

Report to Congressional Requesters

November 2018

AIRLINE CONSUMER PROTECTIONS

Additional Actions
Could Enhance DOT's
Compliance and
Education Efforts

Highlights of GAO-19-76, a report to congressional requesters

Why GAO Did This Study

Airlines recently came under scrutiny for their treatment of passengers—including a high-profile incident in which a passenger was forcibly removed from an overbooked flight. However, airlines maintain that service has improved, citing better on-time performance and lower airfares. DOT has the authority to issue and enforce certain consumer protection requirements. DOT also educates passengers about their rights.

GAO was asked to examine airline consumer protection issues. This report examines, among other issues, (1) trends in DOT's data on airline service; (2) the effectiveness of DOT's compliance efforts; and (3) the extent to which DOT's passenger education efforts align with key practices for consumer outreach. GAO reviewed DOT data on airline service and analyzed passenger complaint data for the 12 largest domestic airlines from 2008 through 2017; reviewed relevant documents and data on DOT's compliance program; assessed DOT's educational efforts against key practices for successful consumer outreach; and interviewed DOT officials. GAO interviewed or obtained written information from 11 of the 12 airlines.

What GAO Recommends

GAO is making six recommendations, including that DOT: develop performance measures for compliance activities, improve its procedures for coding airline passengers' complaints, and improve how passenger education aligns with GAO's key practices. DOT concurred with our recommendations and provided technical comments, which we incorporated as appropriate.

View GAO-19-76. For more information, contact Andrew Von Ah at (202) 512-2834 or vonaha@gao.gov.

November 2018

AIRLINE CONSUMER PROTECTIONS

Additional Actions Could Enhance DOT's Compliance and Education Efforts

What GAO Found

The Department of Transportation's (DOT) data offered mixed information on whether airlines' service improved from 2008 through 2017. While DOT's operational data on rates of late flights, denied boardings, and mishandled baggage generally suggested improvement, the rate of passenger complaints received by DOT increased about 10 percent—from about 1.1 complaints per 100,000 passengers to 1.2 complaints per 100,000 passengers.

DOT conducts five key activities to ensure airlines' compliance with consumer protection requirements (see table). However, GAO found that DOT lacked performance measures to help it evaluate some of these activities and that it could improve its procedures (i.e., guidance documents and training materials), that analysts use to code passenger complaints.

- Performance measures: DOT has established objectives for each of its
 five key compliance activities that state what it seeks to achieve;
 however, DOT lacks performance measures for three objectives. For
 example, DOT lacks a performance measure for conducting inspections
 of airlines' compliance with consumer protection requirements at airlines'
 headquarters and at airports. As a result, DOT is missing opportunities to
 capture critical information about airlines' compliance with consumer
 protection requirements.
- Procedures: DOT has procedures to help analysts code passenger complaints and identify potential consumer protection violations. GAO found that DOT's guidance for coding passenger complaints did not consistently include definitions or examples that illustrate appropriate use or help analysts select among the various complaint categories. Additional procedures would help DOT ensure that complaints are consistently coded and that potential violations are properly identified.

Department of Transportation's (DOT) 2017 Key Compliance Activities					
Providing compliance assistance to airlines	DOT staff issued guidance and consulted with airlines to promote an understanding of consumer protection requirements.				
Processing passenger complaints	Staff received and responded to more than 18,000 passenger complaints and elevated potential consumer protection violations.				
Inspecting airlines	Staff conducted inspections in 2017 of U.S. airlines' compliance with certain consumer protection requirements at 18 airports.				
Investigating potential violations	Staff initiated 287 investigations of potential consumer protection violations in 2017.				
Taking enforcement action	DOT issued 58 warning letters and 13 consent orders for consumer protection violations found in investigations it started in 2017.				

Source: GAO analysis of DOT documents and data extracted in August 2018. | GAO-19-76

GAO found that while DOT has taken steps to educate passengers on their rights, its efforts did not fully align with four of nine key practices GAO previously identified for conducting consumer education. For example, while DOT has defined the goals and objectives of its outreach efforts, it has not used budget information to prioritize efforts or established performance measures to assess the results. DOT has also not solicited input directly from passengers to understand what they know about their rights. Taking such actions would provide DOT with greater assurance that its efforts are meeting passengers' needs.

_ United States Government Accountability Office

Contents

Letter		1
	Background DOT's Data Provide Mixed Information on Improvement in the	5
	Quality of Airline Service; Selected Airlines Indicate They Are	
	Taking Steps Intended to Enhance Service DOT Conducts Multiple Activities to Monitor Airline Compliance,	12
	but Opportunities Exist to Improve These Efforts' Effectiveness DOT Has Made Recent Improvements, but Its Passenger Education Efforts Do Not Fully Align with Key Consumer	22
	Outreach Practices Conclusions	39 44
	Recommendations for Executive Action	45
	Agency Comments	46
Appendix I	Studies on the Effect of Market Structure on Elements	
	of Airlines' Customer Service	47
Appendix II	Objectives, Scope, and Methodology	52
Appendix III	Key Practices for Conducting Consumer Outreach	58
Appendix IV	Comments from the Department of Transportation	59
Appendix V	GAO Contact and Staff Acknowledgments	61
Tables		
	Table 1: Examples of the Department of Transportation's (DOT) Airline Consumer Protection Regulations	9
	Table 2: Number and Type of Enforcement Actions from the Department of Transportation's (DOT) Investigations,	
	Calendar Years 2008 through 2017	26

	Table 3: Consent Orders and Penalties Assessed by the Department of Transportation (DOT) against Selected Airlines, Calendar Years 2008 through 2017	28
	Table 4: Summary of the Department of Transportation's Compliance Activities, Objectives, and Performance	20
	Measures	35
	Table 5: GAO's Key Practices for Conducting Consumer Outreach	58
Figures		
	Figure 1: Examples of Factors That Affect Passengers'	
	Satisfaction with Airlines' Service	8
	Figure 2: Trends in Selected Measures of Airlines' Service, 2008	
	through 2017	14
	Figure 3: The Department of Transportation's Updated Aviation	
	Consumer Protection Website	40
	Figure 4: Department of Transportation's (DOT) Airline Passenger	
	Educational Efforts Compared with Key Practices for	
	Conducting Consumer Outreach	42

Abbreviations

Alaska Alaska Airlines American American Airlines Delta Delta Air Lines

DOT Department of Transportation

ExpressJet ExpressJet Airlines
Frontier Frontier Airlines

GPRA Government Performance and Results Act of 1993

Hawaiian Hawaiian Airlines JetBlue JetBlue Airways

OIG Office of Inspector General OST Office of the Secretary

RFID radio frequency identification technology

SkyWest Airlines
Southwest Southwest Airlines
Spirit Spirit Airlines
United United Airlines

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

November 20, 2018

The Honorable Bill Shuster
Chairman
The Honorable Peter DeFazio
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

The Honorable Frank LoBiondo
Chairman
The Honorable Rick Larsen
Ranking Member
Subcommittee on Aviation
Committee on Transportation and Infrastructure
House of Representatives

The Honorable Seth Moulton House of Representatives

Each year hundreds of millions of passengers rely on airlines to get them to their destination without incident. However, if a service incident does occur—such as a delayed or cancelled flight, mishandled or lost baggage, an unsatisfactory customer-service experience, or a denied boarding—a passenger's experience can quickly deteriorate. For example, video of a passenger being forcibly removed from an overbooked United Express flight awaiting departure at Chicago's O'Hare International Airport on April 9, 2017, went viral on social media, focusing national attention on the common airline business practice of overbooking flights—which can lead to denied boardings—and what is allowed under federal regulation. Despite the public attention, airlines have maintained that these high-profile incidents are isolated and that service has improved in recent years, citing better on-time performance, lower airfares, and newer

¹ If a flight is oversold, airlines must request volunteers to be denied boarding. A "volunteer" is a person who responds to the airline's request for volunteers and willingly accepts the airline's offer of compensation, in any amount, in exchange for relinquishing the confirmed reserved space. Any other passenger denied boarding is considered to have been denied boarding involuntarily, even if that passenger accepts the denied boarding compensation airlines are required to provide. See 14 C.F.R. § 250.2b(a). Though in law airlines are generally referred to as "air carriers" and "foreign air carriers," we will refer to them as "airlines" for the purpose of this report.

aircraft. More recently, some airlines' services and treatment of passengers, as well as their traveling pets, have come under additional public scrutiny, as have related federal requirements. For example, airlines have called for additional regulation of service animals after instances in which passengers tried to misrepresent pets as emotional support animals to avoid certain fees and requirements.

While U.S. airlines' business practices were largely deregulated following the Airline Deregulation Act of 1978,² a number of consumer protections for airline passengers (i.e. "consumer protections") are in place at the federal level.³ For example, some consumer protections are in federal statute, such as the Air Carrier Access Act of 1986, as amended, which prohibits airlines from discriminating against individuals based on a disability.4 Federal statutes have also authorized the Department of Transportation (DOT) to regulate certain areas affecting passengers. For example, DOT has the authority to stop airlines from engaging in unfair or deceptive practices, or unfair methods of competition, and may promulgate consumer protection regulations under that authority. 5 In particular, under that authority, among others, DOT has issued three final rules on Enhancing Airline Passenger Protections since 2009, with the most recent rule issued in November 2016.6 These rules have, among other things, restricted long tarmac delays, significantly increased compensation amounts for passengers who are involuntarily denied boarding, and required certain airlines to post information about their fees and on-time performance on their websites. Despite these protections, some congressional members have questioned if additional consumer protections are needed and whether passengers know about their

² See Pub. L. No. 95-504, 92 Stat. 1705 (Oct. 24, 1978).

³ For the purposes of this report, we use the term "consumer protections" or "consumer protection requirements" to refer to regulations and statutes that generally provide benefits to passengers in air transportation; however, Congress's and DOT's purpose for developing these statutes and regulations might have been broader.

⁴ Pub. L. No. 99-453, 100 Stat. 1080 (Oct. 2, 1986) (codified as amended at 49 U.S.C. § 41705).

⁵ See 49 U.S.C. § 41712.

⁶ See 81 Fed. Reg. 76800 (Nov. 3, 2016); 76 Fed. Reg. 23110 (Apr. 25, 2011); 74 Fed. Reg. 68983 (Dec. 30, 2009).

existing rights.⁷ More recently, in October 2018, the FAA Reauthorization Act of 2018 was enacted and includes a number of consumer protection provisions.⁸

You asked us to examine airline consumer protection issues. This report:

- describes trends in DOT's data on airline service from 2008 through 2017 and airlines' actions to improve service,
- assesses how effectively DOT ensures airlines' compliance with consumer protection requirements, and
- assesses the extent to which DOT's airline passenger education efforts align with key practices for consumer outreach.

At your request, we also examined the relationship between airline competition and airline customer service (see app. I).

The scope of this report focused on airline consumer protection issues overseen by DOT.⁹ To describe trends in airline service, we analyzed DOT's operational data—including data on late flights and cancellations, denied boardings, and mishandled baggage—and passenger complaints submitted to DOT from 2008 through 2017.¹⁰ We limited our analysis of

⁷ In March 2017, Representatives DeFazio and Larsen introduced the "Know Before You Fly Act" which would have increased transparency to passengers on the services airlines provide during flight delays and cancellations resulting from computer network failures, in addition to increasing transparency on baggage fees in internet fare quotations, among other things. H.R. 1420, 115th Cong. (2017). Senators Markey and Blumenthal also introduced legislation to, among other things, end involuntary denied boardings, compensate passengers for certain delays and cancellations, and increase transparency around fees. S. 1418, 115th Cong. (2017).

⁸ Pub. L. No. 115-254, 132 Stat. 3186 (Oct. 5, 2018). For example, section 424(c) establishes an aviation consumer advocate within DOT that must, among other things, identify and recommend actions DOT can take to improve the enforcement of aviation consumer protection rules.

⁹ We excluded issues related to safety and security as the Federal Aviation Administration and the Transportation Security Administration, respectively, generally oversee those issues. Moreover, while we summarize information in our report on how price can affect service, our analyses were limited to non-price elements of customer service.

¹⁰ The "reporting airlines" that provide operational data to DOT are different from the "selected airlines" for which we analyzed passenger complaint data. From 2008 through 2017, DOT required airlines with at least 1 percent of domestic scheduled-passenger revenues in the most recently reported 12-month period to report operational data to DOT for reportable flights. Because the reporting threshold is determined on an annual basis, the number of reporting airlines has varied from 19 airlines in 2008 to 12 airlines in 2017.

passenger complaints to "selected" airlines that were required to report operational data to DOT in 2017—the most recent year of available data when we started our review—because they were the largest U.S. domestic passenger airlines in 2016. 11 To assess the reliability of DOT's data, we reviewed DOT reports, analyzed data to identify any outliers. and interviewed DOT program officials about how the data were collected and used. We determined that the data were sufficiently reliable for our purposes, including to present high-level trends in passenger service over time. To understand airlines' actions to enhance service from 2013 through 2017, we conducted a literature search of popular press articles and interviewed or obtained written responses from representatives from 11 of the 12 selected airlines. We requested interviews with all selected 12 airlines; 11 airlines agreed to be interviewed or provided written responses (Alaska Air Group representatives provided written responses on behalf of both Alaska and Virgin America as the airlines have merged since 2016), and 1 airline declined to be interviewed. 12 Given the dynamic nature of the industry, we asked about business practices and reviewed passenger satisfaction data for the most recent 5-year period.

To determine how effectively DOT ensures airlines' compliance with consumer protection requirements, we conducted multiple interviews with DOT officials and reviewed DOT's data and documents on its compliance activities from 2008 through 2017. We then evaluated selected DOT compliance activities against principles of *Standards for Internal Control in the Federal Government* related to DOT's policies and procedures for coding passenger complaints, case management system, and performance measures. ¹³ We also compared DOT's use of performance

¹¹ The 12 selected airlines are: Alaska Airlines (Alaska), American Airlines (American), Delta Air Lines (Delta), ExpressJet Airlines (ExpressJet), Frontier Airlines (Frontier), Hawaiian Airlines (Hawaiian), JetBlue Airways (JetBlue), Southwest Airlines (Southwest), Spirit Airlines (Spirit), SkyWest Airlines (SkyWest), United Airlines (United), and Virgin America. In 2017, the "reporting airlines" and "selected airlines" were the same.

¹² Hawaiian declined our requested for interview. In certain instances, we omitted two regional airlines from our discussion of business practices because representatives told us they operate aircraft on behalf of larger airlines whose policies they follow.

¹³ GAO, Standards for Internal Control in the Federal Government, GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

measures against other leading practices for successful performance measures.¹⁴

To understand the extent to which DOT's passenger education efforts align with key practices for consumer outreach, we assessed DOT's efforts to disseminate educational materials against key practices we identified in prior work. ¹⁵ We believe the key practices we identified in 2007 remain relevant today since the practices are not time-sensitive. DOT officials agreed that these key practices were relevant to conducting consumer outreach. See appendix II for more information on our scope and methodology.

