United States Government Accountability Office

Report to Congressional Committees

January 2024

VEHICLE SAFETY

Opportunities to Improve Repair Rates for Recalled Vehicles

GAO-24-106356

GAO Highlights

Highlights of GAO-24-106356, a report to congressional committees

January 2024

VEHICLE SAFETY

Opportunities to Improve Repair Rates for Recalled Vehicles

Why GAO Did This Study

NHTSA is responsible for overseeing recalls when a defect in a vehicle creates an unreasonable safety risk. In 2021, NHTSA reported that 69 percent of passenger vehicles recalled in 2018 had been repaired. High-profile recalls over the last decade highlighted the importance of repairing recalls.

The Infrastructure Investment and Jobs Act includes a provision for GAO to study vehicle recall repair rates. This report examines (1) the primary factors that influence vehicle recall repairs, and the extent to which NHTSA has conducted research to identify these factors; and (2) how NHTSA has identified lessons learned from efforts to collaborate with third parties to improve recall repair rates, among other objectives.

To identify factors, GAO reviewed literature, such as academic studies. To determine how NHTSA has identified lessons learned from collaborative efforts, GAO reviewed documents, such as after-action reports about the Takata air bag recall. GAO interviewed NHTSA officials. GAO also interviewed 27 industry entities—selected based on the literature review, recommendations of other interviewees, and other factors.

What GAO Recommends

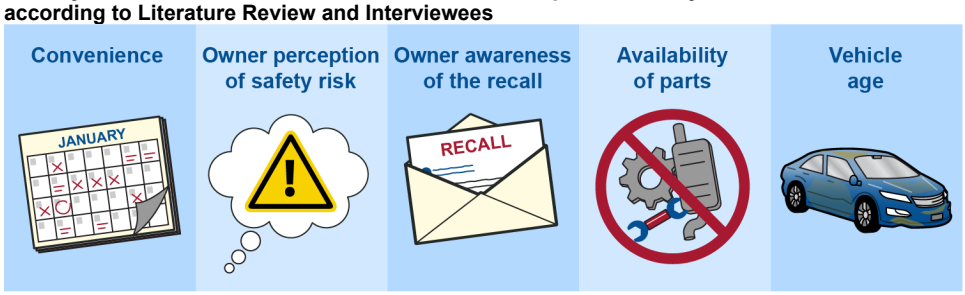
GAO is making two recommendations to NHTSA that it (1) develop a plan for regularly conducting research to identify the factors influencing vehicle recall repairs and (2) more fully implement a lessons-learned process to identify lessons from its own and manufacturers' collaborative efforts with third parties. NHTSA concurred with the recommendations.

View GAO-24-106356. For more information, contact Elizabeth Repko at (202) 512-2834 or repkoe@gao.gov.

What GAO Found

GAO found five primary factors that influence vehicle recall repair rates (see fig.).

Primary Factors That Influence Vehicle Owners to Respond to Safety Defect Recalls, according to Literature Review and Interviewees

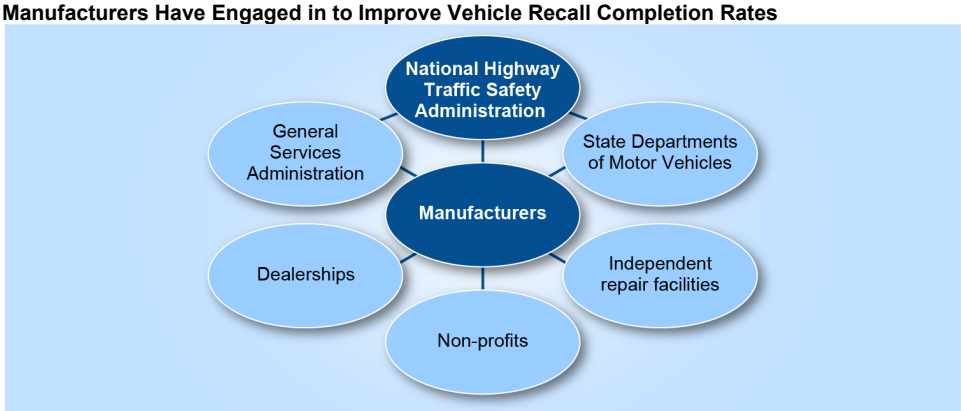


Source: GAO analysis of literature and interviews; GAO (icons). | GAO-24-106356

The National Highway Traffic Safety Administration (NHTSA) has conducted research that identified factors similar to those found by GAO. However, NHTSA has not updated this research and does not have plans to do so. Regularly updating this research could allow NHTSA to maintain more up-to-date information on the factors and enable the agency to respond accordingly. For example, technological developments, such as over-the-air technologies, can change these factors. NHTSA officials told GAO that they are seeing a growing number of recalls that can be repaired with over-the-air software updates.

NHTSA and manufacturers collaborate with third parties to improve recall repair rates (see fig.). However, NHTSA has not fully implemented a lessons-learned process to analyze and document lessons learned across all collaborations. As a result, NHTSA may be losing valuable insights that could improve repair rates and help the agency work toward its vision of achieving a 100 percent repair rate for every recall.

