DECEMBER 1992

Ethical responsibility of flight surgeons (U.S. Army 18th Medical Command, Seoul, Korea): "To best serve the interests of the aviation community and provide fair and objective services, the military aeromedical practitioner must enjoy credibility and the trust of the population he serves. The power of the flight surgeon is obvious to the aircrew and pilots. If there is any suspicion that this power is being misused, the flight surgeon will not be able to serve as an impartial advocate of the patient or as an objective advisor to the commander. Flight surgeons have an ethical responsibility to treat their patients with the same care, knowledge, attention, and respect accorded to patients outside of the military community and to render the highest quality of care that they are capable of providing."[5]

No need for pilot classification (Armstrong Laboratory, Brooks Air Force Base, TX): "Recent U.S. Air Force policy decisions regarding [Specialized Undergraduate Pilot Training] implementation have eliminated the need for upfront classification of pilot training applicants into specialized training tracks based on preselection factors (i.e., test scores, biographical information, academic performance). Classification in the new SUPT system will occur at the end of T-37 training and will be based on T-37 flying and academic performance, pilot candidate preferences, and aircraft availability. The other significant change to the SUPT program was the development of a refined selection model that reduced potential threats to test compromise and gaming strategies. Following operational implementation of PCSM in 1992, the research emphasis will shift to emphasize operational support. Work has already begun to develop and validate alternate forms of the apparatus tests (to reduce threats to test compromise). Other efforts are planned to evaluate possible sources of test bias (gender and race) for PCSM components, and establish a BAT retest policy for pilot training applicants."[2]

DECEMBER 1967

Supersonic commercial transport (Office of Aviation Medicine, Federal Aviation Administration): "For the first time in the history of commercial aviation, medical and human factors specialists have the opportunity to essentially contribute to the establishment of airworthiness and operational standards for a new generation aircraft during its early design and development. Three major steps in this direction already have been taken. The first one was the participation of human engineers in the evaluation of SST designs to ensure adequate consideration of the capabilities and limitations of man as a component of the SST. The second step consisted in the establishment of a Standing Committee for Radiation Biology Aspects of the SST, which advises the Federal Air Surgeon on the pertinent problems and their solution. Finally, aeromedical representation of this country has been granted at the FAUSST (French-Anglo-US Supersonic Transport) Committee to pool existing experience and to cooperate with their French and British colleagues in the safety and advancement of the SST."[3]

Hypoxia warning systems (RAF Institute of Aviation Medicine, Farnborough, Hunts, England): "These laboratory tests have shown that a Po_2 sensor within the mask, with a response time of the order of 5–6 seconds, cannot be used to provide adequate warning of hypoxia if at the same time spurious warnings are to be avoided. The ability of a system to detect hypoxia without a high incidence of spurious warnings may be improved by placing the sensor either in the inlet or beyond the expiratory valve in the mask. If it is placed in the inlet the system will, however, not provide warning in the event of hypoxia due to inboard mask leakage. If the sensor is placed downstream from the expiratory valve of the mask it will be necessary to use a warning level as low as 50 mm. Hg. Since, however, in this position the output of the sensor is very close to the Po_2 of the gas leaving the lungs, it will provide, after a lag due to the volume of gas in the lungs, a warning of hypoxia at a level equivalent to breathing air at an altitude of 11,000-15,000 ft. Even this situation is far from satisfactory since it would be possible for a moderate impairment of performance to arise due to hypoxia without operation of the alarm."[1]

DECEMBER 1942

Physical impairments and accidents (Aviation Medical Division, Civil Aeronautics Administration): "In the 300 accident cases studied, seventy-nine of the pilots had listed physical impairments. This amounts to 26 1/3 per cent of the entire group. A check of 1,000 cases at random throughout the files shows 205, or 20.5 per cent, of all airmen certificated, to have listed impairments. Thus, in this group the accident ratio for pilots with deficiencies is approximately one-third greater than the ratio of such pilots certificated…

"From the results of this study, it appears safe to conclude that pilots with physical impairments can reasonably be expected to be involved in aviation accidents more frequently than persons with no impairments. While we have no idea of the relative accident exposure of the two groups, we are further justified in concluding that…persons with impairments who survive accidents learn to fly with equal readiness as do persons without impairments…."[4]

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