We conducted this performance audit from September 2017 to November 2018 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 that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

State of the Airline Industry

In the U.S. commercial airline industry, passengers travel by air on network, low-cost, and regional airlines. With thousands of employees and hundreds of aircraft, network airlines support large, complex hub-and-spoke operations, which provide service at various fare levels to many destinations. ¹⁶ Low-cost airlines generally operate less costly point-to-point service using fewer types of aircraft. ¹⁷ Regional airlines typically operate small aircraft—turboprops or regional jets with up to 100 seats—

¹⁴ Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285 (Aug. 3,1993), as enhanced by the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011).

¹⁵ See GAO, *Digital Television Transition: Increased Federal Planning and Risk Management Could Further Facilitate the DTV Transition*, GAO-08-43 (Washington, D.C.: Nov. 19, 2007).

¹⁶ For purposes of this report, we defined Alaska, American, Delta, United, and Virgin America as network airlines.

¹⁷ For purposes of this report, we defined Frontier, JetBlue, Southwest, and Spirit as low-cost airlines. While Southwest has historically been classified as a low-cost airline, its route structure is increasingly similar to that of network airlines.

and generally provide service to smaller communities on behalf of network airlines.¹⁸

The U.S. airline industry's financial health has improved greatly in recent years due in part to increased demand for air travel as a result of the improved economy, industry reorganization, and changes in business practices. ¹⁹ Starting in 2007, airlines faced a number of major challenges, including volatile fuel prices, the financial crisis, and the ensuing recession of 2007–2009. These events led to a wave of domestic airline bankruptcies, five airline mergers, and changes in airlines' business practices. ²⁰ In all, these circumstances—such as the improved economy and new airline business practices—contributed to record level profits for airlines. For example, in 2017, U.S. airlines reported an after-tax net profit of \$13.4 billion for domestic operations, according to DOT data.

As the industry recovered from the recession and passenger traffic began to rebound, airlines began to exercise "capacity restraint" by carefully controlling the number of seats on flights to achieve higher load factors in order to control costs and improve profitability. Because capacity restraint may result in fewer empty seats on many flights, this practice also limits airlines' ability to rebook passengers if a flight is delayed or cancelled. Airlines have also made changes in their ticket pricing. For example, airlines now generally "unbundle" optional services from the base ticket price and charge ancillary fees for those services. Unbundling may result in passengers paying for services that were previously included in the price of the ticket. Additionally, certain aspects of customer service quality are tied to the class of ticket passengers

¹⁸ For purposes of this report, we defined ExpressJet and SkyWest as regional airlines.

¹⁹ See, for example, GAO, *Airline Competition: The Average Number of Competitors in Markets Serving the Majority of Passengers Has Changed Little in Recent Years, but Stakeholders Voice Concerns about Competition*, GAO-14-515 (Washington, D.C.: June 11, 2014) and Airlines For America, *U.S. Airline Industry Review: Allocating Capital to Benefit Customers*, Employees and Investors, Sept. 20, 2018.

²⁰ GAO-14-515.

²¹ Load factors represent the proportion of airline output that is actually consumed and are calculated by dividing revenue passenger miles by available seat miles.

²² GAO-14-515.

²³ GAO, Commercial Aviation: Information on Airline Fees for Optional Services, GAO-17-756 (Washington, D.C.: Sept. 20, 2017).

purchase.²⁴ For example, purchasing a "basic economy" ticket may include restrictions, such as not allowing passengers to select seats or charging for carry-on bags, that would not apply to a higher priced ticket class.²⁵ Similarly, the quality of seating varies based on the ticket class purchased—even within the main cabin of the aircraft. Moreover, while the recent airline mergers have resulted in some new service options for passengers in certain markets, they have also reduced consumers' choice of airlines on some routes and can result in higher ticket prices. At the same time, low-cost airlines provide greater competition in the markets they serve, which may help to keep prices in check.

Factors That Affect Passengers' Satisfaction with Service

Many factors—from booking a flight through collecting checked baggage—may contribute to passengers' level of satisfaction with an airline's service, according to an airline industry association and market research organizations (see fig.1). For example, one industry survey found that passengers most valued affordable airfare, convenient flight schedules, and reliable on-time departures and arrivals.²⁶

²⁴ GAO-17-756.

²⁵ GAO-17-756.

²⁶ Airlines for America, Air Travelers in America 2017, conducted by Ipsos Public Affairs.



Source: GAO summary of data from an airline industry association and market research firms. | GAO-19-76

Note: Although our report excluded issues related to safety and security as they are generally overseen by the Federal Aviation Administration and the Transportation Security Administration, respectively, those issues may affect passenger satisfaction.

DOT's Regulatory, Compliance, and Education Efforts

DOT's regulatory activities include issuing consumer protection regulations.²⁷ Specifically, DOT may issue or amend consumer protection regulations under its statutory authority to prohibit unfair or deceptive practices, or unfair methods of competition by airlines, among others.²⁸ As mentioned previously, under this authority DOT has promulgated various regulations to enhance airline consumer protections since 2009 (see table 1).

Table 1: Examples of the Department of Transportation's (DOT) Airline Consumer Protection Regulations						
Area/Topic ^a Regulatory requirements (citation)						
Airlines' "contracts of	 An airline cannot retroactively apply certain changes to its contract of carriage to persons who have already bought a ticket. (14 C.F.R. § 253.9) 					
carriage" ^b	 Certain airlines must post their current contract of carriage on their website. (14 C.F.R. § 259.6(c)) 					
Airlines' customer service plans	 Certain airlines must adopt and adhere to customer service plans with 12 required elements, including commitments to (1) ensure responsiveness to consumer problems as required by federal regulation, (2) identify services to mitigate passenger inconveniences resulting from flight cancellations and misconnections, and (3) hold reservations at the quoted fare without payment, or cancelled without penalty, for at least 24 hours after the reservation is made if the reservation is made 1 week or more prior to a flight's departure. (14 C.F.R. § 259.5) 					
Mishandled Baggage	 For certain domestic flights, an airline cannot limit its liability for certain damages resulting from the loss, damage or delay of baggage to an amount less than \$3,500 per passenger. (14 C.F.R. § 254.4) 					
	 Certain airlines must report monthly to DOT the total number of mishandled-baggage reports filed with the airline for certain domestic flights. (14 C.F.R. § 234.6(a)) 					
On-time performance (i.e., delays and cancellations)	 For certain domestic flights, certain airlines must display on their websites certain information regarding the flight's performance including the percentage of on-time arrivals, arrivals more than 30 minutes late, and sometimes flight cancellations. (14 C.F.R. § 234.11(b)) 					
	 Certain airlines must promptly provide information on their website about a change in the status of certain flights within 30 minutes after the airline becomes aware of the change in flight status. (14 C.F.R. § 259.8(a))^c 					
	 Certain airlines generally cannot permit an aircraft to remain on the tarmac for more than 3 hours for domestic flights, or 4 hours for international flights departing from or arriving at a U.S. airport, before allowing passengers to deplane. (14 C.F.R. § 259.4) 					
	 Certain airlines cannot hold out a chronically delayed flight for more than four consecutive 1-month periods.^d (14 C.F.R. § 399.81(c)) 					
	 Certain airlines must report monthly to DOT the on-time performance for certain domestic flights (including cancelled flights). (14 C.F.R. § 234.4) 					

²⁷ State and local governments are generally preempted by federal law from regulating airlines' prices, routes, or service. *See* 49 U.S.C. § 41713(b)(1).

²⁸ DOT has also issued regulations under the statute prohibiting discrimination by airlines against individuals based on disability.

Area/Topic^a Regulatory requirements (citation) Oversales and In the event that a flight is oversold an airline must request volunteers to be denied boarding before identifying passengers to be involuntarily denied boarding in accordance with its boarding priority rules. If an denied boarding airline offers free or reduced rate air transportation as compensation to passengers who volunteer, the compensation airline must disclose all material restrictions before the passenger agrees. (14 C.F.R. § 250.2b) Airlines must establish priority rules and criteria for determining which passengers will be involuntarily denied boarding if insufficient volunteers come forward. Factors may include a passenger's time of check-in, the fare paid by the passenger, and a passenger's frequent-flyer status. (14 C.F.R. § 250.3) In general, an airline must pay compensation to passengers who are denied boarding involuntarily from an oversold flight. The amount of compensation varies based on whether the flight is foreign or domestic; and when the alternate transportation, if any, is scheduled to arrive compared to the planned arrival time (of the original flight). Currently, for a domestic flight, the maximum denied boarding compensation amounts are \$675 (alternate transportation arrival more than one hour but less than two hours after planned arrival time) and \$1,350 (alternate transportation arrival two hours or more after planned arrival time). (14 C.F.R. § An airline must provide passengers who are denied boarding involuntarily, immediately after the denied boarding occurs, a written statement explaining the terms, conditions, and limitations of denied boarding compensation, and describing the airlines' boarding priority rules and criteria. (14 C.F.R. § 250.9(a)) Certain airlines must report on a quarterly basis to DOT passengers denied confirmed space data for certain flights. (14 C.F.R. § 250.10) Airlines must provide (or ensure the provision of) assistance in enplaning and deplaning as requested by or Passengers with on behalf of passengers with disabilities. (14 C.F.R. § 382.95(a)) disabilities Airlines must provide (or ensure the provision of) assistance with transportation between gates to make a connecting flight if requested by or on behalf of passengers with disabilities. (14 C.F.R. § 382.91(a)) Generally, airlines must not leave a passenger with a disability, who has requested certain assistance, unattended in a wheelchair in which the passenger is not independently mobile for more than 30 minutes. (14 C.F.R. § 382.103) Airlines must offer preboarding to passengers with disabilities who self-identify at the gate as needing additional time or assistance to board, stow accessibility equipment, or be seated. (14 C.F.R. § 382.93) For lost, damaged, or delayed wheelchairs or other assistive devices on domestic flights, airlines must calculate compensation based on the original purchase price of the device. (14 C.F.R. § 382.131) Airlines must permit service animals to accompany passengers with disabilities. (14 C.F.R. § 382.117(a)) Service animals Airlines must accept emotional support or psychiatric service animals for transportation in the cabin if the passenger provides certain required documentation. (14 C.F.R. § 382.117(e)) **Training** Certain airlines must provide training for certain personnel on various topics related to passengers with disabilities. (14 C.F.R. § 382.141) Airlines must include the entire price for air transportation, including government taxes and mandatory fees, Transparency of in certain advertisements. (14 C.F.R. § 399.84(a)) ticket prices and fees Certain airlines must prominently disclose fees for all optional services in a single place on their website. (14 C.F.R. § 399.85(d)) When offering a ticket for purchase by a consumer for passenger air transportation, airlines must offer

Source: GAO analysis of DOT regulations, I GAO-19-76

optional services on an opt-in basis. (14 C.F.R. § 399.84(c))

^a"Area/Topic" information does not necessarily reflect the title of the regulatory sections and parts in the Code of Federal Regulations.

^bPassengers who purchase an airline ticket are generally subjected to that airline's "contract of carriage"—a legal document that defines the rights, liabilities, and duties of the airline and passenger.

^cA change in the status of a flight means, at a minimum, a cancellation, diversion or delay of 30 minutes or more in the planned operation of a flight that occurs within 7 calendar days of the scheduled date of the planned operation. 14 C.F.R. § 259.8(a).

^dA chronically delayed flight is any domestic flight that is operated at least 10 times a month, and arrives more than 30 minutes late (including cancelled flights) more than 50 percent of the time during that month. 14 C.F.R. § 399.81(c)(2).

^eNo compensation is required for a domestic flight if the airline offers alternate transportation that, at the time the arrangement is made, is planned to arrive at the airport of the passenger's first stopover, or if none, the airport of the passenger's final destination no later than one hour after the planned arrival time of the passenger's original flight. 14 C.F.R. § 250.5(a)(1).

In 2011, DOT changed the denied boarding compensation maximum amounts from \$400/\$800 to \$650/\$1,300. In 2015, DOT updated these maximum amounts to the current levels of \$675/\$1,350.

When regulations are promulgated, agency officials must determine how to promote compliance and deter noncompliance. ²⁹ Agencies charged with promoting regulatory compliance, including DOT, usually adopt a program that consists of two types of activities: those that encourage compliance and those that enforce the regulations. ³⁰ Compliance assistance helps regulated entities, such as U.S. airlines, understand and meet regulatory requirements, whereas activities such as monitoring, enforcement, and data reporting deter noncompliance and ensure that entities follow requirements. Agencies choose a mix of compliance activities that will achieve their desired regulatory outcome.

DOT promotes airlines' compliance with consumer protection requirements through a number of activities, and it educates passengers on their rights. For example, DOT has the authority to investigate whether an airline has been, or is engaged, in an unfair or deceptive practice or an unfair method of competition in air transportation or the sale of air transportation.³¹ If DOT finds that an airline has violated consumer protection requirements, DOT may take enforcement action against the airline by, for example, assessing civil penalties.³² In addition to promoting airlines' compliance with consumer protection requirements, DOT also conducts activities aimed at educating passengers about their rights and the services provided by airlines. For example, DOT has an

²⁹ GAO, Federal Regulations: Key Considerations for Agency Design and Enforcement Decisions, GAO-18-22 (Washington, D.C.: Oct. 19, 2017).

³⁰ GAO-18-22.

^{31 49} U.S.C. § 41712(a).

³² 49 U.S.C. § 46301(a). Passengers generally cannot sue an airline in federal court. However, if, for example, the airline fails to adhere to its contract of carriage, the passenger may be able to sue the airline for breach of contract in a state or local court.

aviation consumer protection website where it highlights passengers' rights and describes how to file complaints with DOT, in addition to other consumer resources. Within DOT's Office of the Secretary (OST), the Office of the Assistant General Counsel for Aviation Enforcement and Proceedings and its Aviation Consumer Protection Division are responsible for these efforts. According to DOT officials, the annual appropriation to OST's Office of the General Counsel provides funding for DOT's consumer protection activities, among other things.³³ At the end of fiscal year 2017, DOT employed 38 staff—including 18 attorneys and 15 analysts—to conduct these activities, according to DOT officials.

DOT's Data Provide
Mixed Information on
Improvement in the
Quality of Airline
Service; Selected
Airlines Indicate They
Are Taking Steps
Intended to Enhance
Service

DOT's Data Provide Mixed Information on the Quality of Airline Services

DOT's data, which include both operational measures of airline service, as well as passenger complaints received by DOT, provide mixed information on whether service improved from 2008 through 2017. DOT requires reporting airlines to provide operational data, including information on late, cancelled, or diverted flights; mishandled baggage; and denied boardings.³⁴ These data showed some general improvement in the quality of airline service from 2008 through 2017. However, during

³³ In some years between 2008 and 2017, the Senate Committee on Appropriations directed that the Office of the General Counsel use a portion of its appropriation, generally around \$2,500,000, toward aviation consumer protection activities.