Examples of Collaborations the National Highway Traffic Safety Administration and Vehicle Manufacturers Have Engaged in to Improve Vehicle Recall Completion Rates



Source: GAO analysis of National Highway Traffic Safety Administration documents and interviews with agency officials, representatives of vehicle manufacturers, and industry organizations. | GAO-24-106356

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Abbreviations

DMV	department of motor vehicles
GSA	General Services Administration
NHTSA	National Highway Traffic Safety Administration

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Washington, DC 20548

January 9, 2024

The Honorable Maria Cantwell
Chair
The Honorable Ted Cruz
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Cathy McMorris Rodgers
Chair
The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy and Commerce
House of Representatives

In 2022, about 22 million vehicles were recalled for defects related to a wide variety of safety risks, such as wiring problems that may cause fires or windshield wipers that do not operate properly.[1] The National Highway Traffic Safety Administration (NHTSA) is responsible for overseeing these recalls when a defect in a vehicle creates an unreasonable safety risk. When either NHTSA or manufacturers identify safety defects, manufacturers are required to notify vehicle owners via First-Class Mail and generally remedy (repair) the problem without charge. High-profile recalls over the last decade, such as those involving ignition switches and air bags, have highlighted the importance of vehicle owners getting the defects repaired. Most notably, defective Takata air bag inflators have caused over 400 injuries and 27 fatalities in the U.S.[2]

NHTSA monitors the percentage of defective vehicles that manufacturers ultimately repair—known as completion rates. NHTSA has a stated vision of achieving a 100 percent completion rate for every recall.[3] However, in

[1]National Highway Traffic Safety Administration, *NHTSA 2022 Annual Report: Safety Recalls* (Mar. 2023).

[2]National Highway Traffic Safety Administration, *Takata Recall Spotlight*, accessed Sept. 11, 2023, https://www.nhtsa.gov/equipment/takata-recall-spotlight. The Takata recall has grown to include 67 million air bags in tens of millions of vehicles across 19 manufacturers.

[3]U.S. Department of Transportation, National Highway Traffic Safety Administration, *The Road Ahead: National Highway Traffic Safety Administration Strategic Plan 2016-2020* (Oct. 2016).

2021, NHTSA reported that 69 percent of passenger vehicles recalled in 2018 had been remedied as of 15 months after a remedy became available.[4] To improve completion rates over the last decade, NHTSA has required manufacturers to implement certain practices for several high-profile recalls, in particular the Takata air bag recall. In response, manufacturers have developed and implemented innovative strategies to reach more vehicle owners, including engaging in collaborative efforts with third parties such as independent repair facilities. NHTSA has also developed new collaborative efforts, for example with state departments of motor vehicles (DMV), to increase awareness about recalls.

The Infrastructure Investment and Jobs Act includes a provision for GAO to study vehicle recall completion rates.[5] This report examines (1) the primary factors that influence vehicle repairs in response to recalls, and the extent to which NHTSA has conducted research to identify these factors; (2) how NHTSA has identified lessons learned from its and manufacturers' efforts to collaborate with third parties to improve recall completion rates; and (3) additional actions selected stakeholders have identified that the federal government could take to improve recall completion rates. For the purpose of this report, we use "recalls" to refer to safety defect recalls.[6]

To address these objectives, we interviewed NHTSA officials. We also selected and interviewed 27 entities, including industry associations, safety groups, and vehicle manufacturers. We selected non-manufacturer entities based on a variety of factors, including that they were interviewed for previous GAO reports, recommended by other interviewees, or identified through a literature review. We selected eight vehicle

[4]U.S. Department of Transportation, National Highway Traffic Safety Administration, *Report to Congress: "Vehicle Safety Recall Completion Rates Report"* (Washington, D.C.: Aug. 2021). Passenger vehicles include cars, pickup trucks, sport utility vehicles, large passenger vans, and minivans, but exclude other vehicles, such as motorcycles, recreational vehicles, and commercial trucks.

[5]Pub. L. No. 117-58, § 24203(a), 135 Stat. 429, 819-820 (2021).

[6]NHTSA is responsible for overseeing two types of recalls: compliance and safety defect recalls. Compliance recalls are initiated when vehicles are determined to be noncompliant with applicable Federal Motor Vehicle Safety Standards, as identified by NHTSA or a manufacturer. We did not examine compliance recalls nor did we examine car seat (e.g., child safety seat), tire, and other equipment (e.g., vehicle accessories and after-market equipment such as lighting, trailer hitches, and bike racks) recalls.

manufacturers with a variation in the number of vehicles recalled in 2022 and vehicle sales in 2022, among other factors.

