

TRANSPORTATION ISSUES, POLICIES AND R&D

# General Aviation



**Liability Insurance  
Issues and Mitigation  
of Safety Risks**

Jessie Douglas

Editor

NOVA

**TRANSPORTATION ISSUES, POLICIES AND R&D**

**GENERAL AVIATION**  
**LIABILITY INSURANCE ISSUES AND**  
**MITIGATION OF SAFETY RISKS**

**JESSIE DOUGLAS**  
**EDITOR**

The logo for Nova Publishers features the word "nova" in a bold, lowercase sans-serif font. The letter "o" is replaced by a stylized globe showing continents. To the left of the "nova" text is a decorative graphic of a cluster of dots of varying sizes, arranged in a roughly circular pattern. Below "nova" is the word "publishers" in a smaller, lowercase sans-serif font. At the bottom of the logo is the text "New York" in an italicized serif font.  
**nova**  
**publishers**  
*New York*

Copyright © 2016 by Nova Science Publishers, Inc.

**All rights reserved.** No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means: electronic, electrostatic, magnetic, tape, mechanical photocopying, recording or otherwise without the written permission of the Publisher.

We have partnered with Copyright Clearance Center to make it easy for you to obtain permissions to reuse content from this publication. Simply navigate to this publication's page on Nova's website and locate the "Get Permission" button below the title description. This button is linked directly to the title's permission page on copyright.com. Alternatively, you can visit copyright.com and search by title, ISBN, or ISSN.

For further questions about using the service on copyright.com, please contact:

Copyright Clearance Center

Phone: +1-(978) 750-8400

Fax: +1-(978) 750-4470

E-mail: info@copyright.com.

### **NOTICE TO THE READER**

The Publisher has taken reasonable care in the preparation of this book, but makes no expressed or implied warranty of any kind and assumes no responsibility for any errors or omissions. No liability is assumed for incidental or consequential damages in connection with or arising out of information contained in this book. The Publisher shall not be liable for any special, consequential, or exemplary damages resulting, in whole or in part, from the readers' use of, or reliance upon, this material. Any parts of this book based on government reports are so indicated and copyright is claimed for those parts to the extent applicable to compilations of such works.

Independent verification should be sought for any data, advice or recommendations contained in this book. In addition, no responsibility is assumed by the publisher for any injury and/or damage to persons or property arising from any methods, products, instructions, ideas or otherwise contained in this publication.

This publication is designed to provide accurate and authoritative information with regard to the subject matter covered herein. It is sold with the clear understanding that the Publisher is not engaged in rendering legal or any other professional services. If legal or any other expert assistance is required, the services of a competent person should be sought. FROM A DECLARATION OF PARTICIPANTS JOINTLY ADOPTED BY A COMMITTEE OF THE AMERICAN BAR ASSOCIATION AND A COMMITTEE OF PUBLISHERS.

Additional color graphics may be available in the e-book version of this book.

### **Library of Congress Cataloging-in-Publication Data**

ISBN: 978-1-63484-735-3

*Published by Nova Science Publishers, Inc. † New York*

**TRANSPORTATION ISSUES, POLICIES AND R&D**

**GENERAL AVIATION**

**LIABILITY INSURANCE ISSUES AND  
MITIGATION OF SAFETY RISKS**

# **TRANSPORTATION ISSUES, POLICIES AND R&D**

Additional books in this series can be found on Nova's website  
under the Series tab.

Additional e-books in this series can be found on Nova's website  
under the e-book tab.

## **PREFACE**

A substantial proportion of all domestic aviation accidents and fatalities that occur each year involve general aviation (GA), which includes all aviation except commercial and military. Under federal law, the Secretary of Transportation is responsible for ensuring that commercial air carriers carry liability insurance. However, no such federal requirements exist for GA aircraft owners. In some cases, accidents involving uninsured or underinsured GA aircraft owners have occurred where individuals (passengers or third parties) who incurred losses received little or no compensation. This book examines existing liability insurance requirements for GA aircraft owners; premiums for GA liability insurance; and factors that selected stakeholders cited which should be considered in determining whether to adopt a federal liability insurance requirement. Furthermore, this book discusses the characteristics of and trends in general aviation accidents from 1999 through 2011; and recent actions taken by the Federal Aviation Administration (FAA) to improve general aviation safety.