³⁴ See 14 C.F.R. §§ 234.4, 234.6, 250.10. A diverted flight is one that operated from the scheduled origin point to a point other than the scheduled destination point in the airline's published schedule. This information is reported to DOT's Bureau of Transportation Statistics. As mentioned previously, the number of "reporting airlines" has varied from 19 airlines in 2008 to 12 airlines in 2017.

the same time period, the total number of passenger complaints filed with DOT increased for "selected" airlines.³⁵ Moreover, while these data may be imperfect measures of service quality, they do provide some indication of the passenger experience. DOT publishes data on both operational performance and passengers' complaints in its monthly *Air Travel Consumer Report* to inform the public about the quality of services provided by airlines.

Operational Measures of Airline Service

Certain measures of airline service generally improved from 2008 through 2017 for reporting airlines, according to DOT data (see fig. 2). DOT collects operational data to measure airline performance on denied boardings; on-time performance (i.e., late, cancelled, or diverted flights); and mishandled baggage.

³⁵ As mentioned previously, these were the 12 largest airlines in 2016 that were required to report operational data to DOT in 2017.

Figure 2: Trends in Selected Measures of Airlines' Service, 2008 through 2017 Percent 0.12 0.10 **Denied boardings** 0.08 0.06 Percentage of passengers voluntarily denied boarding 0.04 Percentage of passengers 0.02 involuntarily denied boarding 0.00 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 Year Percent 25 20 On-time performance 15 Percentage of flights that arrived late 10 Percentage of flights that are cancelled Percentage of flights that are diverted 5 0 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 Year Percent 0.6 0.5 Mishandled baggage 0.4 Percentage of enplanements with mishandled baggage 0.3 0.2 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 Year

Source: GAO analysis of Department of Transportation (DOT) data. \mid GAO-19-76

Notes: DOT required airlines with at least 1 percent of domestic scheduled-passenger revenues in the most recently reported 12-month period to report data on on-time performance, mishandled baggage, and denied boardings for reportable flights from 2008 through 2017.

The scale for the y-axis is different for each of the graphs.

- Denied boardings. Over the 10-year period of our review, the lowest rate of involuntary denied boardings occurred in 2017. Specifically, in 2017, airlines involuntarily denied boarding to about .003 percent of all passengers (or about 23,000 of more than 680 million passengers)—a slight decrease from prior years. Voluntary denied boardings also decreased across this time frame, from a high of more than 695,000 passengers in 2009 to more than 341,000 passengers in 2017.
- On-time performance. Rates of late arrivals, cancellations, and diverted flights have been lower in recent years, particularly since 2014. For example, in 2017, rates of diverted and cancelled flights, which accounted for less than 3 percent of all flights, were below average across the 10-year period. The percentage of late arrivals, which accounted for between 16.7 and 21.8 percent of all flights from 2008 through 2017, was also lower in recent years and declined almost 4 percentage points since 2008—the year with the highest rate of late arrivals.
- **Mishandled baggage.** Rates of mishandled baggage have generally decreased since 2008, particularly since 2014.³⁷ For example, in 2017 reporting airlines posted a rate of 2.5 mishandled bags per 1,000 passengers (a rate of .25 percent of mishandled bags per passenger enplanement), compared to a rate of 5.25 mishandled bags per 1,000 passengers in 2008.

Passenger Complaints

Despite improvements to DOT's operational data, we found that the number of passenger complaints received by DOT, relative to passenger enplanements, increased between 2008 and 2017 for selected airlines, peaking in 2015 and declining somewhat in later years. Specifically, the rate of passenger complaints received by DOT, relative to passenger

³⁶ DOT's on-time performance data do not capture all delays or increases in passenger travel times. For example, on-time performance is measured against airlines' published schedules for how long the flight is expected to take between gate departure and gate arrival—referred to as a "block time." Airlines can increase their block times in an effort to anticipate potential delays due to weather conditions or airport and airspace congestion, among other things, and improve on-time performance. Longer block times can also provide passengers additional certainty that flights operate according to their published schedules.

³⁷ DOT reports the rate of mishandled baggage relative to passenger enplanements, not the total number of checked bags. Accordingly, improvement to the rate could be the result of reductions in checked bags relative to enplanements. However, improvements may also be due to a new DOT regulation requiring airlines to reimburse passengers for any baggage fee if the bag is lost, and other operational improvements discussed later in this report.

enplanements (i.e., passengers), increased about 10 percent from about 1.1 complaints per 100,000 passengers in 2008 to 1.2 complaints per 100,000 passengers in 2017.³⁸

DOT receives passenger complaints via its website, by mail, or through DOT's telephone hotline and categorizes complaints by the predominant passenger issue. Our analysis of the complaint data found that 4 of DOT's 15 complaint categories make up the vast majority of complaints for selected airlines. ³⁹ Specifically, from 2008 through 2017, the following 4 categories consistently accounted for at least 70 percent of all complaints received by DOT for selected airlines. ⁴⁰ As discussed later, DOT uses these data as one source of information for identifying which airlines to inspect and deciding whether to open investigations of airlines, among other things.

Flight problems generally accounted for an average of about 33 percent of all complaints for selected airlines. This category included complaints related to airline delays, cancellations, missed connections, and diversions, among other things. Complaints in this category were commonly due to delays and cancellations and, according to DOT data, the reason was frequently bad weather,

³⁸ Complaint data have limitations as a measure of service quality because, according to academic literature, a substantial portion of dissatisfied individuals do not complain and the perceptions of service quality by individuals who complain may not be representative of other individuals who experience the same level of service or of the complainants themselves. Moreover, as passengers form impressions, they may not rely solely on objective information, but rather there is a tendency for a perception created in one area to influence a person's opinion in another area. See, for example, Doga Istanbulluoglu, Sheena Leek, and Isabelle T. Szmigin, "Beyond exit and voice: Developing an integrated taxonomy of consumer complaining behavior," *European Journal of Marketing*, vol. 51 no. 5/6 (2017) and Line Lervik-Olsen, Tor Wallin Andreassen, and Sandra Streukens, "What drives the intention to complain?," *Journal of Service Theory and Practice*, vol. 26 no. 4 (2016).

³⁹ DOT's 15 complaint categories include: flight problems, oversales, reservations, ticketing, and boarding, fares and ancillary fees, refunds, baggage, customer service, smoking, advertising, credit, tours or charters, miscellaneous/other (includes frequent flyer), disability, animals: loss, injury, or death, and discrimination (except disability).

⁴⁰ The next largest complaint category changed across the years we reviewed. From 2008 through 2014, the fifth largest category was refunds, which includes complaints about problems in obtaining refunds for unused or lost tickets, fare adjustments, or bankruptcies. From 2014 through 2017, the fifth largest complaint category was fares, which includes incorrect or incomplete information about fares, discount fare conditions and availability, overcharges, fare increases; and level of fares in general.

mechanical issues, or crew availability. From 2008 through 2017, the rate of complaints in this category generally increased.

- Baggage issues generally accounted for an average of about 15
 percent of total complaints for selected airlines. Complaints were
 largely related to lost, delayed, or damaged bags. According to DOT
 data, the underlying issues were commonly related to airlines'
 insufficient effort to locate the bag. The rate of baggage complaints
 generally decreased over our time period for these airlines.
- Reservations, ticketing, and boarding generally accounted for an average of almost 13 percent of complaints for selected airlines. Complaints in this category were frequently related to a refusal to board passengers, which commonly stemmed from issues with information provided by the passenger, government documentation (such as passports), and unaccompanied minors. While complaints about reservations, ticketing, and boarding are consistently a top complaint category, the rate of complaints per 100,000 passengers generally stayed the same between 2008 and 2017.
- Customer service complaints generally accounted for an average of about 13 percent of all complaints for selected airlines. These complaints were commonly related to airline staff having a poor attitude, refusing to provide assistance, and unsatisfactory seat assignments. The rate of such complaints declined slightly over our time period for selected airlines.

While passenger complaints received by DOT on disability issues, oversales, and fares typically did not fall in the top-five complaint categories, the rates related to these complaints increased across our time frame. For example, the rate of disability complaints received by DOT per 100,000 passengers—including complaints for failure to provide timely service to passengers with disabilities, accessibility of the aircraft or aircraft seats, and service animals—increased from 2008 through 2017. Similarly, the rate of complaints on oversales also increased; these complaints related to airlines' failure to solicit volunteers or providing compensation below the required amount, among other things. As discussed later in the report, if DOT analysts identify spikes in specific passenger complaints, they can elevate this information to DOT attorneys, who can begin investigations.

DOT's passenger complaint data do not include passengers' complaints submitted directly to airlines. 41 DOT officials estimated that, on average, airlines receive 50 complaints for every 1 complaint DOT receives. Stakeholders we interviewed suggested that the difference in complaint rates is because passengers may not know they can file a complaint with DOT. DOT officials said they generally recommend that passengers first reach out to airlines as they are best positioned to respond to a passenger's complaints. 42

While DOT data on operational performance and passenger complaints provide mixed information on whether airline service improved, recent analyses conducted by three market research organizations generally suggest that passenger satisfaction improved in recent years, though results for 2018 diverged. We reviewed analyses from three market research organizations that measure trends in passenger satisfaction—as measured by DOT operational data and organizations' survey of passengers, among other things—and all concluded that satisfaction improved from 2013 to 2017; however, results for 2018 diverged. For example, one market research organization found that satisfaction decreased in 2018 due to dissatisfaction with airlines' reservation systems, flight crew courtesy, and baggage handling, while another found that passenger satisfaction increased in 2018 due to airlines' investments in newer airplanes and improved customer satisfaction with overhead storage compartments.

⁴¹ Selected airlines generally consider certain aspects of their complaint data to be proprietary.

⁴² DOT officials said that it was difficult to determine what drives trends in passenger complaints. Alternatively, an industry association representing airlines said that complaint rates tend to spike after extreme weather events, airport security breaches, and new DOT rules, among other things. Academic research has shown that service is not the only driver. For example, one study found that passengers traveling on low-cost airlines are less likely to complain, compared to passengers on network airlines, even with similar service. See Michael D. Wittman, *Are low-cost carrier passengers less likely to complain about service quality?* Massachusetts Institute of Technology, International Center for Air Transportation, Cambridge, MA (2013).

Selected Airlines Indicate
They Have Taken a Variety
of Actions to Enhance
Passenger Service

Representatives from all 11 selected airlines highlighted actions they took to enhance passenger service since 2013, including in some of the areas discussed above. 43 While customer service is important for airlines, these actions can also be motivated in part by other factors—including compliance with certain consumer protection requirements or DOT consent orders, or competition with other airlines. For example, one airline developed a wheelchair tracking system in response to DOT enforcement, which also contributed to the airline's goal to improve its services to passengers with disabilities. Additional examples of service improvements are listed below.

On-time performance. Representatives we interviewed from almost all selected airlines (10 of 11) reported taking actions intended to improve on-time performance or mitigate challenges associated with flight delays and cancellations. These actions varied across airlines from those intended to improve operational performance to those intended to improve the comfort of passengers. For example, one airline began tracking flights that were "at-risk" of meeting DOT's definition of a chronically delayed flight, so it could, among other things, swap crews or substitute aircraft and avoid these types of delays. 44 According to DOT regulations, airlines with a chronically delayed flight for more than four consecutive one-month periods are engaging in a form of unrealistic scheduling, which is an unfair or deceptive practice and an unfair method of competition.⁴⁵ Airlines have also used technology, such as text-messaging updates, to communicate with passengers during delays and cancellations (8 of 9); increased the number of situations where passengers are compensated during delays and cancellations (5 of 9); and empowered customer service agents to provide food, beverages, and entertainment to passengers during flight delays (1 of 9). For example, one airline e-mails all passengers that experience long delays with an apology and voucher for future travel, regardless of

⁴³ As mentioned previously, regional airlines generally provide service on behalf of network airlines. As a result, they do not provide some of the services we asked about, such as selling tickets or providing baggage handling services. In these cases, we omitted them from our discussion of airlines.

⁴⁴ A chronically delayed flight is any domestic flight that is operated at least 10 times a month, and arrives more than 30 minutes late (including cancelled flights) more than 50 percent of the time during that month.

^{45 14} C.F.R. 399.81(c)(4).

whether the delay was within the airline's control. While DOT has some requirements for airlines on delays and cancellations, such as on tarmac delays and chronically delayed flights, it generally does not require airlines to compensate passengers for delays.⁴⁶

- Baggage handling. Representatives we interviewed from almost all network and low-cost airlines (8 of 9) reported investing resources in order to improve baggage-handling efforts and minimize the effects to passengers whose bags are lost or delayed. Among other things, airlines upgraded baggage technology (5 of 9); modernized the claims process, so passengers could complete forms on-line (3 of 9); and instituted replacement baggage programs, where passengers get a replacement bag at the airport (2 of 9). For example, one airline invested several million dollars to use radio frequency identification technology (RFID) to track bags, as well as allowing passengers to track their baggage via an application on their smartphone. Another airline introduced a policy to use FedEx to deliver delayed bags if the airline cannot return them within 24 hours. Since 2011, DOT has required certain airlines to make every reasonable effort to return mishandled baggage within 24 hours. ⁴⁷
- Quality of interaction with airline staff. Representatives we interviewed from almost all selected airlines (10 of 11) reported improving training programs in an attempt to enhance interactions between airline staff and passengers. For example, one airline worked with the Disney Institute to provide training to staff on relating to guests during travel disruptions and de-escalating conflict. While airlines have increased customer service training, representatives from one industry association said that the training would be more beneficial if it was provided on a more regular basis. Two airlines also expanded their customer service departments' hours to better match

⁴⁶ See Department of Transportation, Flight Delays & Cancellations, Accessed Sept. 20, 2018, https://www.transportation.gov/individuals/aviation-consumer-protection/flight-delays-cancellations.

⁴⁷ See 14 C.F.R. § 259.5(b)(3).

when passengers travel. According to DOT officials, airlines are not required to provide customer service training to staff.⁴⁸

- Passengers with disabilities. Representatives we interviewed from almost all network and low-cost airlines (8 of 9) reported taking actions intended to improve services for passengers with disabilities. These actions included programs to replace damaged or misplaced wheelchairs or other assistive devices (3 of 9); improving seating and access to lavatories in the aircraft (1 of 9); and using RFID technology to track wheelchairs (1 of 9). For example, representatives from one airline told us they have retrofitted their larger single aisle aircraft lavatories to be wheelchair accessible. Two airlines also reported changing policies pertaining to emotional support animals. For example, one airline has an online registration for emotional support animals where passengers must submit all documentation at least 48 hours in advance of the flight; according to representatives, the process allows the airline to validate the required paperwork, while providing relevant information to passengers with emotional support animals and ensuring the safety of everyone onboard the aircraft.⁴⁹
- Involuntary denied boardings. Representatives we interviewed from network and low-cost airlines (9) reported taking steps to reduce or eliminate involuntary denied boardings. Representatives from three airlines said they have reduced or stopped overbooking flights, and other representatives (5 of 9) said their airlines have begun soliciting volunteers to be "bumped" off a flight (i.e., give up their seat) earlier in

⁴⁸ However, DOT has training requirements for certain airline employees, including certain contractors, on various topics related to passengers with disabilities. 14 C.F.R. § 382.141. Such training may include class-based instruction with situational scenarios and hands-on training, such as wheelchair handling and lifting passengers into aisle seats to assist in boarding. See GAO, *Passengers with Disabilities: Air Carriers' Disability-Training Programs and the Department of Transportation's Oversight*, GAO-17-541R (Washington, D.C.: May 31, 2017).