To determine the primary factors that influence vehicle repairs in response to recalls, we conducted a literature review to identify reports and studies that explore why vehicle owners do or do not have vehicles subject to recalls repaired. Specifically, we conducted searches of literature published in the last 10 years—including scholarly articles, industry articles, and government reports—by searching various databases. We summarized the primary factors highlighted in the reports and studies and identified by NHTSA and interviewees, including any changes to these factors in the past 5 years.[7] To determine the extent to which NHTSA has sought to identify the factors that influence vehicle repairs in response to recalls, we reviewed relevant NHTSA documentation, including research documentation. We compared NHTSA's efforts to identify these factors against a relevant enterprise risk management practice that involves examining strategic objectives by regularly considering how uncertainties, both risks and opportunities, could affect the agency's ability to achieve its mission.[8]

To determine how NHTSA has identified lessons learned from its and manufacturers' collaborative efforts to improve recall completion rates we reviewed documentation related to NHTSA's and selected manufacturers' collaborations, such as reports about the Takata recall. We defined a collaboration as any formal or informal collaborative effort NHTSA or manufacturers engaged in with another entity in the last 5 years to improve completion rates that is voluntary for at least one party. We also interviewed selected entities with whom NHTSA and manufacturers have collaborated, including state DMVs and large vehicle fleet managers, to collect information on the collaborations. We then analyzed the responses from interviewees to identify common themes and practices. We also assessed NHTSA's efforts to identify lessons learned from collaborations and compared these efforts against GAO-identified key practices of a

[7]We last examined this issue in-depth and conducted focus groups in 2017 as part of our work on the use of publicly available recall information. GAO, *Auto Recalls: NHTSA Should Take Steps to Further Improve the Usability of Its Website*, GAO-18-127 (Washington, D.C.: Dec. 4, 2017).

[8]GAO, *Enterprise Risk Management: Selected Agencies' Experiences Illustrate Good Practices in Managing Risk*, GAO-17-63 (Washington D.C.: Dec. 1, 2016).

lessons-learned process.[9] We determined the extent to which NHTSA's efforts aligned with each key practice as follows: (1) Fully: NHTSA's efforts for all of its collaborations and manufacturers' collaborations aligned with the practice; (2) Partially: NHTSA's efforts for some of its and manufacturers' collaborations aligned with the practice; or (3) Not: NHTSA's efforts for neither its collaborations nor manufacturers' collaborations aligned with the practice.

To determine what additional actions the federal government could take to improve vehicle recall completion rates, we conducted a modified two-stage Delphi survey of knowledgeable stakeholders.[10] We selected 65 knowledgeable stakeholders who could provide a range of perspectives on vehicle recalls. We selected stakeholders in four broad categories: federal, state, industry, and consumer protection and safety. We identified knowledgeable stakeholders based on whether they had testified before Congress on vehicle recalls, whether they had conducted work specifically related to vehicle recalls, recommendations from interviews, and other factors.[11] The first stage of the survey consisted of open-ended questions to solicit potential actions the federal government could take to improve completion rates. We received 40 responses for a 62 percent response rate. We conducted a content analysis of the responses and developed a list of 25 actions the federal government could take to improve completion rates.

The second stage of the survey consisted primarily of close-ended questions asking the knowledgeable stakeholders to evaluate the 25 actions. For example, these close-ended questions asked stakeholders to rate the actions in terms of effectiveness at helping to improve completion rates and to select actions for the federal government to prioritize. We received 36 responses to the second stage of the survey for a 63 percent

[9]We identified six lessons-learned key practices in GAO, *Telecommunications: GSA Needs to Share and Prioritize Lessons Learned to Avoid Future Transition Delays,* GAO-14-63 (Washington, D.C.: Dec. 5, 2013).

[10]We last examined stakeholder-suggested options for improving the recall process in 2011. GAO, *Auto Safety: NHTSA Has Options to Improve the Safety Defect Recall Process*, GAO-11-603 (Washington, D.C.: June 15, 2011).

[11]We selected stakeholders for the two-stage survey independently of selecting vehicle manufacturers and other entities to interview to inform the other objectives for this report. In some cases, an entity was selected to receive the survey and for interview.

response rate.[12] We analyzed the responses from the second stage of the survey to identify the top five actions knowledgeable stakeholders suggested the federal government prioritize.[13] For complete information on our objectives, scope, and methodology, see appendix I.

We conducted this performance audit from November 2022 to January 2024 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

