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AVIATION SAFETY

Advancements Being Pursued to Improve Airliner Cabin Occupant Safety and Health

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Highlights

Highlights of GAO-04-33, a report to the Ranking Democratic Member, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Airline travel is one of the safest modes of public transportation in the United States. Furthermore, there are survivors in the majority of airliner crashes, according to the National Transportation Safety Board (NTSB). Additionally, more passengers might have survived if they had been better protected from the impact of the crash, smoke, or fire or better able to evacuate the airliner. As requested, GAO addressed (1) the regulatory actions that the Federal Aviation Administration (FAA) has taken and the technological and operational improvements, called advancements, that are available or are being developed to address common safety and health issues in large commercial airliner cabins and (2) the barriers, if any, that the United States faces in implementing such advancements.

What GAO Recommends

This report contains recommendations to FAA to initiate discussions with NTSB to facilitate the exchange of medical information from accident investigations and to improve the cost and effectiveness data available for setting priorities for research on cabin occupant safety and health. FAA generally agreed with the report's contents and its recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-04-33.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Gerald Dillingham at (202) 512-2834 or dillinghamg@gao.gov.

What GAO Found

FAA has taken a number of regulatory actions over the past several decades to address safety and health issues faced by passengers and flight attendants in large commercial airliner cabins. GAO identified 18 completed actions, including those that require safer seats, cushions with better fire-blocking properties, better floor emergency lighting, and emergency medical kits. GAO also identified 28 advancements that show potential to further improve cabin safety and health. These advancements vary in their readiness for deployment. Fourteen are mature, currently available, and used in some airliners. Among these are inflatable lap seat belts, exit doors over the wings that swing out on hinges instead of requiring manual removal, and photo-luminescent floor lighting. The other 14 advancements are in various stages of research, engineering, and development in the United States, Canada, or Europe.

Several factors have slowed the implementation of airliner cabin safety and health advancements. For example, when advancements are ready for commercial use, factors that may hinder their implementation include the time it takes for (1) FAA to complete the rule-making process, (2) U.S. and foreign aviation authorities to resolve differences between their respective requirements, and (3) the airlines to adopt or install advancements after FAA has approved their use. When advancements are not ready for commercial use because they require further research, FAA's processes for setting research priorities and selecting research projects may not ensure that the limited federal funding for cabin safety and health research is allocated to the most critical and cost-effective projects. In particular, FAA does not obtain autopsy and survivor information from NTSB after it investigates a crash. This information could help FAA identify and target research to the primary causes of death and injury. In addition, FAA does not typically perform detailed analyses of the costs and effectiveness of potential cabin occupant safety and health advancements, which could help it identify and target research to the most cost-effective projects.

A Survivable Large Commercial Airliner Accident

Source: FAA.