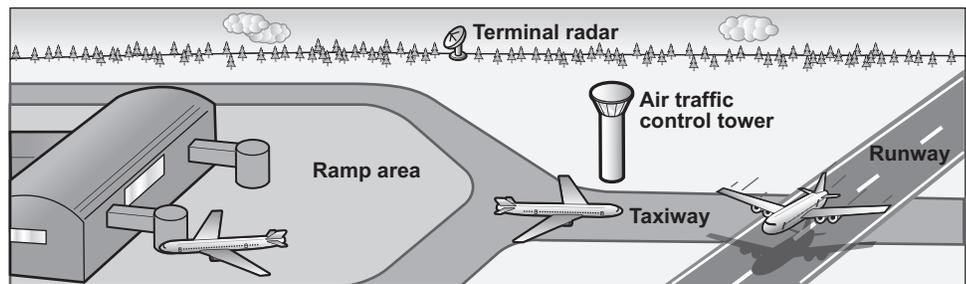# AVIATION SAFETY

Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety

Why GAO Did This Study

Takeoffs, landings, and movement around the surface areas of airports (the terminal area) are critical to the safe and efficient movement of air traffic. The nation's aviation system is arguably the safest in the world, but close calls involving aircraft or other vehicles at or near airports are common, occurring almost daily. The Federal Aviation Administration (FAA) provides oversight of the terminal area and has taken action to improve safety, but has been called upon by the National Transportation Safety Board (NTSB) and others to take additional steps to improve its oversight.

As requested, this report addresses (1) recent actions FAA has taken to improve safety in the terminal area, (2) recent trends in terminal area safety and factors contributing to those trends, and (3) any additional actions FAA could take to improve safety in the terminal area. To address these issues, GAO analyzed data from FAA data; reviewed reports and FAA documents; and interviewed federal and industry officials.

What GAO Recommends

GAO recommends that FAA (1) extend oversight of terminal area safety to include runway overruns and ramp areas, (2) develop risk-based measures for runway safety incidents, and (3) improve information sharing about incidents.

The Department of Transportation agreed to consider the recommendations and provided clarifying information about efforts made to improve runway safety, which GAO incorporated.

View GAO-12-24 or key components. For more information, contact Gerald L. Dillingham, Ph.D. at (202) 512-2834 or dillinghamg@gao.gov.

What GAO Found

Since 2007, FAA has taken several steps to further improve safety at and around airports (see fig.), including implementing procedural and technological changes to improve runway safety, proposing a rule that would require airports to establish risk-management plans that include the ramp areas where aircraft are serviced, collecting more data on safety incidents, and shifting toward risk-based analysis of airborne aviation safety information. Several of these initiatives are intended to better identify systemic issues in air traffic safety.

The Terminal Area

Source: GAO.

Rates of reported safety incidents in the terminal area continue to increase. FAA met its interim goals toward reducing the total number of runway incursions—the unauthorized presence of an airplane, vehicle, or person on the runway—in 2009 and 2010, but the overall rate of incursions at towered airports has trended steadily upward. In fiscal year 2004, there were 11 incursions per million operations at these airports; by fiscal year 2010, the rate increased to 18 incursions per million operations. The rate and number of airborne operational errors—errors made by air traffic controllers—have increased considerably in recent years, with the rate nearly doubling from the second quarter of fiscal 2008 to the same period of 2011. FAA has not met its related performance goals. Comprehensive data are not available for some safety incidents, including runway overruns or incidents in ramp areas. Recent increases in reported runway incursions and airborne operational errors can be somewhat attributed to several changes in reporting policies and procedures at FAA; however, trends may also indicate an increase in the actual occurrence of incidents.

Enhanced oversight and additional information about surface and airborne incidents could help improve safety in the terminal area. FAA oversight in the terminal area is currently limited to certain types of incidents, notably runway incursions and certain airborne incidents, and does not include runway overruns or incidents in ramp areas. In addition, the agency lacks data collection processes, risk-based metrics, and assessment frameworks for analyzing other safety incidents such as runway overruns, incidents in ramp areas, or a wider range of airborne errors. Further, changes to reporting processes and procedures make it difficult to assess safety trends, and existing data may not be readily available to decision makers, including those at the regional and local levels. As a result, FAA may have difficulty assessing recent trends in safety incidents, the risks posed to aircraft or passengers in the terminal area, and the impact of the agency's efforts to improve safety.

_____ **United States Government Accountability Office**