⁴⁹ While DOT generally requires airlines to transport service animals and emotional support animals (with required documentation), in May 2018, DOT issued an Advance Notice of Proposed Rulemaking in response to feedback from the airlines and some high-profile incidents involving service animals and emotional support animals. Specifically, according to DOT's Advance Notice of Propose Rulemaking, airlines and airline associations contacted DOT to express concerns that passengers are increasingly bringing untrained service animals onboard aircraft and putting the safety of crewmembers and other passengers at risk. As part of this process, DOT is soliciting comments on, among other things, whether there should be a distinction between emotional support animals and other service animals; whether emotional support animals should be required to travel in pet carriers for the duration of the flight; and whether the species of service animals and emotional support animals that airlines are required to transport should be limited. *See* 83 Fed. Reg. 23832 (May 23, 2018).

the process.⁵⁰ Two conduct reverse auctions where they ask passengers what compensation they would accept to take an alternative flight. Airlines are also offering additional incentives to encourage passengers to voluntarily switch to flights with available seats (5 of 9)—including travel vouchers with fewer restrictions or that cover ancillary fees, gift cards for Amazon and other retailers, or large travel credits of up to \$10,000.⁵¹

DOT Conducts
Multiple Activities to
Monitor Airline
Compliance, but
Opportunities Exist to
Improve These
Efforts' Effectiveness

DOT promotes and monitors airlines' compliance with consumer protection requirements and deters noncompliance in five key ways, such as by reviewing passenger complaint data and taking enforcement action where it identifies violations. However, we found that DOT could improve its procedures to provide additional assurances that analysts consistently code passengers' complaints and properly identify potential consumer protection violations, in addition to more fully utilizing data from DOT's information systems to inform its compliance program. Further, while DOT has objectives for each of its five key compliance activities, it lacks performance measures for three of these objectives. As a result, DOT is limited in its ability to assess progress toward achieving its goal of promoting airlines' compliance with consumer protection requirements or to identify and make any needed improvements.

DOT Conducts Five Key Compliance Activities

DOT conducts five key activities to help airlines understand and comply with consumer protection requirements: (1) providing compliance assistance to airlines, (2) processing complaints from passengers, (3) conducting compliance inspections of airlines at headquarters and airports, (4) conducting airline investigations, and (5) enforcing airlines' compliance with consumer protection requirements. ⁵² Collectively, these key compliance activities are intended to help airlines understand and meet consumer protection requirements and deter noncompliance.

⁵⁰ Even if an airline does not overbook a flight, it may still be forced to deny some passengers boarding. For example, if an airline has to fly a smaller aircraft than was originally scheduled, it may be forced to deny boarding to some passengers.

⁵¹ For example, in its 2017 United Airlines United Express Flight 3411 Review and Action Report, United Airlines said it would increase passenger compensation for denied boarding volunteers up to \$10,000.

⁵² Our review did not examine DOT's regulatory efforts to establish new consumer protections.

- Providing compliance information to airlines. DOT attorneys assist airlines in meeting consumer protection requirements by developing guidance materials and responding to questions. DOT publishes these materials—such as topic-specific webpages and frequently asked questions—on its website. Attorneys and analysts also informally respond to questions or requests for information from airline representatives.
- **Processing complaints from passengers.** As previously stated, passengers may file complaints with DOT via its website, by mail, or through DOT's telephone hotline. DOT analysts use a web application—the Consumer Complaints Application system—to receive, code, and track passenger complaints. In 2017, DOT's 15 analysts processed about 18,000 air travel-related complaints.⁵³ Initial processing involves reviewing the information in the complaint. notifying complainants that their complaint was received, and transmitting the complaint to the relevant airline for action. Analysts assign one of 15 high-level complaint category codes (e.g., "advertising" or "discrimination") to each complaint as well as more specific lower-level complaint codes and codes indicating a potential violation of consumer protection requirements as necessary. Analysts initially code a complaint based on the passenger's perception of events and not on an assessment of whether the complaint is a potential violation of consumer protections. According to DOT officials, when initially coding passenger complaints, analysts generally use their judgment to code each passenger's complaint based on the primary issue. While analysts handle a variety of complaints, DOT may designate specific analysts to handle more complex complaint codes, such as disability complaints.⁵⁴ On a monthly basis, DOT provides airlines the opportunity to review the complaints received and the agency's categorization of each complaint. At that time, airlines have an opportunity to challenge DOT's categorizations. According to DOT officials, a limited number of complaints are recoded as a result of this process.
- Conducting compliance inspections of airlines at headquarters and airports. DOT analysts and attorneys inspect airlines at airline headquarters and airports to assess their compliance with consumer

⁵³ These complaints were against airlines, in addition to other entities, such as travel agents and tour operators.

⁵⁴ Unlike other types of complaints, all complaints categorized as disability received by DOT are reviewed by an analyst and attorney to determine whether a consumer protection violation occurred.

protection requirements. From 2008 through 2016, analysts and attorneys conducted compliance inspections of airlines at the airlines' headquarters, but DOT has not conducted any such inspections since September 2016. Beginning in 2015, DOT initiated compliance inspections of airlines at airports, and DOT continued to conduct these inspections through 2018. According to DOT officials, they have exclusively conducted on-site inspections of airlines at airports in recent years due, in part, to limited resources and budget unpredictability. However, officials stated that they would consider conducting more inspections of airlines at airline headquarters in the future.

Inspections of airlines at airlines' headquarters examine customer service policies and passenger complaints received directly by airlines, among other things. According to DOT officials, these inspections represent a "deep dive" into an airline's relevant policies and involve collecting and analyzing data prior to and after their weeklong visit, as well as interviewing corporate personnel.⁵⁵ DOT analysts and attorneys use the agency's inspection checklist to assess compliance with a variety of regulated areas such as the inclusion of certain information on the airline's website and the proper reporting of data to DOT (e.g., mishandled baggage and on-time performance data). According to DOT data, between 2008 and 2016 DOT completed inspections at 33 U.S. airlines' headquarters. These 33 inspections identified 23 systemic violations, resulting in consent orders.⁵⁶ Two inspections resulted in warning letters, 57 and eight did not identify any systemic violations. The assessed penalty amounts for these inspections ranged from \$40,000 to \$1,200,000.

⁵⁵ During headquarters inspections and other DOT investigations, DOT may review the airline's contract of carriage to ensure it accurately reflects regulatory requirements, if they are included. DOT also may review the airline's procedures to ensure they comply with the promises in its contract of carriage. DOT interprets an airline's failure to comply with its contract of carriage as an unfair and deceptive practice in violation of 49 U.S.C. § 41712.

⁵⁶ A consent order is a type of settlement in which DOT orders an entity, such as an airline, to cease and desist from future violations and may require an airline to pay a civil penalty or complete specified corrective actions in order to avoid future litigation.

⁵⁷ A warning letter informs an airline that DOT has found it has violated a consumer protection requirement, but for a number of possible reasons (e.g., severity or frequency of the violation), DOT has determined that a consent order is not appropriate. The warning letter describes the violation and warns the airline that continued violation may lead to stronger measures.

- Inspections of airlines at airports examine staff's knowledge of certain consumer protection requirements and the availability and accuracy of signage and documentation. Such inspections provide DOT the opportunity to examine multiple airlines in one visit. According to DOT officials, during these unannounced inspections, attorneys and analysts focus on assessing compliance through observation and interviews with randomly selected airline employees. For example, analysts and attorneys may confirm the availability of information on compensation for denied boarding from an airline gate agent or review an airline's required signage on compensation for mishandled baggage to determine whether the information is accurate. According to DOT data, DOT inspected 12 to 14 U.S. airlines annually—most multiple times—at 51 domestic airports from 2015 through 2017. In 2017, DOT conducted inspections at 18 domestic airports that included inspecting 12 U.S. airlines multiple times. In total, from 2015 through 2017, DOT found violations of various consumer protection requirements for 13 airlines that DOT addressed through warning letters. In addition, DOT found violations related to incorrect (e.g., out-of-date) or missing notices regarding baggage liability limits or oversales compensation for 8 airlines that were settled by consent orders with penalties between \$35,000 and \$50,000.
- Conducting airline investigations. According to DOT officials, attorneys determine whether to open an investigation by weighing numerous factors, including whether they believe an airline is systematically violating consumer protection requirements. Attorneys may initiate an investigation based on findings from trends in passenger complaints, compliance inspections, monitoring of airline websites and news media, or information supplied by other entities, including other DOT offices or governmental agencies. According to DOT officials, after gathering preliminary information, an attorney may notify the airline of his or her investigation, request information for further analysis, and then determine whether a violation has occurred and which enforcement action, if any, is appropriate. Attorneys document these investigations using DOT's case management system. From 2008 to 2017, DOT initiated almost 2,500 investigations as shown in table 2 below.

⁵⁸ DOT's case management system—which was implemented in 2008 to track and monitor investigations—allows attorneys to create, update, and close case records, link documents to case records, and create and monitor enforcement actions associated with cases.

requirements. When investigations result in a determination that a violation occurred, DOT may pursue enforcement action against the airline by, for example; (1) seeking corrective actions through warning letters; (2) consent orders (which may include fines); or (3) commencement of a legal action (see table 2).⁵⁹ According to DOT officials, attorneys consider a number of factors in determining the appropriate enforcement action, including whether there is evidence of recidivism or systemic misconduct, and the number of passengers affected. According to DOT data, most investigations result in administrative closures and findings of no violation.⁶⁰

Table 2: Number and Type of Enforcement Actions from the Department of Transportation's (DOT) Investigations, Calendar Years 2008 through 2017

Calendar year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Investigations initiated	108	186	267	395	320	233	190	222	256	287	2,464
Open investigations	0	0	0	0	0	0	1	3	16	67	87
Enforcement actions re	esulting	from ir	nitiated	investig	ations:						
Consent order ^a	23	46	61	63	53	44	34	17	42	13	396
Warning letter ^b	32	63	35	82	41	32	22	37	33	58	435
Administrative closure ^c	40	68	98	152	176	52	61	74	128	95	944
Letter of no violation	7	6	72	91	49	93	68	86	33	51	556
Dismissal order ^d	1	0	0	1	1	10	2	3	4	3	25
Letter of abeyance ^e	5	3	1	2	0	0	0	0	0	0	11
Verbal correction	0	0	0	2	0	2	1	1	0	0	6
Adjudicated complaint ^f	0	0	0	2	0	0	1	1	0	0	4

Source: DOT data from its case management system as of August 2018. | GAO-19-76

Note: DOT's attorneys revise and update data in its case management system as DOT makes determinations about enforcement actions and closes investigations.

^aA consent order is a type of settlement in which DOT orders an entity, such as an airline, to cease and desist from future violations and may require an airline to pay a civil penalty or complete specified corrective actions in order to avoid future litigation.

^bA warning letter informs an airline that DOT has found it has violated a consumer protection requirement, but for a number of possible reasons (e.g., severity or frequency of the violation), DOT has determined that a consent order is not appropriate. The warning letter describes the violation and warns the airline that continued violation may lead to stronger measures. These data do not include

⁵⁹ If DOT and the airline cannot reach an agreement on a consent order, DOT may commence a legal action by filing a complaint with an administrative law judge.

⁶⁰ Administrative closures include cases closed with an email warning of violations, a finding of no violation, a finding of insufficient evidence, or other miscellaneous reasons indicating that an enforcement action was not necessary.

warning letters sent by analysts to airlines as the result of a disability complaint submitted to DOT. DOT is required by statute to investigate each disability complaint. To accomplish this task, analysts investigate each complaint and determine whether a violation occurred; this determination is reviewed by an attorney. In cases where the analysts find a violation, they send the passenger a confirmation letter and send a copy of the letter to the airline, a process that DOT considers an "informal warning of violation." Because analysts record these warnings in the Consumer Complaint Application, they are not reflected in the data in this table.

^cAdministrative closures include cases closed with an e-mail warning of violations, a finding of no violation, or a finding of insufficient evidence.

^dA dismissal order is an order issued by DOT that disposes of a formal complaint or a petition for rulemaking.

^eA letter of abeyance indicates that an investigation is placed on hold, typically because the company has ceased operations, with a notation that the investigation may resume if the airline resumes activity.

An adjudicated complaint is a formal complaint filed before and resolved by an administrative law judge pursuant to DOT regulations.

According to DOT officials, when attorneys decide to issue a consent order, they work with their managers to arrive at an initial civil penalty level and then negotiate with the airline to arrive at a final settlement agreement and civil penalty amount if applicable. DOT has criteria for setting civil penalties, but officials describe the process as "more art than science" because facts and circumstances always vary. Civil penalties assessed in consent orders often include three parts: mandatory penalties, credits, and potential future penalties (see table 3). A mandatory penalty is the portion of the assessed penalty that must be paid immediately or in installments over a specified period of time. 61 A credit is the portion of the assessed penalty that DOT allows an airline to not pay in order to give credit to the airline for spending funds on passenger compensation or toward specific service improvements, both of which must be above and beyond what is required by existing requirements. A potential future penalty is the portion of the assessed penalty that the airline will pay if DOT determines that the airline violated certain requirements during a specified period of time.

⁶¹ According to DOT officials, mandatory penalties are deposited in the General Fund of the U.S. Treasury.

Table 3: Consent Orders and Penalties Assessed by the Department of Transportation (DOT) against Selected Airlines, Calendar Years 2008 through 2017

Year	Consent orders	Assessed penalties	Mandatory penalties ^a	Credits ^b	Potential future penalties ^c
2008	3	\$105,000	\$75,000	\$10,000	\$20,000
2009	6	\$1,005,000	\$517,500	\$225,000	\$262,500
2010	8	\$1,112,000	\$656,000	\$270,000	\$186,000
2011	10	\$2,440,000	\$1,000,000	\$1,250,000	\$190,000
2012	5	\$395,000	\$189,500	\$33,000	\$172,500
2013	13	\$3,100,000	\$1,337,200	\$1,257,800	\$505,000
2014	4	\$475,000	\$350,000	\$0	\$125,000
2015	5	\$1,880,000	\$750,000	\$700,000	\$430,000
2016	11	\$4,715,000	\$2,027,500	\$2,580,000	\$107,500
2017	11	\$2,740,000	\$1,535,000	\$1,075,000	\$130,000
Total	76	\$17,967,000	\$8,437,700	\$7,400,800	\$2,128,500

Source: GAO analysis of DOT data. | GAO-19-76

Note: A consent order is a type of settlement in which DOT orders an entity, such as an airline, to cease and desist from future violations and may require an airline to pay a civil penalty or complete specified corrective actions in order to avoid future litigation.

Our review of 76 consent orders for our 12 selected airlines where a penalty was assessed found that DOT issued penalties totaling \$17,967,000 from 2008 through 2017. 62 Of this, 47 percent (\$8,437,700) comprised mandatory penalties paid by the airline. The remaining amounts were either credits or potential future penalties. According to DOT officials, credits are a better way to effect positive change than merely assessing a mandatory penalty. For example, one recent consent order included violations of regulations regarding assistance for passengers with disabilities, among other things. The airline and DOT agreed to an assessed civil penalty amount of \$400,000, \$75,000 of which was credited to the airline for compensation to customers filing

^aMandatory penalties are the portion of the assessed penalty that must be paid immediately and/or in installments over a specified period of time.

