, should permit reliable predictions to be made concerning the ability of the individual pilots studied to continue performing at the highest level of safety.

### THE PROPOSED APPROACH

The proposed program is designed to provide, for each pilot who wishes to fly beyond the age of 59, comprehensive sequential measurements of health status and performance ability in order to obtain data that can be used to predict future health status and performance ability. It may provide the additional benefit of creating data that can subsequently be used as a basis for general modification of rules regarding retirement of this class of persons.

The proposed approach is predicated on a concerted effort being made to define the medical and performance testing procedures, using state-of-the-art techniques, required to conduct the annual comprehensive medical and performance examinations described below.

1. At age 55 each pilot subject to the age 60 rule would be permitted to indicate whether he or she wishes to continue flying beyond age 59 to the age of 65.
2. Those who opt to continue flying beyond age 59 would undergo a minimum of four annual comprehensive medical evaluations in lieu of the presently prescribed FAA Class 1 medical examination (standard medical examinations would continue to be required at semiannual intervals at the discretion of the Federal Air Surgeon). In addition to the tests now in use, the comprehensive evaluations would include:
  - a. A comprehensive evaluation of health status, including vision, hearing and those physiological and psychological functions that are known to be related to flying (see answer to Question 3 for additional details).
  - b. A standardized and systematic evaluation of the cardiovascular system in keeping with the general outline of the IOM report, staged according to risk factors. This evaluation would include resting and stress electrocardiograms, and, if necessary, radionuclide testing. In individual cases, a coronary angiogram may be required.
3. At the initiation of this program, pilots older than 55 but not more than 57 years of age who can produce evidence of recent past medical evaluations adjudged by the Federal Air Surgeon to be the substantial equivalent of the evaluations that would be required under this program may elect to participate. Complete medical records of the past evaluations would be made available to physicians having responsibility for the conduct of the comprehensive medical evaluations required in this program. Such pilots, having volunteered to enter the program after age 55 but not more than 57 years of age, would undergo a minimum of three comprehensive annual evaluations of health status and performance ability, according to the protocols developed for use in this program, i.e., at 57, 58, and 59 years of age. At the inception of the program, this will permit earlier collection of data on air carrier pilots past the age of 59 without compromising the essential feature of the program, i.e., the collection of longitudinal data on individuals to permit predictions to be made regarding their future health and performance ability. At the conclusion of the first year of testing under the program, the minimum age for entry would become 56. At the conclusion of the second year of testing, the minimum age for entry would become 55, at which time the requirement that pilots produce evidence of prior medical evaluations would be removed.

4. Pilots would be given a comprehensive flight proficiency test, at least on an annual basis, in lieu of the standard proficiency check now in use. This comprehensive test would embrace the standard test but would also include:
  - a. performance under conditions of stress and fatigue in a LOFT-type simulation with objective measurement of flying performance;
  - b. assessment of vigilance, handling of workload and complex decision-making situations; and
  - c. evaluation of ability to coordinate crew performance effectively and manage cockpit and ground support resources.
5. The comprehensive tests would also be conducted on a random sample of volunteer younger pilots from age 40 to 55 in order to provide multiple cohort groups and to establish baseline performance data for these younger pilots as a group, as well as for comparison with the older pilots who choose the option to continue to fly after age 60. The pass/fail criteria currently used by check pilots on proficiency tests and by the FAA Office of Aviation Medicine, on medical tests, would be maintained. The additional performance measurements would not be used to determine current eligibility to continue flying for pilots below age 60.
6. The comprehensive medical evaluation will be administered each year, preferably in the same medical facility and preferably in one having experience over the years in screening individuals medically for stressful duty. A review board would examine the annual data on each pilot to compare the results.
7. It will be necessary to modify selected simulators in current use by air carriers to provide for the collection of quantitative, objective data on flying performance.
8. Among the possible additions to the comprehensive evaluation are tests of cognitive and intellectual function, carried out as part of the medical appraisal.
9. A pilot who volunteers for this program may withdraw from it at any time without prejudice, in which case he or she will again become subject to mandatory retirement upon reaching age 60.
10. Current criteria for medical fitness and performance ability will govern each pilot's eligibility to continue flying through the age of 59. If a disqualifying disorder is detected, it will be dealt with as at present. The results of longitudinal testing will be used by licensing authorities to determine each pilot's eligibility to continue flying beyond his/her 60th birthday.

Each pilot permitted to continue past that point will remain in the testing program. Annual reviews of test results will be used to determine continued ability to perform at the highest level of safety.

11. It is envisioned that a review panel made up of operational and medical licensing authorities would be established to oversee the proposed program. These authorities would be charged with conducting the required evaluations of medical and performance records for pilots as they reach their 60th birthday and for decisions with respect to continued licensing thereafter. The review panel would also be responsible for evaluations, at periodic intervals, of the sufficiency of the proposed program and of possibilities for modifying it.

#### SIGNIFICANCE

By adopting the above approach, a mechanism would be provided for improving the medical examinations and flight proficiency tests of pilots under standard conditions in a comprehensive and reproducible way, thereby affording in the years ahead a reliable data base upon which predictions of individual pilot health and performance could be made with much more assurance than is currently possible. The relationship of health status to flying performance would also be determined as a natural outcome of this approach.