The recall process for motor vehicles involves the following stakeholders

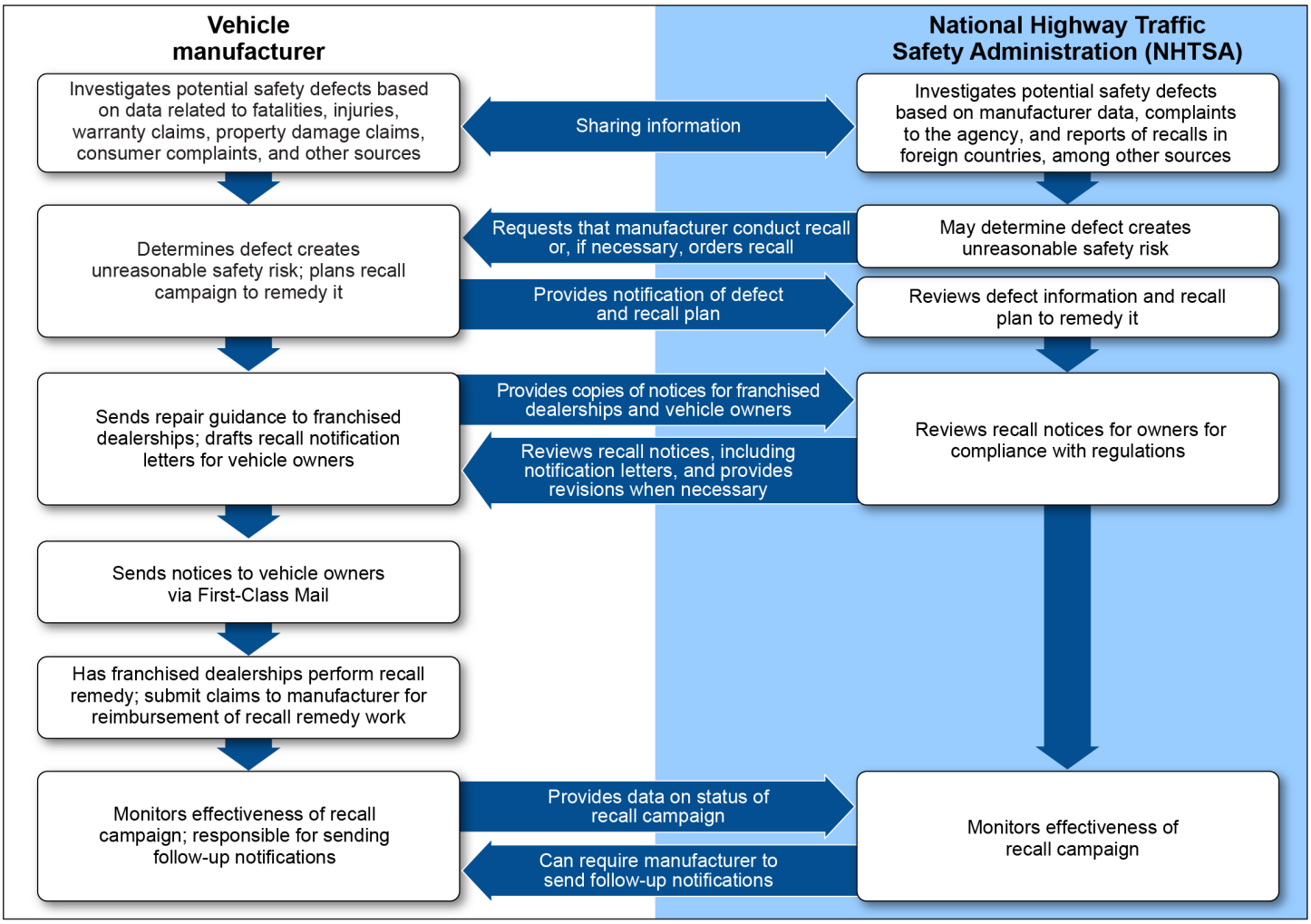
- vehicle manufacturers—businesses that manufacturer, assemble, or import motor vehicles;
- NHTSA—the federal agency that oversees vehicle safety;
- franchised dealerships—businesses that sell or lease a vehicle manufacturer's new vehicles; and
- vehicle owners—purchasers or lessees of a vehicle.

See figure 1 for information about the role of vehicle manufacturers and NHTSA in the vehicle recall process.

[12]We administered both stages of the survey to the same group of knowledgeable stakeholders, except for eight stakeholders who declined to participate in the first stage of the survey.

[13]For objective 3, we gathered information on the strengths and limitations of the top five actions identified by stakeholders through open-ended questions asked as part of the survey and as part of our interviews with entities that informed the entire report. In total, 42 stakeholders responded to the first- or second-stage survey, including eight vehicle manufacturers who responded to both stages of the survey. We also interviewed 27 entities, as previously described.

Figure 1: The Role of Vehicle Manufacturers and NHTSA in the Vehicle Safety Defect Recall Process



Source: GAO analysis of NHTSA documents and interviews with agency officials, vehicle manufacturers, and industry organizations. | GAO-24-106356

Note: Vehicle manufacturers may take actions not required in regulations, such as notifying vehicle owners of recalls through means other than First-Class Mail.

NHTSA's process for overseeing recalls involves ensuring that manufacturers comply with requirements set out in statute and regulation for recalls when a manufacturer or NHTSA determines that a defect exists

in a vehicle that creates an unreasonable safety risk.[14] As part of its recall oversight duties, NHTSA

- oversees manufacturers' planning and implementation of recalls, including reviewing drafts of letters that manufacturers plan to send to affected vehicle owners;[15]
- provides guidance and information to consumers and the public, including through public awareness campaigns and by maintaining a web-based tool for owners to look up their Vehicle Identification Number to see if their vehicle is subject to a recall; and
- monitors completion rates, including reviewing reports that manufacturers submit on the number of vehicles remedied for each recall. NHTSA performs a review to determine whether a manufacturer's reported completion rate meets forecasted benchmarks and takes appropriate actions when it determines that the manufacturer is falling short of performance expectations. Actions may include requesting that the manufacturer renotify vehicle owners of the recall or provide additional completion rate reports to NHTSA.