# CONTENTS

<b>Preface</b>		<b>vii</b>
<b>Chapter 1</b>	General Aviation: Observations Related to Liability Insurance Requirements and Coverage for Aircraft Owners <i>United States Government Accountability Office</i>	<b>1</b>
<b>Chapter 2</b>	General Aviation Safety: Additional FAA Efforts Could Help Identify and Mitigate Safety Risks <i>United States Government Accountability Office</i>	<b>39</b>
<b>Chapter 3</b>	Fact Sheet – General Aviation Safety <i>Federal Aviation Administration</i>	<b>81</b>
<b>Chapter 4</b>	NTSB 2015 Most Wanted Transportation Safety Improvements: Prevent Loss of Control in Flight in General Aviation <i>National Transportation Safety Board</i>	<b>91</b>
<b>Index</b>		<b>95</b>

*Chapter 1*

**GENERAL AVIATION:  
OBSERVATIONS RELATED TO LIABILITY  
INSURANCE REQUIREMENTS AND  
COVERAGE FOR AIRCRAFT OWNERS\***

*United States Government Accountability Office*

**ABBREVIATIONS**

DOT	Department of Transportation
FAA	Federal Aviation Administration
GA	general aviation
NAIC	National Association of Insurance Commissioners
NTSB	National Transportation Safety Board
OST	Office of the Secretary of Transportation

**WHY GAO DID THIS STUDY**

A substantial proportion of all domestic aviation accidents and fatalities that occur each year involve GA, which includes all aviation except

---

\* This is an edited, reformatted and augmented version of a United States Government Accountability Office publication, No. GAO-15-740, dated September 2015.



commercial and military. Under federal law, the Secretary of Transportation is responsible for ensuring that commercial air carriers carry liability insurance. However, no such federal requirements exist for GA aircraft owners. In some cases, accidents involving uninsured or underinsured GA aircraft owners have occurred where individuals (passengers or third parties) who incurred losses received little or no compensation.

GAO was asked to look at the feasibility and costs associated with adopting federal liability insurance requirements for GA aircraft owners. This report examines (1) existing liability insurance requirements for GA aircraft owners, (2) premiums for GA liability insurance, and (3) factors that selected stakeholders cited which should be considered in determining whether to adopt a federal liability insurance requirement. GAO surveyed aviation officials in 50 states, analyzed state statutes identified in the surveys, collected insurance premium information from three nationwide aviation insurance brokers, and interviewed a diverse group of 73 aviation stakeholders—including FAA and NTSB officials, GA associations, and attorneys representing accident victims—selected based on GAO’s prior work that identified the GA associations and recommendations from FAA, NTSB, and other aviation stakeholders.

## WHAT GAO FOUND

Based on GAO’s 50-state survey of state aviation officials and analysis of state statutes and regulations identified by such officials, the vast majority of states do not have liability insurance requirements for general aviation (GA) aircraft owners and operators (i.e., pilots). As of April 2015, 11 states have some variation of a liability insurance requirement or aircraft financial-responsibility requirements, which require GA aircraft owners to demonstrate financial ability to cover potential losses incurred in an accident. Minnesota is the only state that requires almost all GA aircraft owners to have a minimum liability insurance coverage: the required minimum coverage is \$100,000 per passenger seat.

Annual premiums for liability insurance vary depending on the type of aircraft insured and a pilot’s experience. For example, three nationwide brokers GAO contacted noted that an annual premium for a common 4-seat GA aircraft, a Cessna 172, can range from \$200 to \$550 for a policy that provides \$1 million in coverage per accident, with a limit of \$100,000 for each accident victim.

GAO interviewed 73 aviation stakeholders who most frequently cited five factors that they felt should be considered in determining whether to adopt a federal liability insurance requirement. Understanding the extent of the problem—both the number of GA aircraft owners who are uninsured and underinsured and the extent to which accident victims received little or no compensation from such owners—was one such factor. However, data on the extent of this problem are not available and, according to FAA and NTSB officials, could be challenging to collect. Four other factors cited include: (1) costs to victims and the public in the absence of liability insurance; (2) costs to the GA community if such a requirement were adopted; (3) issues related to the implementation and administration of such a requirement; and (4) the potential public-safety benefits.