^bCredits are the portion of the assessed penalty that DOT allows an airline to not pay in order to give credit to the airline for spending funds on passenger compensation or toward specific service improvements, both of which must be above and beyond what is required by existing requirements.

^cPotential future penalties are the portion of the assessed penalty that the airline will pay if DOT determines the airline violated certain requirements during a specified period of time.

⁶² The number of consent orders in this table differs from those displayed in table 2 because the specific airlines and related information represented in this table is limited to selected airlines.

disability-related complaints in certain years and for implementation of an application to provide real-time information and response capabilities to a wheelchair dispatch and tracking system, among other things. However, our review found that consent orders do not always ensure future compliance. Specifically, we found 14 instances where an airline received multiple consent orders for the same regulatory violation. Three of these instances—each for different airlines—related to violations of the "full fare rule," and two—also for different airlines—related to airlines' failure to adhere to customer service plans. 64

Improvements to DOT's
Procedures Could Provide
Greater Assurance That
Passengers' Complaints
Are Consistently Coded
and that Consumer
Protection Violations are
Properly Identified

We found that while DOT has some procedures (i.e., guidance documents and on-the-job training) in place for coding passenger complaints, it lacks others that could help ensure that analysts consistently code complaints and that potential consumer protection violations are properly identified. Federal internal control standards state that agencies should design control activities to achieve objectives and establish and operate monitoring activities to evaluate results. By designing and assessing control activities, such as procedures and training, agencies are able to provide management with assurance that the program achieves its objectives, which in this case involve identifying instances of airline noncompliance.⁶⁵

DOT has taken some steps to help analysts code passenger complaints and properly identify potential violations of consumer protection requirements:

 Guidance documents. DOT developed two documents to guide complaint processing and evaluation—a coding sheet that helps analysts determine how to code complaints and identify potential

⁶³ 14 C.F.R. § 399.84(a). The full fare rule is the commonly used name for DOT's regulation requiring airlines to include the entire price for air transportation, including government taxes and mandatory fees, in certain advertisements.

⁶⁴ 14 C.F.R. § 259.5(a). Certain airlines must adopt and adhere to customer service plans with 12 required elements, including commitments to (1) ensure responsiveness to consumer problems as required by federal regulation, (2) identify services to mitigate passenger inconveniences resulting from flight cancellations and misconnections, and (3) hold reservations at the quoted fare without payment, or cancelled without penalty, for at least 24 hours after the reservation is made if the reservation is made 1 week or more prior to a flight's departure.

⁶⁵ GAO-14-704G.

consumer protection violations, and a user guide that describes how analysts should enter complaint information into the web application. However, we found that these documents may not be clear or specific enough to ensure that analysts consistently coded complaints or properly identified potential consumer protection violations. ⁶⁶ For example, while the coding sheet includes explanatory notes in 9 of the 15 complaint categories, it does not include definitions and examples for each of DOT's 15 complaint categories that would illustrate appropriate use of a complaint code, a gap that could result in inconsistent coding.

On-the-job training. DOT supplements its guidance documents with on-the-job training, which officials told us helps analysts consistently code complaints and identify potential consumer protection violations; however, DOT has not established formal training materials to ensure all new analysts get the same information. DOT pairs each newlyhired analyst with a senior analyst to be their coach and instruct them on how to code complaints. According to DOT officials, senior and supervisory analysts determine when new analysts are able to code and work independently but continue to monitor their work as needed and determined by the senior analyst. DOT officials stated that while the agency does not regularly check the extent to which complaints are consistently coded, supervisory analysts check analysts' complaint coding on an as-needed basis throughout the year, as well as during semi-annual performance reviews. However, DOT does not provide formal training materials or other guidance to ensure that senior analysts are conveying the same information during these informal, on-the-job training sessions.

DOT officials stated that the combination of the existing guidance, procedures, and hands-on training provides adequate assurance that analysts share a common understanding of the complaint categories resulting in complaints being consistently coded. As a result, DOT officials have not developed additional guidance documents or established formal training materials.

While DOT officials said they believe their procedures and on-the-job training are sufficient to ensure that complaints are consistently coded

⁶⁶ The coding sheet lists 15 high-level complaint code categories, their associated codes, and numerous sub-level codes that describe different complaint characteristics, such as causal factors. In addition, the coding sheet lists relevant consumer protection regulations for some codes.

and that potential consumer protection violations are properly identified, a recent DOT Office of Inspector General (OIG) report found that DOT analysts did not identify when to code complaints as potential consumer protection violations for a sample of frequent flyer complaints the agency reviewed. As a result, in 2016, the DOT OIG recommended that DOT provide additional training on what constitutes an unfair or deceptive practice to strengthen oversight of airlines' frequent flyer programs. In response, DOT created a special team to process frequent flyer complaints and developed and provided review team analysts and other members with training on how to review complaints and identify potential violations related to airlines' frequent flyer programs.

Improving DOT's procedures that analysts use to code complaints and identify potential consumer protection violations could provide DOT with additional assurances that analysts: share a common understanding of the definitions of all the complaint codes, are coding complaints in each category consistently, and are identifying potential consumer protection violations. Consistent coding among analysts is important for a number of reasons. First, according to DOT officials, passengers use complaint data—which are publicly reported in DOT's *Air Travel Consumer Report*—to make decisions about air travel, including which airlines to fly. Second, DOT analysts and attorneys use complaint data to guide their compliance activities (e.g., selecting airlines for inspections and investigations, and determining proper enforcement actions).

⁶⁷ DOT, Office of Inspector General, *Improvements Needed in DOT's Process for Identifying Unfair or Deceptive Practices in Airline Frequent Flyer Programs*, AV-2016-068 (Washington, D.C.: June 16, 2016).

⁶⁸ Since the DOT Office of Inspector General issued its report, DOT has also created and trained review teams to process complaints related to consumer privacy issues, air ambulance matters, and allegations of sexual misconduct. DOT officials told us they have not established similar teams for other complaint categories as there are specific DOT regulations that apply.

DOT Is Missing
Opportunities to Use Its
Case Management
System to Help Inform Its
Compliance Program

We found that while DOT's case management system allows attorneys to track investigations, it lacks functionality that would allow DOT officials to more efficiently use data from the system to inform other key activities, such as making compliance and enforcement decisions. ⁶⁹ Federal internal control principles state that agencies should design an entity's information system and related control activities to achieve objectives and respond to risks, which in this case involve using data from DOT's case management system to inform its compliance activities. ⁷⁰

Our review of DOT's case management system identified the following limitations that affect DOT's ability to use data from its case management system to target resources and accurately monitor trends in violations, compliance activities, and the results of its enforcement actions:

- Key data are optional. Attorneys are not required to complete certain key data fields in the case management system. For example, attorneys are not required to document the outcome of an investigation in the "enforcement action" field. According to officials, while attorneys do not always complete this field, they often choose to document the outcome of investigations in the case notes. Even if that information is captured in the case notes section, attorneys can only access that information by individually reviewing each case file.
- Data entries are limited. Attorneys cannot record multiple consumer protection violations for a single investigation in the case management system. As a result, when multiple violations occur, attorneys must use their professional judgement to select the primary violation to record. Our review of the 76 consent orders against selected airlines resulting from airline investigations identified 24 instances—or more than 30 percent—where an airline violated multiple consumer protection regulations. While this is a small subset of all investigations (2,464) DOT completed across our timeframe, it suggests investigations could include violations of multiple consumer protection regulations.

⁶⁹ According to the user guide, DOT's case management system is a tool for: capturing the status of enforcement cases and projects, linking critical case history documentation to case records, conducting keyword searches of all documents in the database, and allowing attorneys to monitor and update the status of individual and groups of cases.

⁷⁰ GAO-14-704G.

- Data entries do not reflect DOT's compliance activities. While the case management system includes a field for attorneys to document the source of investigations, the field's response options do not fully correspond to DOT's key compliance activities or align to DOT's documentation listing the sources of investigations. For example, the field that tracks the source of an investigation includes an option to identify passenger complaints as the source but not an inspection of an airline. Officials told us that, like the outcomes of investigations, attorneys often document the source of an investigation in the case notes. However, as mentioned previously, information captured in the case notes section can only be accessed by individually reviewing each case file.
- Limited reporting capabilities exist. Attorneys are limited in their ability to run reports to understand trends across multiple investigations, according to DOT officials. For example, the case management system lacks a function to run reports by certain data fields. Specifically, according to DOT officials, attorneys cannot run reports by the airline name data field and must instead type in the airline name to create a report, a process that could produce unreliable results if an airline's name is inconsistently entered into the database.

According to DOT officials, the case management system's capabilities are limited largely because the database was designed as a mechanism for attorneys to manage ongoing investigations. DOT officials told us that, while the database has successfully fulfilled that role, officials have increasingly used data from the case management system to make enforcement decisions. For example, DOT attorneys use information from the case management system to inform civil penalty amounts. In addition, DOT uses data from the case management system to analyze the results of investigations and inspections, as well as the details of consent orders in order to target future compliance activities. However, because of limited reporting capabilities, attorneys and managers must manually create summary documents from the case management system's data, work that could be time consuming and subject to manual errors, and that does not address the issue that some data are not entered into various data fields in the first place.

Recognizing limitations with the case management system, DOT has taken steps to improve the system. Specifically, starting in June 2018, DOT began working with a contractor to update the case management system's functionality. Among other things, the updates are intended to improve the system's ability to run reports, which could enhance DOT's

ability to examine trends in enforcement actions and penalty amounts, and allow the system to track investigation milestones. While DOT's planned updates may help DOT officials better examine trends in enforcement actions, the planned updates do not fully address the issues we identified above, particularly related to collecting complete data. Collecting complete and comprehensive data in the case management system could allow DOT to better track trends in its investigations, inspections, and enforcement actions and to use that information to make data-driven decisions about future compliance activities and enforcement actions.

DOT Lacks Performance Measures for Three of Five of Its Compliance Program Objectives

While DOT has five objectives for its key compliance program activities, it has not established performance measures for three of these objectives. Objectives communicate what results the agency seeks to achieve, and performance measures show the progress the agency is making toward achieving those objectives. Federal internal control standards state that agencies should define objectives clearly to enable the identification of risks and define risk tolerances. They further state that management defines objectives in measurable terms, so that performance toward those objectives can be assessed. Additionally, the Government Performance and Results Act of 1993 (GPRA), as enhanced by the GPRA Modernization Act of 2010, requires agencies to develop objective, measurable, and quantifiable performance goals and related measures and to report progress in performance reports in order to promote public and congressional oversight, as well as to improve agency program performance. The program of the standard program and to report progress in performance reports in order to promote public and congressional oversight, as well as to improve agency program performance.

In fiscal years 2017 and 2018, DOT developed objectives for each of its five key compliance activities; however, as illustrated in table 4 below, DOT does not have performance measures for three of its objectives.

⁷¹ GAO-14-704G.

⁷² Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285, as enhanced by the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866.

Key compliance activities	Objectives	Performance measure
Providing compliance information to airlines.	Engage in outreach activities to better educate airlines of their obligations under the law.	None.
Processing complaints from passengers.	Assist consumers, as appropriate, in resolving complaints against airlines, among others.	Acknowledge all passenger complaints within 24 hours of receipt.
Conducting compliance inspections of airlines at headquarters and airports.	Conduct on-site compliance inspections of airlines at their headquarters and at airports.	None.
Conducting airline investigations.	Maintain or lower the mean and median times to conduct investigations on disability and other discrimination issues.	Median and mean times of 100 days or less for all investigations concerning disability and discrimination issues.
Enforcing airlines' compliance with consumer protections.	Fairly and vigorously, monitor and enforce compliance with federal law protecting the economic and civil rights of air travel consumers and requiring airlines to hold effective economic authority.	None.

Source: GAO summary of DOT internal documents. | GAO-19-76

For the three objectives for which DOT has not established performance measures, it has documented qualitative measures in internal agency documents. For example, while DOT has not developed a performance measure related to enforcing airlines' compliance with consumer protection requirements, it summarized enforcement cases in fiscal year 2017 that illustrated actions the agency had taken to achieve this objective. For instance, one enforcement action included a consent order against an airline with an assessed penalty of \$1.6 million for violating DOT's tarmac delay rule. DOT highlighted similar accomplishments for educating airlines and conducting inspections. For example, DOT issued guidance to help airlines understand their legal obligations to not discriminate against passengers in air travel on the basis of race, color, national origin, religion, sex or ancestry, 73 and the agency highlighted identifying unlawful practices by multiple airlines during an inspection of airlines at an airport. While the actions described may provide DOT with some information on whether it is achieving its objectives, they fall short of internal control standards that call for federal agencies to define objectives in measureable terms to assess performance.⁷⁴

⁷³ See 49 U.S.C. § 40127.

⁷⁴ GAO-14-704G.

DOT officials stated that they have not developed performance measures to monitor progress toward achievement of some objectives because it is difficult to develop quantifiable performance measures. We have previously reported that officials from other enforcement agencies with similar objectives found it challenging to develop performance measures in part due to the reactive nature of enforcement as well as the difficultly of quantifying deterrence, but were ultimately able to do so.⁷⁵ Developing performance measures for all objectives would allow DOT to more fully assess the effectiveness of its efforts at promoting airlines' compliance with consumer protection requirements. Specifically:

- **Providing compliance information to airlines.** DOT has not developed quantifiable performance measures to assess how well DOT educates airlines about consumer protection requirements. For example, DOT does not have a performance measure for developing and disseminating guidance for specific rules or to issue information on new rules within a certain time frame. Rather, officials told us that they proactively e-mail stakeholders new consumer protection rules rather than relying on stakeholders having to find them on DOT's website or Regulations.gov—and if officials receive the same question repeatedly, about the same requirement they might issue guidance on the topic. According to DOT officials, these activities help ensure that stakeholders are complying with relevant consumer protection requirements. DOT officials did not provide a specific reason for why they do not have a performance measure related to this objective. However, without such a measure, DOT cannot be sure that it is providing timely educational materials to clarify new consumer protection requirements and assist airlines in complying with these requirements.
- Conducting compliance inspections of airlines at headquarters and airports. DOT lacks quantifiable performance measures related to conducting inspections of airlines at airlines' headquarters and at airports. Having such a measure could help ensure that DOT conducts these activities. Specifically, we found that while DOT continues to conduct inspections of airlines at airports, it has not conducted inspections at airlines' headquarters since 2016, despite having identified this compliance activity as a key priority in planning documents. According to DOT officials, they have not conducted inspections at airlines' headquarters for two primary reasons. First,

⁷⁵ GAO, *Telecommunications: FCC Updated Its Enforcement Program, but Improved Transparency is Needed*, GAO-17-727 (Washington, D.C.: Sept. 14, 2017).