For most recalls, a vehicle owner must bring a vehicle to a dealership for the remedy. In some cases, recalls can be remedied through a software update without requiring a trip to a dealership. Federal law does not require individual vehicle owners to repair or otherwise remedy open safety recalls.[16]

For the Takata air bag recall, and as required by NHTSA, manufacturers implemented strategies designed to improve completion rates. The scope of the Takata recall presented "an unprecedented level of complexity" which required a response that "transcend[ed] the scope of the processes ordinarily followed in a recall under the Safety Act."[17] This extraordinary effort by NHTSA, vehicle manufacturers, and parts suppliers may provide lessons for future recall completion efforts. NHTSA coordinated with the

[14]Manufacturers are required to provide notice to NHTSA of a safety-related defect within 5 working days and may be subject to civil penalties for failure to make a timely notification.

[15]49 C.F.R. § 577.5(a).

[16]49 U.S.C. § 30120(i)(3). In addition, federal law bans the sale or lease of new cars with open safety recalls and prohibits renting vehicles with open safety recalls. 49 U.S.C. § 30120(i)(1).

[17]U.S. Department of Transportation, National Highway Traffic Safety Administration, Coordinated Remedy Order, para. 1 (Washington, D.C.: Nov. 3, 2015).

Takata Independent Monitor's team to research ways to encourage owners to complete recall repairs, with vehicle manufacturers implementing a number of new strategies.[18] The following strategies, among others, have allowed Takata-affected manufacturers to achieve an almost 80 percent completion rate:

- Conducting outreach to vehicle owners at least monthly using a variety of messaging channels including certified mail, postcards, email, phone calls and social media.
- Using English and Spanish to communicate with vehicle owners and using other languages, as appropriate.
- Using language and imagery in recall communications to convey the urgency and risk of the Takata recalls.
- Communicating that free accommodations may be available to owners of recalled vehicles, including loaner cars, rental cars, shuttle services, towing, and mobile repair.[19]

In addition, Takata-affected manufacturers collaborated with third parties—state DMVs, independent repair facilities, vehicle auctions, independent dealers, and insurers—to improve Takata recall completion rates. The third parties helped with letter mailing, phone calls, and emails for notifying vehicle owners of the recall, as well as providing on-site recall repair, among other things. Collaborations between manufacturers and third parties became a key driver behind improving Takata recall completion rates. Prior to the Takata recall, many affected manufacturers had not routinely collaborated with third parties to encourage owners to repair recalled vehicles. NHTSA published four reports from the Takata Independent Monitor, which outlined a progressively more sophisticated third-party engagement, or collaboration, strategy for the recall.

[18]For the Takata recall, NHTSA issued various orders and established a Coordinated Remedy Program under which the agency oversees the supply of remedy parts and risk-based prioritization of vehicles for repair. NHTSA manages the recall with the assistance of an Independent Monitor whose time as Monitor ended in December 2020. *See* NHTSA, Coordinated Remedy Order (Nov. 3, 2015). The Order relied upon NHTSA's authorities to enforce the requirements of the Motor Vehicle Safety Act of 1966. The Independent Monitor assessed compliance with the applicable orders issued by NHTSA and made recommendations aimed at enhancing the remedy program. NHTSA also published reports from the Independent Monitor related to the Takata recall.

[19]Mobile repair involves performing the Takata recall repair at an owner's residence, place of business, or other convenient location outside of a dealership.

Certain Factors Influence Vehicle Recall Repair, but NHTSA Does Not Regularly Research Them

The Primary Factors Influencing Owners to Repair Recalled Vehicles Are Convenience, Awareness, and Perception of Safety Risk

Relevant literature and entities we interviewed identified a number of primary factors that influence vehicle repairs in response to recalls (see app. I for additional factors). They identified the top five factors as follows:

- **Convenience.** Convenience is a highly influential factor for vehicle owners when considering whether to repair their recalled vehicles. The more inconvenient it is to get a recall repaired (e.g., inability to bundle the recall repair with regularly scheduled maintenance, not having access to a vehicle during the repair, having to wait to get a recall repair), the less likely a repair will be completed, according to relevant literature. Similarly, 14 of the entities we interviewed said that vehicle owners consider how much time a recall repair will take and the distance to the dealership. Thus, when manufacturers and dealers take steps to make the recall repair process easy and convenient—for example by providing loaner vehicles or mobile repairs—owners are more likely to pursue repair, according to relevant literature and interviewees.
- **Owner perception of safety risk.** The more an owner perceives a safety defect to be dangerous or risky, the more likely the owner will complete the recall repair, according to relevant literature. Data in some of the literature we reviewed suggested that some types of defects (e.g., electronic stability control and fuel systems) are perceived by owners to be more dangerous than other types (e.g., seats) and, therefore, lead to higher completion rates. The recall notification letters manufacturers send to vehicle owners must include a clear description of the safety defect and an evaluation of the risk to vehicle safety. One manufacturer we spoke with said that it aims to be very explicit in recall notification letters about the danger associated with the potentially defective air bags by including graphic images. As described previously, manufacturers used this strategy to enhance their Takata recall efforts.
- **Owner awareness.** Owners need to know their vehicles are subject to recalls before they can have them repaired. However, owners do

not always receive recall notification letters—historically, the primary means of contacting owners—from manufacturers. According to relevant literature, vehicle owner contact information is less reliable over time for owners who do not maintain their current mailing addresses with state DMVs.[20] A recommendation from relevant literature noted that vehicle manufacturers should use multiple sources of vehicle and owner information that is frequently updated (monthly or quarterly). For example, in addition to state DMV information, the literature notes that Takata-affected manufacturers used information that was aggregated from independent repair facilities, background searches, utility bills, auto clubs, auto parts stores, and insurance companies.