\* \* \*

September 9, 2015

The Honorable Bill Nelson  
Ranking Member  
Committee on Commerce, Science, and Transportation  
United States Senate

The Honorable Sherrod Brown  
United States Senate

According to National Transportation Safety Board's (NTSB) statistics, the number of accidents involving general aviation (GA), which includes all forms of aviation except commercial and military, represent a substantial proportion of all domestic aviation accidents and fatalities each year.<sup>1</sup> However, the number of GA accidents has decreased over the last decade. Although no federal requirements for liability insurance exists for GA aircraft owners and operators,<sup>2</sup> a marketplace for liability insurance is available for GA aircraft owners and operators. Some members of Congress and aviation stakeholders have raised questions regarding the lack of such a federal requirement as a result of accidents involving uninsured or underinsured GA aircraft owners and operators<sup>3</sup> where individuals (i.e., passengers and third parties) who incurred losses received little or no compensation from the responsible aircraft owners and operators. For instance, in September 2012, a young flight instructor was killed during a landing attempt with a student pilot

and another passenger, both of whom survived the accident. According to documents from the flight instructor's family, he was not covered under the flight school's liability insurance policy, and his estate received a claim against the estate for property damage caused by the accident.

You asked us to examine the feasibility of and costs associated with adopting a federal requirement for GA aircraft owners and operators to maintain liability insurance. This report examines (1) existing liability insurance requirements for GA aircraft owners and operators in the United States; (2) available data on the range of premiums charged by selected insurance providers for GA liability insurance and factors that influence those costs; and (3) factors that selected stakeholders stated should be considered in determining whether to adopt a federal liability insurance requirement for GA aircraft owners and operators.

To identify existing liability insurance requirements, we conducted a survey of aviation officials in all 50 states and analyzed state statutes, regulations, and other documents identified by state aviation officials. We received a 100 percent response rate to our survey as of April 2015. We also spoke with state aviation officials in those states that identified some kind of GA liability insurance or aircraft financial responsibility requirements to obtain more information about those requirements, including how they are administered.<sup>4</sup> To identify the range of premiums charged for GA liability insurance and factors that influence those costs, we obtained information on GA liability insurance premiums for common GA aircraft and factors that influence those costs from three nationwide insurance brokers that work with the major underwriters in the GA insurance market; these insurance brokers and underwriters were identified by aviation insurance representatives we interviewed.<sup>5</sup> Although we could not independently validate the insurance premium information collected from these brokers, we corroborated the premium information received from the insurance brokers with premium data from the insurance underwriters to assess the reasonableness of the data provided. We determined that the information provided was sufficient to use as examples of GA liability insurance premiums, but that it is not generalizable to the entire spectrum of the GA aviation insurance market, given the multiple and unique factors that can significantly influence premium prices. To obtain aviation stakeholders' perspectives on factors that should be considered in determining whether to adopt a federal liability insurance requirement, we interviewed or obtained written responses from 73 stakeholders, including officials from the Office of the Secretary/Department of Transportation, Federal Aviation Administration (FAA), NTSB, and 39

state aviation offices,<sup>6</sup> representatives from 9 GA trade associations and 10 aviation insurance-related organizations, as well as an accident victims association and 11 aviation attorneys representing GA accident victims. The selection of representatives from GA trade associations was based on prior GAO reports that identified the GA associations and recommendations from FAA, NTSB, stakeholders, and selected state aviation officials. We identified an accident victims association and selected aviation attorneys, specializing in personal injury and representing aviation accident victims based on our initial literature reviews and recent news articles that mentioned law firms prosecuting or defending GA accident cases. The aviation stakeholders' views are not generalizable to the entire GA community, but provided us with valuable insights. See appendix I for a more detailed description of our scope and methodology and for a list of stakeholders we interviewed.