DOT officials said inspections at airlines' headquarters require significant staff resources, which DOT has allocated to other compliance activities in recent years. Second, officials said that no airline was an obvious choice for an inspection at its headquarters because DOT had not received a disproportionate number of complaints against a specific airline to suggest an inspection was warranted. However, the DOT OIG previously directed the agency to make these inspections a priority and to allocate resources accordingly, and DOT officials themselves have said that these inspections provide incentives for airlines' continued compliance regardless of whether one airline has an obvious problem. The Establishing performance measures for conducting both types of inspections would provide greater assurance that DOT conducts these activities on a regular basis.

Moreover, officials told us that inspections at airlines' headquarters examine specific consumer protection requirements that are not examined during inspections at airports, and that inspections at headquarters help promote compliance. Among other things, inspections at airlines headquarters allow DOT officials to: (1) review training manuals and training records; (2) examine a sample of passengers' complaint data received directly by the airlines, including disability and discrimination complaints; and (3) verify that airlines are current on reporting data such as on mishandled baggage and denied boardings to DOT. Performance measures related to how often and under what circumstances compliance inspections should take place could provide assurance that DOT conducts these activities, and is not missing opportunities to monitor airlines' compliance with consumer protection requirements.

• Enforcing airlines' compliance with consumer protections. DOT officials told us that they have not developed performance measures for enforcement actions because they would not want to have performance measures that were punitive or reactive by, for example, requiring the agency to collect a certain penalty amount from airlines. While we acknowledge the complexity and risks involved in setting these types of performance measures, as mentioned previously, other agencies have done so. For example, one of the Federal Trade Commission's performance measures is to focus 80 percent of

⁷⁶ DOT, OIG, Final Report on Airline Customer Service Commitment, AV-2001-020 (Washington, D.C.: Feb. 12, 2001) and DOT, OIG, Follow-Up Review: Performance of U.S. Airlines in Implementing Selected Provisions of The Airlines Customer Service Commitment, AV-2007-012 (Washington, D.C.: Nov. 21, 2006).

enforcement actions on consumer complaints. Without a performance measure for enforcement activities, DOT is missing opportunities to assess the effectiveness of these activities and make any needed changes. We have previously reported that performance measurement gives managers crucial information to identify gaps in program performance and plan any needed improvements.⁷⁷

⁷⁷ GAO, Executive Guide: Effectively Implementing the Government Performance and Results Act, GAO/GGD-96-118 (Washington, D.C.: June 1996); Veterans Justice Outreach Program: VA Could Improve Management by Establishing Performance Measures and Fully Assessing Risks, GAO-16-393 (Washington, D.C.: Apr. 28, 2016); Performance Measurement and Evaluation: Definitions and Relationships, GAO-11-646SP (Washington, D.C.: May 2, 2011); and Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making, GAO-05-927 (Washington, D.C.: Sept. 9, 2005).

DOT Has Made
Recent
Improvements, but Its
Passenger Education
Efforts Do Not Fully
Align with Key
Consumer Outreach
Practices

DOT Updated Its Website to More Effectively Educate Passengers on their Rights

DOT's primary vehicle for educating passengers is its aviation consumer protection website, which it relaunched in November 2017 (see fig. 3). 78 According to DOT officials, as part of the relaunch, DOT improved the navigability and accessibility of the website by, among other things, arranging material by topic, adding icons for various subjects, and including a link for the website on DOT's aviation homepage. 79 The website now includes summaries of passengers' rights on a number of issues including tarmac delays, overbookings, mishandled baggage, and disability issues, as well as DOT's rules, guidance issued to airlines and others, and enforcement orders on key consumer protection issues. Moreover, the website is now accessible to people with disabilities. 80 Moving forward, DOT has a number of additional updates planned through fiscal year 2019. For example, DOT plans to update its website with information on frequent flyer issues, optional services and fees, and codeshare agreements by the end of calendar year 2018. According to

⁷⁸ DOT's aviation consumer protection website can be found at: https://www.transportation.gov/airconsumer/. DOT officials previously conducted in-person forums where they discussed consumer issues with passengers. However, according to officials, they stopped conducting these forums in 2009 in response to certain language in a report from the Senate Committee on Appropriations. *See* S. Rep. No. 110-418, at 8 (2008).

⁷⁹ Recommendations to upgrade the website came from the Advisory Committee for Aviation Consumer Protection, which was established by the FAA Modernization and Reform Act of 2012 to advise the Secretary of Transportation in carrying out activities relating to airline customer service improvements. Pub. L. No. 112-95, § 411, 126 Stat. 11, 88-89 (Feb. 14, 2012).

⁸⁰ According to DOT documents, the website is compliant with Section 508 of the Rehabilitation Act of 1973 (as amended) and Web Content Accessibility Guidelines 2.0.

DOT officials, while not statutorily required to conduct these education activities, passenger education is a key effort to ensuring airlines' compliance.

Tonsportation.gow

**Available Constrained Processing

**Available

Figure 3: The Department of Transportation's Updated Aviation Consumer Protection Website

Sources: GAO and U.S. Department of Transportation, 2 May 2018. Web. | GAO-19-76

DOT also has numerous other efforts to educate passengers on their rights. For example:

 Establishing resources for passengers. DOT developed Fly Rights—an online brochure that details how passengers can avoid common travel problems—in addition to material on unaccompanied minors, family seating, and a glossary of common air travel terms. DOT also developed training tools (e.g., brochures, digital content, and videos) on the rights of passengers with disabilities under the Air Carrier Access Act of 1986 and its implementing regulations, including wheelchair assistance at airports and onboard aircraft, traveling with a service animal, and traveling with assistive devices. While some of these materials were developed primarily for airline employees and contractor staff, others were developed to directly assist passengers with disabilities by providing helpful tips on airlines' responsibilities, according to DOT officials.

- Building consumer education information into existing regulations. Passenger education is built into certain consumer protection requirements, according to DOT officials. For example, when an airline involuntarily denies a passenger boarding, immediately after the denied boarding occurs the airline must provide a written statement explaining the terms, conditions, and limitations of denied boarding compensation, and describing the airline's boarding priority rules and criteria.⁸¹
- Responding to complaints. DOT officials said they include information on an airline's responsibilities when responding to passenger complaints. For example, if a passenger submits a complaint to DOT about not receiving compensation for a delayed or cancelled flight, the DOT analyst may inform the passenger that airlines are generally not required to compensate passengers in these instances.

DOT's Educational Efforts Fully Align with Five of Nine Key Practices

We compared DOT's efforts to educate airline passengers about their rights against key practices for consumer outreach GAO identified in prior work and found that DOT's efforts fully align with five of the nine key practices (see fig. 4). 82 For example, we found that DOT has successfully identified the goals and objectives of its passenger education program and identified the appropriate media mix for disseminating its materials. Similarly, we found that DOT had identified and engaged stakeholders, a step that, according to DOT officials, allowed them to better tailor materials.

However, as summarized in the figure below, we found that DOT only partially met or did not meet the remaining four key practices.

^{81 14} C.F.R. § 250.9(a).

⁸² Definitions of key practices have been abbreviated to improve the readability of the table. For definitions of the key practices, see appendix III. GAO modified the language for the final key practice from "establish metrics to measure success" to "establish performance measures" to make the language consistent throughout this report.

Figure 4: Department of Transportation's (DOT) Airline Passenger Educational Efforts Compared with Key Practices for Conducting Consumer Outreach

Key practices for consumer outreach	DOT's efforts to inform passengers about their rights	Assessment
Define goals and objectives	 The goal of the program is to educate passengers about their rights during air travel. According to DOT officials, their primary objective for updating their consumer protection website is to educate passengers. For example, as mentioned previously, DOT plans to update the consumer protection website with additional information on frequent flyer programs, optional fees, and codeshare agreements by the end of calendar year 2018. 	
2. Analyze the situation	 To analyze the situation, DOT officials have (1) reviewed trends in passenger complaints; (2) solicited input from consumer groups; and (3) reviewed publicly available information (e.g., media reports or comments on rulemakings). DOT officials have applied lessons learned. For example, recognizing the benefits of stakeholder input on previous work, officials conducted focus groups with representatives from airlines and consumer rights groups to develop new trainings intended to assist individuals with disabilities while traveling and to supplement the training and education of airline employees and contractors. According to officials, this allowed them to properly tailor materials. 	
3. Identify stakeholders	DOT has identified and engaged stakeholders. For example, DOT receives input from stakeholders through the Advisory Committee for Aviation Consumer Protection, and DOT has clarified the committee's roles and responsibilities in the charter documents.	
4. Identify resources	DOT has not taken steps to identify short- and long-term resources for its education efforts.	
5. Research target audiences	 DOT solicits input from stakeholder groups to conduct audience research. For example, officials conducted focus groups with stakeholder representatives to update materials to assist individuals with disabilities while traveling. DOT has not reached out to passengers directly. DOT has not measured audience awareness, and DOT officials said they have limited knowledge of what passengers know. 	
6. Develop consistent, clear messages	 DOT has developed messages based on goals and audience findings but contrary to the key practice has not used budget data to inform its messages. Officials told us they do not identify resources spent on education materials. DOT tests and refines materials based on stakeholder input. For example, officials solicited feedback from internal DOT stakeholders to confirm that new material on the website was clear, legally sufficient, and accessible for the public. 	
7. Identify credible messenger(s)	DOT works with stakeholders to disseminate passenger education materials. Officials told us they identify stakeholders based on identifying who comments on proposed rules, knowledge of the industry, and informal relationships.	
8. Design media mix	DOT disseminates information to passengers via its website, airline stakeholders, and news media. Officials told us they generally disseminate materials during busy travel seasons, after high-profile events, or when DOT issues new regulations.	
9. Establish performance measures	DOT has not developed process or outcome performance measures to track the effectiveness of its consumer outreach efforts. Officials told us they receive informal input from stakeholders and track website traffic, trends in passenger complaints received by DOT, and other data to monitor performance.	
Denotes that DOT's actions fully align to the key practice Denotes that DOT's actions partially align to the key practice Denotes that DOT's actions do not align to the key practice		

Sources: GAO analysis of DOT documents and interviews. | GAO-19-76

Note: GAO modified the language for the final key practice from "establish metrics to measure success" to "establish performance measures" to make the language consistent throughout this report.

For example, DOT's actions do not align with the key practice to "identify resources" and only partially align with the key practice to "develop consistent, clear messages" based on the established budget. According to a senior DOT official, DOT has not identified budgetary resources because, while important, DOT's educational efforts are secondary to the office's other efforts. Further, officials said that it has been difficult for the agency to develop a budget when it has been operating under a continuing resolution for some part of the fiscal year for the last decade. However, without identifying short- and long-term budgetary resources and planning activities accordingly, DOT is missing an opportunity to plan educational efforts or prioritize needs based on available resources.

In addition, we found DOT's efforts only partially align with the key practice that calls for an agency to research its target audience. While DOT has solicited some input from stakeholder groups such as those representing passengers with disabilities, DOT has not solicited feedback directly from passengers to understand what they know about their rights. DOT officials said they have not sought such feedback because they have not identified a method for doing so that would be statistically generalizable and not cost prohibitive. While costs are always an issue when considering budget priorities, we have previously reported on other agencies' direct consumer outreach efforts that while not statistically generalizable were nonetheless useful for understanding the effect of the agencies' efforts. For example, the Bureau of Consumer Financial Protection has used focus groups to understand its outreach efforts.⁸³ Bureau of Consumer Financial Protection officials previously told GAO that while obtaining information through such efforts was resource intensive, it allowed them to assess the performance of their outreach activities. In another case, an agency surveyed users that access its website to help it understand whether its outreach efforts were effective.⁸⁴ Obtaining input from passengers directly on what information they want or what they know about their rights would provide DOT with greater assurance that educational materials are appropriately tailored to meet a wide range of passengers' needs.

⁸³ GAO, *Public Relations: Selected Agencies' Activities Supported by Contracts and Public Affairs Staff*, GAO-17-711 (Washington, D.C.: Sept. 12, 2017).

⁸⁴ See GAO, *Performance.gov: Long-Term Strategy Needed to Improve Website Usability*. GAO-16-693 (Washington, D.C.: Aug. 30, 2016).

Finally, DOT has not established performance measures to understand the quality of its passenger education materials (i.e., process measures) or the effectiveness of its efforts (i.e., outcome measures). DOT officials said that they receive informal input from stakeholders on the quality of the materials and track website traffic to understand whether materials are reaching passengers. Officials said they believe that these mechanisms provide them with some assurance that the materials are meeting passengers' needs and that passengers are accessing and using the materials. While these mechanisms may provide DOT with some information on how often materials are accessed online, they do not help it understand the quality of the materials and measure the success of its passenger education efforts. For example, while DOT officials track website traffic, they have not established a related performance measure. A number of different measures could be used to track processes and outcomes related to the use of its website, including the time consumers spend on the website, number of website pages viewed, bounce rate (i.e., percentage of visitors who looked at only one page and immediately left the site), or user's perception of the experience of their visit.85 Establishing such measures would provide DOT with greater assurances that its educational efforts are appropriately tailored to passengers and leading to improved understanding of passengers' rights, including whether any adjustments are needed.

Conclusions

To enforce consumer protection requirements, such as those preventing unfair or deceptive practices or unfair methods of competition by airlines, DOT has conducted almost 2,500 investigations and issued about 400 consent orders over the last decade. However, DOT lacks reasonable assurance that its approach is achieving the highest level of airlines' compliance, given its available resources. For example, DOT has not assessed whether its procedures and training materials help analysts consistently code passengers' complaints and identify potential consumer protection violations. Additionally, DOT has not fully used data from its case management system to inform its compliance program. Moreover, in the absence of comprehensive performance measures, DOT lacks a full understanding of the extent to which it is achieving its goal of airlines' compliance with consumer protection requirements and whether any

⁸⁵ These are examples of the 24 performance measures recommended by Digitalgov.gov for federal agencies to track website performance. Digitalgov.gov requirements were developed by the General Services Administration to help agencies provide digital services and information for the public. See GAO-16-693.

programmatic changes may be warranted. Improvements in these areas would provide DOT with additional information to target its resources and improve compliance.

DOT has taken positive steps to educate passengers about their rights—through its revamped website and other educational resources.

Nevertheless, DOT could improve its efforts by more fully following key practices GAO previously identified for conducting consumer education, such as by:

- seeking feedback directly from consumers;
- identifying short- and long-term budget resources; and
- establishing performance measures.

Taking such actions would provide DOT with greater assurance that its efforts are meeting passengers' needs.

Recommendations for Executive Action

We are making the following six recommendations to DOT:

- The Office of the Secretary should assess its procedures and training materials for coding airline passengers' complaints, as appropriate, to help ensure that passengers' complaints are consistently coded and that potential consumer protection violations are properly identified. (Recommendation 1)
- The Office of the Secretary should assess the feasibility and cost of updating its airline case management system to address data and reporting limitations, and to undertake those updates that are cost effective and feasible. (Recommendation 2)
- The Office of the Secretary should establish performance measures for each of its objectives for its five key airline-compliance activities. (Recommendation 3)
- The Office of the Secretary should capture feedback directly from airline passengers or identify other mechanisms to capture passengers' perspectives to inform DOT's education efforts. (Recommendation 4)
- The Office of the Secretary should identify available short- and longterm budgetary resources for DOT's airline-passenger education efforts. (Recommendation 5)

• The Office of the Secretary should develop performance measures for DOT's efforts to educate airline passengers. (Recommendation 6)

Agency Comments

We provided a draft of this report to DOT for review and comment. DOT provided written comments, which are reprinted in appendix IV, and technical comments, which we incorporated as appropriate. DOT concurred with our recommendations and officials said that they had begun taking steps to address the recommendations.