- **Parts availability.** A lack of available parts also influences whether vehicles are repaired in response to recalls. Recall repairs cannot be completed if necessary parts are not available. According to relevant literature, parts delays and shortages can cause vehicle owners to become frustrated or apathetic about completing a recall repair. A consumer safety group we spoke with said that vehicle recalls that drag on when parts are unavailable or other logistical issues arise are highly frustrating to vehicle owners. Similarly, a rental car association we spoke with said that lack of parts is one of the biggest barriers for rental car companies to having their recalled vehicles repaired.
- **Vehicle age.** The older a recalled vehicle is, the lower the likelihood that it will be remedied, for several reasons. Owners of older vehicles are less likely to have a relationship with franchised dealerships, and owner contact information may be out-of-date due to changes in vehicle ownership as vehicles age, according to relevant literature and interviewees. Relevant literature we reviewed notes that accommodations, such as towing and mobile repair, were effective in encouraging owners of older vehicles to schedule a recall repair.

In addition, certain populations may be less likely to seek out a vehicle remedy in response to a recall. According to relevant literature, lower levels of English language comprehension, education, and income are often associated with owners of older vehicles. One vehicle manufacturer we spoke with said that their demographic research on recalls found that traditionally underrepresented groups have lower completion rates. They noted this is particularly true of Hispanic vehicle owners for whom there may be language barriers at dealerships and fears about immigration

[20]Vehicle manufacturers typically use state DMVs' vehicle registration data as a source of owner contact information.

status. Socioeconomic status is also related to higher and lower completion rates. For instance, according to literature we reviewed, vehicle owners who belong to more transient and lower income populations who may experience less housing stability often do not maintain current mailing addresses with state DMVs. In its 2019 consumer research, NHTSA found that misperceptions around the cost of the recall remedy remain a significant barrier to consumers, especially Hispanic consumers.

According to NHTSA officials and 11 entities we interviewed, the factors influencing recall repairs have not changed very much over time. In our prior work on vehicle recalls, we found that the two most influential factors owners consider when deciding to repair their recalled vehicles are owner perception of the safety risk and convenience—both of which remain primary factors.[21] However, in the last 5 years, entities we interviewed said that the COVID-19 pandemic exacerbated four factors: (1) the availability of parts; (2) wait times to have recalls repaired; (3) vehicle age; and (4) labor costs for dealerships. Furthermore, longer-term industry trends, such as vehicle manufacturers announcing plans to significantly expand electric vehicle production or the increase in the average age of vehicles in the U.S., could significantly alter what factors influence whether vehicle owners get recalls repaired, as discussed below.

NHTSA Has Identified but Does Not Regularly Research the Factors Influencing Vehicle Recall Repairs

NHTSA conducted research to identify the factors that affect vehicle recalls in 2019. The agency undertook this research to update a 2016 consumer information campaign that aimed to promote greater awareness of recalls and motivate consumers to engage with NHTSA's online recall resources, which can help improve completion rates. It conducted five focus groups with 189 participants sorted into groups representing the general population, those who experienced a Takata recall, and the Hispanic population.

Similar to what we identified in this review, NHTSA's research found that the following factors were barriers to vehicle owners completing recall repairs. They also identified actions to address each of these factors:

[21]GAO-11-603 and GAO-18-127. To identify the factors that owners consider when deciding to repair their recalled vehicles in our fiscal year 2011 work, we conducted 10 focus group sessions with a total of 89 vehicle owners. To identify the factors in our fiscal year 2018 work, we conducted 12 focus groups with 94 vehicle owners.

- As described previously, the **owner perception of the safety risk** associated with a recall affects the likelihood of repairs: NHTSA reported that showing vehicle owners images of defective components and describing potential results can help owners better understand the safety risk and emphasize how important it is to have the recall repaired.
- As described previously, **owners' lack of awareness** about a recall affects the likelihood of repair: NHTSA reported that outreach to make vehicle owners aware needs to employ a multi-channel communications approach involving direct mail from a government source for credibility, text and email, and mass media communications.
- As described previously, **convenience** affects the likelihood of recall repairs: NHTSA reported that convenience barriers (time and distance) exist generally and noted that the amount of time and distance when they become barriers and affect recall repairs varies and is often a function of the severity of the recall. Given that the agency's research focused on how communications could help overcome such barriers to recall repairs, NHTSA reported that it is important to convey to owners the seriousness of the recall and to highlight the potential results of not repairing their recalled vehicles.
- In addition, NHTSA reported that **concerns about upselling by a dealer** and **misperceptions about the cost of recall repairs** affect the likelihood of repairs: NHTSA reported that recall communications should emphasize that all recall repairs are free.

Findings from this research have informed NHTSA's communication efforts related to improving vehicle completion rates, according to officials.