We conducted this performance audit from October 2014 to September 2015, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

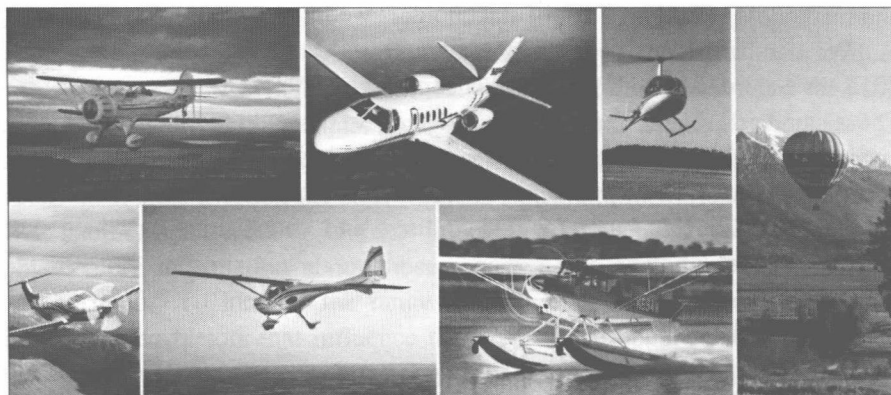
## BACKGROUND

GA is composed of a diverse fleet of aircraft, including airplanes, gliders, and helicopters, that are flown for a variety of purposes (see fig. 1). In 2013, FAA estimated there were about 340,000 licensed GA pilots, and approximately 200,000 aircraft were in the active GA fleet, with airplanes comprising the vast majority—almost 79 percent. According to FAA 2013 data, most GA airplanes are light, single-engine piston, fixed-wing aircraft. FAA also identifies a small, but growing portion of the GA fleet as “experimental” aircraft, which include amateur and home-built aircraft and aircraft used for racing and research (among other purposes), as well as exhibition aircraft, such as former military aircraft that are commonly referred to as “warbirds.” The majority of these GA aircraft (about 88 percent) are used for one of the following purposes:

- personal (e.g., a pilot taking a family on a sightseeing trip);
- business (e.g., an owner and pilot flying to a meeting);

- corporate (e.g., a professionally-piloted aircraft transporting corporate employees); and
- instructional (e.g., a student flying with a certified flight instructor<sup>7</sup>).

Domestic GA operations are conducted from more than 2,950 public-use GA airports (which primarily serve GA aircraft) as well as from thousands of other airports, including those that support commercial air service. GA flights operate under various federal aviation regulations. For the purposes of this report, our definition of GA includes flights operated under Part 91 of general operations and flight rules, namely, all civilian aviation flying except passenger air carriers and military aircraft.<sup>8</sup>



Sources: Aircraft Owners and Pilots Association (AOPA). | GAO-15-740.

Figure 1. Types of General Aviation Aircraft.

Although the number of GA accidents in the United States has been generally decreasing in recent years, there were over 1,200 accidents and over 400 resulting fatalities in 2014 (see table 1). In October 2012, we found that most GA accidents involved personal use and instructional flight operations.<sup>9</sup> In 2014, personal use and instructional flight operations combined accounted for about 75 percent of GA accidents. Most accidents also occurred during the landing and take-off phases of a flight, and in 2014 most GA accidents occurred in California, Texas, and Florida, all states with large numbers of GA aircraft.

**Table 1. Number of General Aviation Accidents, Fatalities, and Serious Injuries in Calendar Year 2010—2014**

Calendar year	Number of accidents	Number of fatalities	Number of serious injuries
2010	1440	457	256
2011	1470	448	328
2012	1471	440	247
2013	1298	391	215
2014	1287	419	240

Source: GAO analysis of National Transportation Safety Board data. | GAO-15-740.