We are sending copies of this report to the appropriate congressional committees, DOT, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions about this report, please contact me at 202-512-2834 or vonaha@gao.gov. Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix V.

Andrew Von Ah

Director, Physical Infrastructure Issues

Since its deregulation in 1978, numerous studies have examined the effects of competition in the airline industry. Most have examined the link between competition and pricing on specific airline routes—i.e., airline service between two airports or cities. These routes are viewed as the relevant markets for competitive analysis because they reflect the products that consumers purchase and for which airlines set prices. These studies have examined the pricing effect: (1) of route competition, (2) of the extent of an airline's presence at airports, and (3) of mergers in the evolving airline industry. Studies have generally shown (1) that prices tend to be higher when fewer airlines serve a city-pair market and (2) that airline dominance at airports can be associated with higher market prices.¹ Other studies have also shown that the presence of a low-cost airline on a route—or even the threat of entry by a low-cost airline—is associated with lower fares.²

In addition, some studies have examined whether there is a link between the level of competition in city-pair markets and certain elements of customer service quality, such as the incidence and length of delays,

¹ See for example, GAO, *Airline Competition: Effects of Market Concentration and Barriers to Entry on Airfares*, GAO/RCED-91-101 (Washington, D.C.: April 1991); Christian Hofer, Robert J. Windle, and Martin E. Dresner, "Price Premiums and Low Cost Carrier Competition," *Transportation Research Part E*, vol.44 (2008); Severin Borenstein, "Hubs and High Fares: Dominance and Market Power in the U.S. Airline Industry," *The Rand Journal of Economics*, vol. 20, no.3 (1989); William N. Evans and Ioannis N. Kessides, "Living by the 'Golden Rule': Multimarket Contact in the U.S. Airline Industry," *The Quarterly Journal of Economics*, vol. 109, no. 2 (1994).

² See Jan K. Brueckner, Darin Lee and Ethan S. Singer, "Airline Competition and Domestic US Airfares: A Comprehensive Reappraisal," *Economics of Transportation*, vol. 2 (2014); Hofer, Windle, and Dresner, "Low Cost Carrier Competition," 864; Martin Dresner, Jiun-Sheng Chris Lin, and Robert Windle, "The Impact of Low-Cost Carriers on Airport and Route Competition," *Journal of Transport Economics and Policy*, vol. 30 no. 3 (1996), Austan Goolsbee and Chad Syverson, "How Do Incumbents Respond to the Threat of Entry? Evidence from the Major Airlines," *The Quarterly Journal of Economics*, vol. 123 no. 4 (2008); John Kwoka, Kevin Hearle, and Phillippe Alepin, "From the Fringe to the Forefront: Low Cost Carriers and Airline Price Determination," *Review of Industrial Organization*, vol. 48 (2016); Steven A. Morrison, "Actual, Adjacent, and Potential Competition: Estimating the Full Effect of Southwest," *Journal of Transport Economics and Policy*, vol. 35 no. 2 (2001).

cancellations, lost baggage, flight frequency, and denied boarding.³ While competition generally lowers prices, the effect of competition on the quality of service is more ambiguous. On the one hand, firms may compete on quality of service; in this instance, competition leads to higher service, but it is also possible that a firm facing less competition may invest in quality of service to more fully differentiate among passengers. A variety of factors could influence the association between competition and customer service. These factors include, for example:

- the cost of providing higher levels of quality,
- the extent to which consumers have full knowledge of quality,
- the extent to which consumers change future purchasing decisions based on quality, and
- the value consumers place on product quality relative to product price.⁴

In the context of the airline industry, airline investments that underlie the provision of consumer services are not necessarily route-specific as they more likely relate to investments airlines make at airports, or at the overall airline level. For example, airlines make decisions about the extent to which resources—such as the number of aircraft and customer service personnel—are available at a given airport. Moreover, policies regarding training of gate and customer service personnel likely take place at the corporate level as do decisions about the configuration of aircraft, which may have related quality of service factors. Also, because airlines provide

³ See for example, Nicholas G. Rupp, Douglas H. Owens, and L. Wayne Plumly, "Does Competition Influence Airline On-Time Performance?" *Advances in Airline Economics*, vol. 1 (2006); Nicholas G Rupp, and George M Holmes, "An Investigation into the Determinants of Flight Cancellations," *Economica*, vol. 73 (2006); Volodymyr Bilotkach, "Multimarket Contact and the Intensity of Competition: Evidence from an Airline Merger," *Review of Industrial Organization*, vol. 38 (2010); Michael J. Mazzeo, "Competition and Service Quality in the U.S. Airline Industry," *Review of Industrial Organization*, vol. 22 (2003); Jeffrey T. Prince and Daniel H. Simon, "Multimarket Contact and Service Quality: Evidence from On-Time Performance in the U.S. Airline Industry," *The Academy of Management Journal*, vol. 52 (2009); Jeffrey T. Prince and Daniel H. Simon, "Do Incumbents Improve Service Quality in Response to Entry? Evidence from Airlines' On-Time Performance," *Management Science*, vol. 61 (2015).

⁴ See David A Matsa, "Competition and Product Quality in the Supermarket Industry," *The Quarterly Journal of Economics*, vol. 126, no. 3 (2011), Rachel E. Kranton, "Competition and the Incentive to Produce High Quality," *Economica*, vol. 70, no. 279 (2003), Richard Schmalensee, "Market Structure, Durability, and Quality: A Selective Survey," *Economic Inquiry*, vol. 17, no. 2 (1979).

a service that involves a large network, some elements of quality may relate to the broad decisions regarding the management of that network. For example, if a flight is delayed on one route, it may affect the timeliness of several downstream flights due to the late arrival of the aircraft, pilots, and flight attendants, and airlines may take these networked effects into consideration in ways that could affect customer service. Still, some decisions that airlines make do have route-specific consequences that could influence customer service, such as decisions on flight scheduling, and which flights to cancel or delay in the face of operational disruptions.

Some empirical airline literature on the impact of competition on certain quality factors predates several airline mergers, and some was conducted more recently. In the earlier literature, several studies found a linkage between the competitiveness of airline markets and customer service outcomes such as on-time performance, cancellations, mishandled baggage and flight frequency. 5 These studies generally found that more competitive markets are associated with an improvement in one or more of these aspects of customer service. For example, one study found a small increase in the number of cancelled flights when a route was served by only one airline, and another found that such routes had, on average, slightly longer delays. 6 However, the extent of these improvements has typically been small, such as an association with a small reduction in cancellations or a reduced average delay of just a few minutes. On the other hand, some studies found that delays and cancellations are less common when they involve airlines' hub airports—especially when a flight is destined for an airline's hub airport.

In order to look more closely at the relationship between market competition and airline customer service in recent years, we reviewed several more current studies. Specifically, because the nature of the airline industry—particularly its competitive landscape—transformed after

⁵ As previously noted, studies vary in the aspect of competition analyzed and some studies use more than one aspect of competition, including whether a route is served only by one airline, general route concentration (as measured, for example, by the Herfindahl index—a commonly-used measure of the extent of market concentration), airline dominance at endpoint airports, the degree of multimarket contact among airlines, and the presence of low-cost airlines serving a route.

⁶ See for example Nicholas G Rupp, and George M Holmes, "An Investigation into the Determinants of Flight Cancellations," Economica, Vol. 73, (2006) and Michael J. Mazzeo, "Competition and Service Quality in the U.S. Airline Industry," Review of Industrial Organization, Vol. 22 (2003).

the 2007–2009 recession, we selected studies that included at least some of the study period post-recession. We identified six studies that met our criteria for inclusion, each of which examined some aspect of the link between airline market competition and one or more element of customer service.

As with the earlier studies, these more recent studies generally found greater competition was associated with some improved customer service. Specifically, some studies found that flight delays were. on average, a little longer, and flight cancellations more likely when markets were more highly concentrated or in the aftermath of an airline merger. For example, one study found that a particular level of increased route concentration was associated with about a 4-minute average increase in flight delay. Another study found a similar effect on delay and also found a slightly higher incidence of cancellations on more concentrated routes. These increases in delays and cancellations were generally small. In the case of mergers, the findings are somewhat mixed. One study we reviewed found increased cancellations and more delays after mergers, but the effects tended to diminish over time, while another study did not find an effect of mergers on these measures of customer service. Another study found that the effect of mergers on consumer welfare—as measured by both price and flight frequency—may be idiosyncratic to the specific airlines involved in the merger and the state of competition in the broader market at the time of the merger. Finally, a GAO study that examined the effect of the tarmac delay rule on flight cancellations found that flights on routes where either the originating or destination airport was a hub airport for the airline had a lower likelihood of cancellation, possibly indicating a focus by airlines on maintaining smooth operations

⁷ Kang Hua Cao, Betty Krier, Chia-Mei Liu, Brian McNamara, and Jerrod Sharpe, "The Nonlinear Effects of Market Structure on Service Quality: Evidence from the U.S. Airline Industry," *Review of Industrial Organization*, vol. 51 (2017), Daniel Greenfield, "Competition and Service Quality: New Evidence from the Airline Industry," *Economics of Transportation*, vol. 3 (2014), Jeffrey T. Prince and Daniel H. Simon, "The Impact of Mergers on Quality Provision: Evidence from the Airline Industry," *The Journal of Industrial Economics*, vol. LXV, no.2 (2017), Vikrant Vaze, Tian Luo, and Reed Harder, "Impacts of Airline Mergers on Passenger Welfare," *Transportation Research Part* E, vol. 101 (2017), Adams B. Steven, Amirhossein Alamdar Yazdi, and Martin Dresner, "Mergers and Service Quality in the Airline Industry: A Silver Lining for Air Travelers?", *Transportation Research Part E*, vol. 89 (2016), U.S. Department of Transportation, Office of the Inspector General, *Reductions in Competition Increase Airline Flight Delays and Cancellations*, CR-2014-040 (Washington, D.C.: April 2014).

as much as possible.⁸ Generally, the differing findings on the extent or existence of quality impacts could be the result of varied methodologies in these analyses, including differing model specifications, variable measurements, and analysis time frames.

Finally, while these studies provide insight into the link between competition and certain aspects of service quality, some elements of airline's service quality are harder to explore in this way. For example, there are no data that would be readily usable in empirical analyses on the effect of competition on certain quality measures such as the extent airline websites are user-friendly, the ability to be rebooked on a different flight when a flight is missed or was cancelled, the helpfulness of airline staff, and consumer satisfaction with airline cabin amenities, such as seat comfort and availability and quality of food for sale. Moreover, while studies examine effects of competition at the route level, the national airline industry has become more concentrated in the past decade due to a series of bankruptcies and mergers. The reduced competition at this broad level may also have implications for customer service, such as the level of service provided at airports and policies on flight cancellations and rebooking.

⁸ GAO, Airline Passenger Protections: More Data and Analysis Needed to Understand Effects of Flight Delays, GAO-11-733 (Washington, D.C.: Sept. 7, 2011).

Appendix II: Objectives, Scope, and Methodology

Our objectives for this report were to: (1) describe trends in DOT data on airline service from 2008 through 2017 and airlines' actions to improve service; (2) assess how effectively DOT ensures airlines' compliance with consumer protection requirements; and (3) assess the extent to which DOT's airline passenger education efforts align with key practices for consumer outreach. We also examined the relationship between airline competition and customer service (app. I).

The scope of this report focused on issues regarding consumer protections for airline passengers (i.e., "consumer protections") overseen by DOT.¹ We focused our analysis on the time period 2008 through 2017 unless otherwise noted because it encompassed key additions or amendments to consumer protection regulations, including *Enhancing Airline Passenger Protections I, II, and III.*² For each of our objectives, we reviewed documents and data from DOT and airlines, to the extent possible. We also conducted multiple interviews with officials from DOT's Office of the Assistant General Counsel for Aviation Enforcement and Proceedings and its Aviation Consumer Protection Division, in addition to a non-generalizable sample of 25 stakeholders—including representatives from 11 airlines, 3 market research organizations, 3 aviation academics, and 8 industry associations representing airlines, airline staff, and airline passengers.

To describe trends in airline service, we analyzed DOT operational data and passenger complaints submitted to DOT from 2008 through 2017. Specifically, we analyzed DOT's data on late flights; cancellations; diverted flights (i.e., flights operated from the scheduled origin point to a point other than the scheduled destination point in the airline's published schedule); voluntary and involuntary denied boardings; and mishandled baggage to describe airlines' operational performance. From 2008 through 2017, DOT required airlines with at least one percent of domestic scheduled-passenger revenues in the most recently reported 12-month period to report this data for reportable flights—we refer to these airlines

¹ We excluded issues related to safety and security as they are generally overseen by the Federal Aviation Administration and the Transportation Security Administration, respectively. Moreover, while we summarize information in our report on how price can affect service, our analyses were limited to non-price elements of customer service.

² See 81 Fed. Reg. 76800 (Nov. 3, 2016); 76 Fed. Reg. 23110 (Apr. 25, 2011); 74 Fed. Reg. 68983 (Dec. 30, 2009).

as "reporting airlines" throughout our report.3 We also obtained data for passenger complaints submitted to DOT and analyzed the data to identify the frequency, types, and changes in complaints over time. We limited our analysis of passenger complaint data to "selected" airlines that were required to report operational data to DOT in 2017— the most recent year of available data when we started our review—because they were the 12 largest U.S. domestic passenger airlines in 2016.4 To assess the reliability of the operational data and complaints, we conducted electronic testing of the data to identify any outliers, compared our results to DOT published data, and interviewed DOT officials about how the data were collected and used. Because our interviews with DOT officials indicated that no changes had been made to the processes used to collect and maintain both data sources, we also relied on our past data reliability assessments from recently issued GAO reports, assessments that found that both data sources are sufficiently reliable for providing information on trends over time. 5 Therefore, we determined that the data were sufficiently reliable for our purposes, including to present high-level trends in service over time. Moreover, we also reviewed analyses from three market research organizations that we identified during the course of our work— J.D. Power and Associates, the American Customer Satisfaction Index, and the Airline Quality Rankings—to provide additional information on airline service quality. We interviewed the authors to understand how they conducted the analyses; however, we did not evaluate the

³ However, all reporting airlines have voluntarily provided data for their entire domestic systems. Since this reporting threshold is determined on an annual basis, the number of "reporting airlines" changes on an annual basis. From 2008 through 2017, the number of airlines required to report this data has varied from 19 airlines in 2008 to 12 in 2017.