However, NHTSA has not updated its research on factors that create barriers to completing recall repairs since 2019 and does not have plans to do so. As directed by law, NHTSA officials said that they are planning additional consumer research on how well vehicle owners understand the recall information that they receive and what methods of communication they prefer, which will be completed in 2024.[22] According to NHTSA

[22]As part of this new research, officials said that they plan to conduct surveys, use evidence gathered through the Takata Independent Monitorship, and use informal information gathering from industry and external stakeholders. NHTSA has been directed to conduct this research into recall notifications, including identifying any opportunities for improvements to the notifications, in the Infrastructure Investment and Jobs Act. IIJA § 24203(c), 135 Stat at 820.

officials, the agency's Recall Management Division is an enforcement entity that primarily manages new recall submissions and monitors recall performance, and research is not a regular task for this division. However, as noted above, longer-term industry trends, such as vehicle manufacturers producing more electric vehicles, could significantly change what factors influence whether vehicle owners get recalls repaired. Further, NHTSA itself has recognized the importance of having up-to-date information on the factors influencing recall repairs. Similarly, 14 entities we interviewed said that there should be more research into the factors influencing recall repairs. Four of these interviewees said that NHTSA should conduct this additional research.

Updating information on the factors that influence recall repairs is important because these factors can change. NHTSA officials and 11 entities we interviewed said that factors affecting whether vehicle owners repair recalls have been stable in recent years, as described previously. However, technological developments, such as over-the-air technologies, can change these factors, making them more or less relevant. In fact, NHTSA officials told us they now see a larger number of recalls that can be remedied with over-the-air software updates; these recalls have very high completion rates because vehicle owners must do very little to repair the recall. Officials noted that while these recalls are currently a small share of total recalls, they are growing in number. They said that the future is moving in the direction of having more over-the-air remedies for vehicle recalls, which will result in higher completion rates. Thus, regular research on factors (e.g., every few years) may help NHTSA understand any changes driven by industry and technological developments.

Further, regular research could allow NHTSA to maintain up-to-date information on the factors and ensure the agency is not surprised by any changes to the factors. NHTSA has a strategic objective to inform and empower consumers by providing reliable, timely, and accurate traffic safety information, including information related to vehicle recalls. Our prior work has demonstrated that effective risk management involves, among other things, examining strategic objectives by regularly considering how uncertainties, both risks and opportunities, could affect the agency's ability to achieve its mission.[23] NHTSA also has a number of processes to oversee vehicle recalls and improve completion rates. Regularly identifying factors is vital to keeping communications to consumers and processes up-to-date and targeted, including NHTSA's

[23]GAO-17-63.

standard operating procedure for reviewing completion rates and its internal risk-based processes for safety defect analysis and recall management.

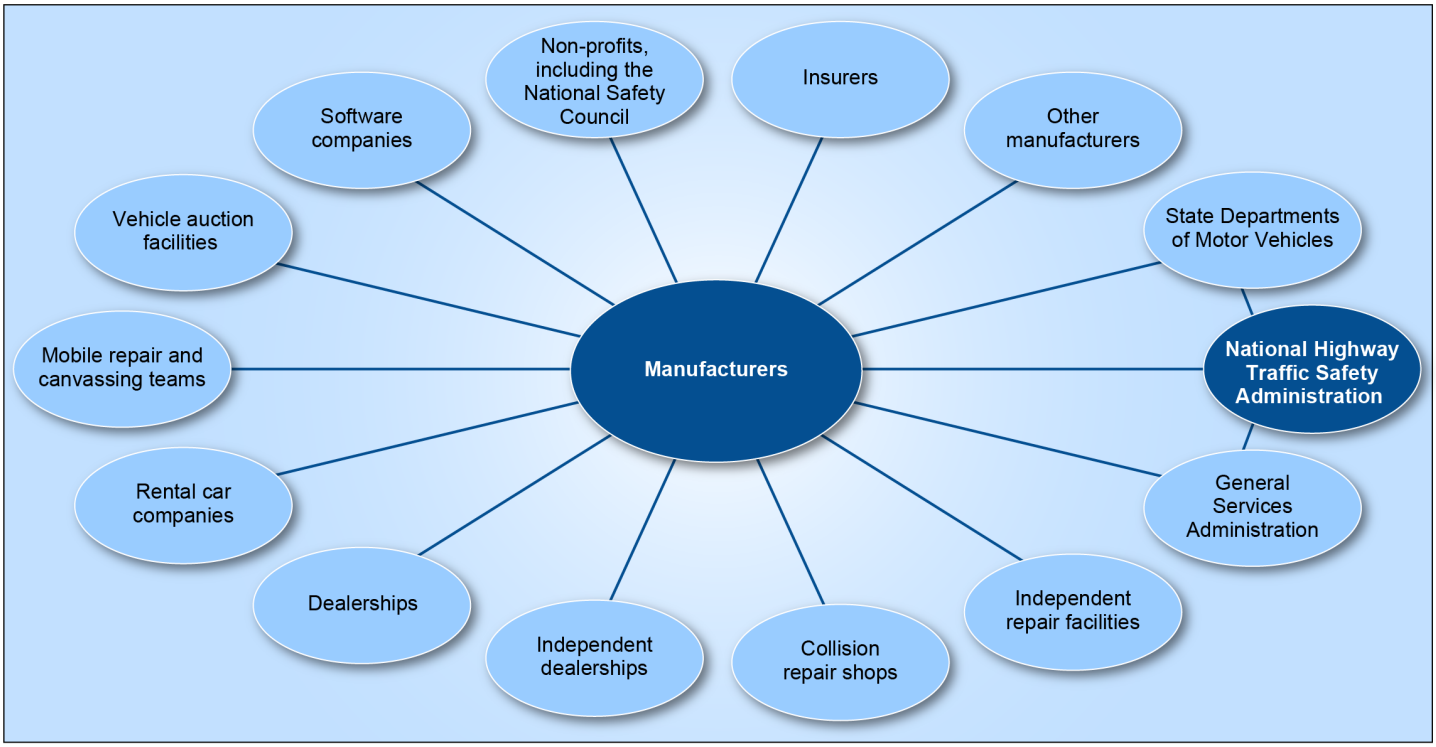
Moreover, without conducting regular research, if other changes occur that affect factors influencing recall repairs, NHTSA may not be aware and able to respond. By not planning to regularly research factors, NHTSA and manufacturers may not know how to best manage recall campaigns to ensure they are doing everything possible to encourage owners to have their recalled vehicles repaired.