Two federal agencies are primarily responsible for investigating GA accidents and ensuring aviation safety: FAA and NTSB. FAA is responsible for administering aircraft registration and pilot certification, conducting safety oversight of pilots' training and GA operations, and taking enforcement actions against pilots and others who violate federal aviation regulations and safety standards. FAA also collects GA fleet and flight activity data through an annual survey that includes the number of hours flown and the uses of GA aircraft. The FAA's statutory mandate does not, however, include requiring that GA aircraft are covered by liability insurance. NTSB is responsible for investigating all civil aviation accidents and major accidents and incidents in other transportation modes.<sup>10</sup> Using the information gathered by its own investigators and in coordination with FAA, NTSB is responsible for determining an accident's probable cause, issuing safety recommendations, and conducting safety studies. According to NTSB officials, if an NTSB official is not available at the scene of where the accident occurred, FAA gathers perishable data that are provided to the NTSB. However, NTSB is responsible for issuing a preliminary report and final accident report describing the history of the flight (e.g., date and time of accident, aircraft and accident type, purpose of flight, extent of pilot and passenger injuries, etc.) and findings of probable cause. NTSB also coordinates accident disaster-assistance activities, including providing information and assistance to accident victims (or their survivors), in the aftermath of an accident.

The Office of the Secretary of Transportation (OST) within DOT is responsible for ensuring that commercial air carriers meet minimum liability insurance coverage amounts for liability, as required under federal law<sup>11</sup>, and FAA has assumed this role pursuant to a memorandum of understanding with OST.<sup>12</sup> The related regulatory requirement, which became effective in 1982,

establishes minimum liability insurance requirements for air carriers. Commuter air carriers and air taxi operators are also required under federal regulations to have *minimum liability insurance*. While federal insurance requirements exist for commercial modes of transportation, the states generally regulate the business of insurance.<sup>13</sup> No federal requirement exists for GA liability insurance, although as discussed later in this report, some states have liability insurance or similar requirements.

Some countries require liability insurance for GA aircraft. Canada, for instance, requires commercial and GA aircraft owners operating aircraft with a maximum permissible take-off weight of more than 5,000 pounds to have liability insurance for death and bodily injury in the minimum amount of \$300,000 (in U.S. dollars) multiplied by the number of passengers onboard the aircraft.<sup>14</sup> Similarly, a European Union regulation requires liability insurance coverage for both commercial and GA aircraft when operating within, into, out of, or over the European Union member territories.

When operating aircraft, owners and operators face financial risks, such as the risks associated with damage to the aircraft itself as well as those associated with death, injury, and property damage to third parties. Aircraft owners and operators, like many other individuals and organizations, may choose to purchase insurance in which the financial risks of an accident are transferred to an insurance company in exchange for a premium payment. Various aviation insurance products are available, such as hull insurance, which covers physical damages to the aircraft, including the engine, propeller, and all other systems and permanently attached equipment. Liability insurance covers death or bodily injury to passengers or persons on the ground as well as property damages caused by an aircraft accident. Aviation insurance policies for GA aircraft owners are generally sold to owners as a package, which include coverage for aircraft hull and liability.

Additionally, GA pilots who do not own their own aircraft may also purchase their own liability insurance policy, commonly referred to as renters insurance. This type of insurance is designed to protect pilots against claims arising from bodily injury or property damages when they are deemed to have caused an accident. It is also designed to provide pilots with legal representation to defend themselves if they are sued, whether or not they are ultimately determined to be at fault for the accident. However, renter's insurance is an excess insurance product that is secondary to the primary insurance policy of the aircraft owner, which is designed to pay for damages first. As such, renter's insurance is not as comprehensive as aircraft owners insurance tied to the aircraft. For instance, in contrast to an aircraft owner's

policy, coverage for damages to third parties on a renter's policy is typically not triggered unless the pilot was deemed to have been negligent in the operation of the aircraft, according to a principal insurance underwriter offering such policies. In addition to passengers on the aircraft or parties on the ground, insurance companies themselves may also sue pilots for damages, taking action to subrogate against the party responsible for losses paid.<sup>15</sup> Apart from where liability insurance is required, whether GA aircraft owners or operators choose to purchase insurance depends, in part, on how much risk they are willing to assume versus the risk they need or desire to transfer (for a premium) to an insurance company. In particular, they may choose not to purchase coverage if they believe the coverage is too expensive for the amount of risk they bear.