⁴ The 12 airlines are: Alaska Airlines (Alaska), American Airlines (American), Delta Air Lines (Delta), ExpressJet Airlines (ExpressJet), Frontier Airlines (Frontier), Hawaiian Airlines (Hawaiian), JetBlue Airways (JetBlue), Southwest Airlines (Southwest), Spirit Airlines (Spirit), SkyWest Airlines (SkyWest), United Airlines (United), and Virgin America. In 2017, the "reporting airlines" and "selected airlines" were the same.

⁵See GAO, Commercial Aviation: Information on Airline Fees for Optional Services GAO-17-756 (Washington, D.C.: Sept. 20, 2017) and GAO, Airline Competition: The Average Number of Competitors in Markets Serving the Majority of Passengers Has Changed Little in Recent Years, but Stakeholders Voice Concerns about Competition GAO-14-515 (Washington, D.C.: June 11, 2014).

underlying methodologies.⁶ We determined that the results were reliable enough to report their high-level trends on passenger satisfaction.

To understand airlines' actions to enhance service, we interviewed or received written responses from 11 of 12 selected airlines. We conducted interviews with airline representatives using a semi-structured interview instrument, which included questions pertaining to business practices aimed at improving service from 2013 through 2017, among other things. We conducted three pretests with one airline and two industry groups. Representatives from each group provided technical comments, which we incorporated, as appropriate. We limited our timeframe to the most recent 5 years because business practices in the industry evolve quickly and we wanted to highlight the most relevant and recent practices. During interviews, we asked selected airline representatives whether these practices were documented in contracts of carriage or other customer commitment documents and reviewed those documents as appropriate. During these interviews, we also asked selected airline representatives if they considered certain aspects of their passenger complaint data they receive directly from passengers to be proprietary, and all airline representatives said the data were proprietary. To inform interviews with selected airlines representatives and to understand recent airlines business practices aimed at improving service for passengers, we also conducted a literature search of trade publications and industry reports from 2013 through 2017.8 Where relevant, we used information from this literature search as additional context and as a basis for our questions to airline representatives regarding specific business practices.

⁶ Representatives from market research organizations were generally hesitant to provide specific details on their underlying methodology, given the proprietary nature of the information; however, we discussed, at a high level, how the organizations collected and analyzed the data used and any limitations associated with those data or methodologies.

⁷ We requested interviews with representatives of all 12 selected U.S. airlines; 11 airlines agreed to be interviewed or provided written responses (Alaska Air Group representatives provided written responses on behalf of the now-merged Alaska and Virgin America), and 1 airline (Hawaiian) declined to be interviewed. Representatives from two regional airlines, ExpressJet and SkyWest, told us that they operate aircraft on behalf of larger airlines and, as a result, do not always set their own business practices in the areas we asked about. In these examples, we omitted the regional airlines from our count of total airlines.

⁸ The search was conducted in the following databases: ProQuest Academic, ProQuest Dialog, Scopus, ScienceDirect, and publications from the Transportation Research Board (TRB).

To describe how DOT ensures airlines' compliance with consumer protection requirements, we reviewed DOT's documentation of the policies, procedures, and guidance that describe its five key compliance activities. In addition, we conducted multiple interviews with staff from DOT's Office of the Assistant General Counsel for Aviation Enforcement and Proceedings and its Aviation Consumer Protection Division. To identify trends in DOT's key compliance activities from 2008 through 2017, we analyzed reports and data DOT provided on the number and results of its airline inspections, investigations, enforcement actions, and civil penalties—including data from DOT's case management system. To assess the reliability of the data, we interviewed DOT officials to understand how the data are collected and used and the steps DOT takes to ensure the data are accurate, complete, and reliable. We determined that the data were reliable enough to summarize trends in DOT's investigation and enforcement actions from 2008 through 2017.

To determine how effectively DOT implements its compliance program, we assessed selected key compliance activities—i.e., coding passenger complaints, using the case management system to inform compliance activities, and developing objectives and related performance measures—against selected principles of *Standards of Internal Control in the Federal Government* related to control activities. ¹⁰ We also summarized other leading practices for developing performance measures, in addition to our past work, which has identified other agencies with successful performance measures. ¹¹

⁹ As part of this analysis, we examined the extent to which DOT issued multiple consent orders to selected airlines for the same consumer protection violation. We define a "repeat offense" as an instance in which a specific airline violated a particular regulatory section or subsection at least two times, as documented in two or more different consent orders. To identify this, analysts reviewed each consent order and recorded the statutory and regulatory violations cited, and the assessed civil penalty as well as the components of the penalty. Staff attorneys from our Office of the General Counsel reviewed each consent order to confirm that analysts had accurately extracted this information. Additionally, the staff attorneys updated the statutory and regulatory violations to the applicable citation based on 2018 law. By updating all regulatory and statutory violations to 2018 law, we were able to compare consent orders over a 10-year period and identify repeat offenses.

¹⁰ GAO, Standards for Internal Control in the Federal Government GAO-14-704G (Washington, D.C.: September 2014).

¹¹ Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285, as enhanced by the GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866. GAO, *Telecommunications: FCC Updated Its Enforcement Program, but Improved Transparency is Needed GAO-17-727* (Washington, D.C.: Sept. 14, 2017).

To understand the extent to which passenger education materials developed by DOT align with key practices for consumer outreach, we reviewed DOT's educational materials and assessed them against nine key practices we previously developed for consumer education planning. In that prior work, GAO convened an expert panel of 14 senior management-level experts in strategic communications to identify the key practices of a consumer education campaign. We believe the key practices the expert panel identified in 2007 remain relevant today since the practices are not time-sensitive. In addition to reviewing relevant materials, we also conducted interviews with DOT officials to understand their outreach efforts. During these interviews, DOT officials agreed that these criteria were relevant to conducting consumer outreach. For a complete list of the criteria and corresponding definitions, see appendix III.

To understand the impact of airline competition on customer service provided to passengers we conducted a literature search of pertinent studies in scholarly, peer-reviewed journals, conference papers, and government publications. ¹⁵ We restricted our review to results published between January 1, 2012, and December 31, 2017, and our search yielded 57 academic results and 10 government studies. Of these results, we reviewed each abstract to determine whether it was relevant to our objective based on criteria we established. For example, we limited

¹² GAO, *Digital Television Transition: Increased Federal Planning and Risk Management Could Further Facilitate the DTV Transition* GAO-08-43 (Washington, D.C.: Nov. 19, 2007). As part of this review, we did not review these materials for readability or to ensure that information accurately summarized various legal requirements.

¹³ We selected these experts based on their experience overseeing a strategic-communications or social-marketing campaign or other relevant expertise. The experts represented private, public, and academic institutions: AARP, Academy for Educational Development, American Legacy Foundation, APCO Worldwide, Edelman, Fleishman-Hillard, GolinHarris, Issue, Dynamics Inc., Ogilvy, PodTech (representing Sweden's DTV transition), Population Services International, Porter Novelli, Food and Nutrition Service within the U.S. Department of Agriculture, and the Darden School of Business at the University of Virginia. For more information, see GAO-08-43.

¹⁴ In 2015, we used the key practices of a consumer education campaign to assess the Federal Communication Commission's efforts to inform the public about accessibility-related protections and remedies. For more information, see GAO, *Accessible Communications: FCC Should Evaluate the Effectiveness of its Public Outreach Efforts* GAO-15-574 (Washington, D.C.: June 25, 2015).

¹⁵ The search was conducted in the following databases: ProQuest Academic, ProQuest Dialog, Scopus, ScienceDirect, and Web of Science.

Appendix II: Objectives, Scope, and Methodology

results to those looking at the U.S. airline system and eliminated results that focused solely on airfares. In total, we found that 5 academic studies and 1 government study were ultimately relevant and sufficiently reliable for our report. Moreover, we also summarized 6 additional studies that we identified by reviewing the bibliographies of our selected studies or that were identified as key pieces of research in the field to summarize prior work in this area.

We conducted this performance audit from September 2017 to November 2018 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 that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix III: Key Practices for Conducting Consumer Outreach

GAO previously identified nine key practices that are important to conducting a consumer education campaign (see table 5).¹

Table 5: GAO's Key Practices for Conducting Consumer Outreach

Key practices for conducting consumer education

1. Define goals and objectives

Define the goals of the communications campaign, e.g., to increase awareness or motivate a change in behavior. Define the objectives that will help the campaign meet those goals.

2. Analyze the situation

Analyze the situation, including any competing voices or messages, related market conditions, and key dates or timing constraints. Review relevant past experiences and examples to identify applicable "lessons learned" that may help to guide efforts.

Identify stakeholders

Identify and engage all key stakeholders who will be involved in communications efforts. Clarify the roles and responsibilities of each stakeholder, including which entity or entities will lead overall efforts.

3. Identify resources

Identify available short- and long-term budgetary and other resources.

4. Research target audiences

Conduct audience research, such as dividing the audience into smaller groups of people who have relevant needs, preferences and characteristics, as well as measuring audience awareness, beliefs, competing behaviors, and motivators. Also, identify any potential audience-specific obstacles, such as access to information.

5. Develop consistent, clear messages

Determine what messages to develop based on budget, goals, and audience research findings. Develop clear and consistent audience messages; test and refine them.

6. Identify credible messenger(s)

Identify who will be delivering the messages and ensure that the source is credible with audiences.

7. Design media mix

Plan the media mix to optimize earned media (such as news stories or opinion editorials) and paid media (such as broadcast, print, or Internet advertising). Identify through which methods (e.g., advertising in newsprint ads), how often (e.g., weekly or monthly) and over what duration (e.g., 1 year) messages will reach audiences.

8. Establish metrics to measure success

Establish both process and outcome metrics to measure success in achieving objectives of the outreach campaign. Process metrics assure the quality, quantity, and timeliness of the contractor's work. Outcome metrics evaluate how well the campaign influenced the attitudes and behaviors of the target audience(s) that it set out to influence.

Source: GAO analysis of expert panel discussion. | GAO-19-76

¹ In prior work, we convened an expert panel of 14 senior management-level experts in strategic communications to identify the key practices of a consumer education campaign. We believe the key practices the expert panel identified in 2007 remain relevant today since the practices are not time-sensitive. As mentioned in our report, DOT officials agreed that these criteria were relevant to their education efforts. See GAO, *Digital Television Transition: Increased Federal Planning and Risk Management Could Further Facilitate the DTV Transition*, GAO-08-43 (Washington, D.C.: Nov. 19, 2007).

Appendix IV: Comments from the Department of Transportation



U.S. Department of Transportation

Office of the Secretary of Transportation

Assistant Secretary for Administration

1200 New Jersey Avenue SE Washington, DC 20590

NOV 0 6 2018

Andrew Von Ah Director, Physical Infrastructure Issues U.S. Government Accountability Office (GAO) 441 G Street NW Washington, DC 20548

Dear Mr. Von Ah:

The Department of Transportation (Department or DOT) is committed to ensuring that the hundreds of millions of airline passengers who fly in the United States each year are treated fairly. This includes a focus on "know your rights" campaigns that educate very clearly what laws and regulations exist to protect the traveling public and make it easier than ever for individuals to file a complaint with DOT about an airline experience. The Department also has a robust and multifaceted program to help airlines understand and comply with consumer protection requirements, investigate airlines' compliance with consumer protection requirements, and pursue enforcement action as appropriate.

More specifically, the Department's Office of Aviation Enforcement and Proceedings (Enforcement Office), within the Office of the Secretary, has taken the following actions to ensure that passengers understand their rights and airlines are complying with aviation consumer protection requirements.

- Processing Passenger Complaints: During the past 10 years (2008-2017), DOT's Enforcement Office processed a total of 142,229 air travel related complaints, which consists of an average of 14,229 complaints per year with a low of 8,820 complaints in 2009 and a high of 20,175 complaints in 2015. In processing the complaints, DOT staff reviewed the information in the complaint, accurately coded the issue in the proper complaint category, notified complainants that their complaint was received, and transmitted the complaint to the airline for action. These complaints form the basis for many of the Department's investigations and enforcement actions.
- Investigating Potential Violations and Taking Enforcement Action: Over the last
 decade, DOT's Enforcement Office conducted approximately 2,500 investigations and
 issued about 400 consent orders. The Enforcement Office also completed 39 inspections
 of airlines at their headquarters and identified 27 systemic violations, resulting in consent
 orders which assessed civil penalties ranging from \$40,000 to \$1,200,000. Also,

beginning in 2015, DOT's Enforcement Office initiated compliance inspections of airlines at airports and continued to conduct these inspections through 2018.

- Providing Compliance Assistance to Airlines: The Department's Enforcement Office has engaged in a variety of outreach activities to better educate airlines of their obligations under the law. For example, after issuing the last three major consumer rules, the Enforcement Office staff held meetings with representatives of airlines and their industry associations to ensure they understood the new requirements and how to comply. The Enforcement Office also developed 25 guidance documents in the last 10 years to inform and assist airlines, and respond to airline inquiries on a daily basis.
- Educating Consumers: The Department's Enforcement Office has educated consumers
 on their rights through issuing and updating publications, presenting at forums or
 webinars and participating in an online live question and answer session with members of
 the public. The Enforcement Office also recently relaunched its website to highlight
 content on topics of greatest concern to consumers, including bumping, tarmac delays
 and family seating.

Upon review of the GAO's draft report, we concur with the recommendations. We will provide a detailed response to each recommendation within 60 days of the final report's issuance.

We appreciate the opportunity to respond to the GAO draft report. Please contact Madeline M. Chulumovich, Director, Audit Relations and Program Improvement, at (202) 366-6512 with any questions or if you would like to obtain additional details.

Sincerely,

Keith Washington

Deputy Assistant Secretary for Administration

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Andrew Von Ah, (202) 512-2834 or vonaha@gao.gov.

Staff Acknowledgments

In addition to the individual named above, other key contributors to this report were Jonathan Carver, Assistant Director; Melissa Swearingen, Analyst-in-Charge; Amy Abramowitz; Lacey Coppage; Caitlin Cusati; Delwen Jones; Kelsey Kreider; Ethan Levy; Gail Marnik; SaraAnn Moessbauer; Malika Rice; Minette Richardson; Pamela Snedden; and Laurel Voloder.

GAO's Mission	The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.
Obtaining Copies of GAO Reports and Testimony	The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (https://www.gao.gov). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to https://www.gao.gov and select "E-mail Updates."
Order by Phone	The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, https://www.gao.gov/ordering.htm.
	Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.
	Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.
Connect with GAO	Connect with GAO on Facebook, Flickr, Twitter, and YouTube. Subscribe to our RSS Feeds or E-mail Updates. Listen to our Podcasts. Visit GAO on the web at https://www.gao.gov.
To Report Fraud,	Contact:
Waste, and Abuse in	Website: https://www.gao.gov/fraudnet/fraudnet.htm
Federal Programs	Automated answering system: (800) 424-5454 or (202) 512-7700
Congressional Relations	Orice Williams Brown, Managing Director, WilliamsO@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548
Public Affairs	Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548
Strategic Planning and External Liaison	James-Christian Blockwood, Managing Director, spel@gao.gov, (202) 512-4707 U.S. Government Accountability Office, 441 G Street NW, Room 7814, Washington, DC 20548

