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Highlights

Highlights of GAO-12-660T, a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

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# AVIATION SAFETY

## FAA Is Taking Steps to Improve Data, but Challenges for Managing Safety Risks Remain

## Why GAO Did This Study

The U.S. aviation system is one of the safest in the world, but fatal accidents, though rare, continue to occur. As a result of recent accidents and related NTSB findings, FAA announced a Call to Action Plan in June 2009 to, among other things, increase air carrier participation in voluntary safety programs. In 2010, Congress passed the Airline Safety and Federal Aviation Administration Extension Act, which, in part, called for FAA to better manage safety risks. As a result, FAA developed a concerted strategy to implement new safety programs, including increasing air carrier use of voluntary safety programs and advancing the use of SMS.

FAA is implementing SMS—a data-driven, risk-based safety approach that involves establishing the necessary organizational structures, accountabilities, policies, and procedures. The implementation of SMS heightens the importance of obtaining and using high-quality aviation safety data.

This statement is based on GAO's previous work and focuses on (1) how FAA uses data to manage safety risks, (2) how FAA ensures it has quality data to manage risk, and (3) the challenges FAA faces in using data to better manage safety risks.

## What GAO Recommends

GAO has made a number of recommendations to address data quality weaknesses. FAA concurred with most of these recommendations and in some cases has taken steps toward addressing them.

View GAO-12-660T. For more information, contact Gerald L. Dillingham, Ph.D. at (202) 512-2834 or dillinghamg@gao.gov.

## What GAO Found

The Federal Aviation Administration (FAA) uses data reactively and proactively to prevent accidents and manage safety risks. For instance, since 1998, FAA has partnered with the airline industry to identify precursors and contributing factors, and ensure that efforts to improve safety focus on the most prevalent categories of accidents and formulate an intervention strategy designed to reduce recurrences. Although FAA plans to continue using data reactively to understand the causes of accidents and incidents, as part of its adoption of Safety Management Systems (SMS), it is shifting to a proactive approach in which it analyzes data to identify and mitigate risks before they result in accidents.

Implementing systems and processes that capture accurate and complete data are critical for FAA to determine the magnitude of safety issues, assess their potential impacts, identify their root causes, and effectively address and mitigate them. Though FAA has put in place data quality controls, weaknesses remain in some areas. In particular, several FAA databases GAO reviewed in 2010 did not have a managerial review process prior to data entry—an important control that helps ensure data accuracy and completeness. In response to GAO's recommendations, FAA is taking steps to address its data weaknesses, but vulnerabilities that remain potentially limit the data's usefulness for safety analysis.

FAA also continues to experience data-related challenges, including limitations with the analysis it conducts and the data it collects and the absence of data in some areas. For example, FAA does not have a process to track or assess runway excursions, which occur when an aircraft veers off or overruns a runway. Runway excursions can be as dangerous as runway incursions, which occur when an unauthorized aircraft, vehicle, or person is on a runway, and FAA has tracked runway incursions for years. GAO previously recommended that FAA develop and implement plans to track and assess runway excursions. FAA agreed and is currently developing a program to collect and analyze runway excursion data and is drafting an order to set out the definitions and risk assessment processes for categorizing and analyzing the data. However, according to GAO's review of FAA's plans, it will be several years before FAA has obtained enough detailed information about these incidents to assess risks. Similarly, GAO has found that efforts to address the occurrence of safety incidents in ramp areas were hindered by the lack of data on the nature, extent, and cost of such incidents and accidents. FAA collects no comprehensive data on incidents in ramp areas, and the National Transportation Safety Board (NTSB) does not routinely collect data on ramp accidents unless they result in serious injury or substantial aircraft damage. FAA's lack of ramp incident data means that FAA is unable to assess the risk of catastrophic accidents in this area. FAA agreed with GAO's recommendation to extend oversight to ramp areas but noted that it already provides oversight through its oversight of airlines. FAA expects to further enhance that oversight through its proposed ruling to require airports with air carrier operations to establish a safety management system.