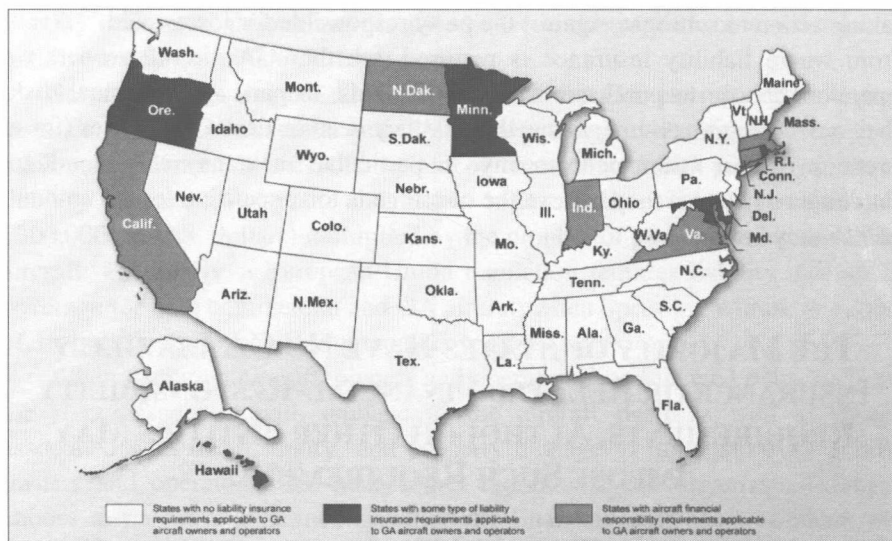
## **THE MAJORITY OF STATES HAVE NO GA LIABILITY INSURANCE OR RELATED FINANCIAL-RESPONSIBILITY REQUIREMENTS, ALTHOUGH OTHER ENTITIES MAY IMPOSE SUCH REQUIREMENTS**

### **Eleven States Impose Either Liability Insurance or Aircraft Financial-Responsibility Requirements Applicable to Some GA Aircraft Owners and Operators**

Based on our survey of state aviation officials and analysis of state statutes and regulations identified by such officials, as of April 2015, the majority of the states do not have liability insurance requirements applicable to GA aircraft owners and operators (see fig. 2). Five states have a liability insurance requirement that is applicable to at least some categories of GA aircraft owners and operators, and six states have some type of aircraft financial-responsibility requirements. Aviation officials we spoke with in these states generally commented that they did not know the history of why they have these requirements or how effective they have been in terms of ensuring liability insurance coverage because data are not collected to measure the effect of these requirements. Minnesota is the only state that has a liability insurance requirement applicable to nearly all GA aircraft owners.<sup>16</sup> Every owner of aircraft in Minnesota, including GA aircraft owners, must show proof of insurance, with the minimum coverage requirements, when registering the aircraft with the state.<sup>17</sup> While it is a misdemeanor under Minnesota law for an



owner to operate an aircraft registered within Minnesota without the required liability insurance,<sup>18</sup> according to state aviation officials, the state relies on self-reporting of liability insurance coverage during the aircraft registration process and does not systematically track violations.



Source: GAO analysis of survey responses and state statutes and regulations identified in survey responses, and Map Resources. | GAO-15-740.

Figure 2. States with Minimum Liability Insurance or Aircraft Financial-Responsibility Requirements Applicable to General Aviation Aircraft Owners and Operators (as of April 2015).

Four other states—Hawaii, Maryland, Oregon, and Rhode Island—have provisions applicable to GA aircraft owners and operators that require them to have liability insurance if they either hangar their aircraft at a state-owned airport or operate their GA aircraft for commercial purposes, such as leasing or renting out aircraft.<sup>19</sup> For instance, according to a state aviation official, GA aircraft owners that base or hangar their aircraft at Rhode Island's six state-owned airports for more than 90 days are required to register their aircraft with the state and have a minimum liability insurance coverage limit of \$1 million per accident. In Hawaii, persons such as GA aircraft owners who rent a state hangar as well as air tour operators are required to maintain liability insurance.<sup>20</sup>

Six other states have some type of aircraft financial responsibility requirements. Under the aircraft financial responsibility requirements in