NHTSA Has Not Fully Implemented a Process to Identify Lessons Learned from Collaborations for Recall Efforts

Vehicle Manufacturers and NHTSA Use Collaborative Efforts to Work to Improve Recall Completion Rates

Vehicle manufacturers and NHTSA use collaborations with third parties as a tool to improve completion rates (see fig. 2). These collaborative efforts with third parties have allowed manufacturers and NHTSA to collect and share strategies to improve completion rates and increase awareness of recalls.

Figure 2: Collaborations the National Highway Traffic Safety Administration and Vehicle Manufacturers Have Engaged in to Improve Vehicle Recall Completion Rates



Source: GAO analysis of National Highway Traffic Safety Administration documents and interviews with agency officials, representatives of vehicle manufacturers, and industry organizations. | GAO-24-106356

Vehicle Manufacturer Collaborations

Selected vehicle manufacturers we spoke with reported establishing a wide variety of collaborations that have improved completion rates. Seven of the eight manufacturers we spoke with reported that at least some of their collaborations with third parties have improved recall completion rates.[24] For example, one manufacturer stated that its collaborations can generate anywhere from a 5 to 40 percent increase to a completion rate. Manufacturers most frequently enter into these collaborative efforts to share recall best practices and strategies and to increase vehicle owners' awareness of recalls.

- **Share recall best practices and strategies.** The collaboration that manufacturers we spoke with highlighted most frequently was their work with each other. All eight manufacturers we spoke with said that

[24]One manufacturer we spoke with had no collaborations with third parties to improve recall completion rates.

collaborating with other manufacturers through recall summits has helped them share recall best practices and strategies more often. In addition, manufacturers have used working groups, made up of multiple manufacturers, to advance specific efforts. For example, four manufacturers said that they participate in working groups, one of which discusses engagement with state DMVs on various efforts to improve completion rates.

- **Increase owners' awareness of recalls.** Manufacturers also enter collaborations to help increase vehicle owners' awareness of recalls.[25] For example, some manufacturers, including five we spoke with, collaborated with the National Safety Council—a non-profit organization—on a campaign to encourage vehicle owners to complete recall repairs.[26] The campaign grew out of manufacturers' collaboration with each other. According to the National Safety Council, the campaign works to increase recall awareness among owners, particularly those in underserved communities, by sending them recall letters on National Safety Council letterhead and engaging with local communities to distribute recall information, among other things. Three of the participating manufacturers we spoke with and the National Safety Council said that the campaign led to improved completion rates, with one manufacturer stating that it yielded one of the highest increases in completion rates compared to other collaborations.

  In addition, manufacturers with whom we spoke cited other collaborations that increased awareness. For instance, according to a software company we interviewed, manufacturers collaborated with the company to add a Takata recall pop-up alert to its software. The pop-up alert appears when the owner of a recalled vehicle receives an estimate at a collision repair shop. Some manufacturers will also use this pop-up alert to notify vehicle owners of other priority recalls, according to the company. Manufacturers have also collaborated with

[25]Vehicle manufacturers' other collaborations mentioned in figure 2 aim to address other factors affecting recall completion rates. For example, to increase the convenience of recalls, manufacturers have collaborated with mobile repairs teams and rental car companies to limit the effect recalls have on vehicle owners' day-to-day lives. One manufacturer said that 31 percent of its monthly repairs are completed by its third-party mobile repair team. Manufacturers also work to find recalled vehicles by collaborating with independent dealerships and auction facilitates. Additionally, manufacturers have collaborated with insurers to try to address data quality issues for recalled vehicle owners' contact information.

[26]Currently there are seven manufacturers collaborating with manufacturers and the National Safety Council—the Check to Protect Campaign. We did not speak to the other two manufacturers.

state DMVs to send recall letters on DMV letterhead. Four of eight manufacturers we spoke with stated that they believe vehicle owners pay more attention to notifications from third-party sources, like their state DMVs, than from manufacturers. One manufacturer reported that after collaborating with state DMVs to send recall notifications, they saw between a 150 and 350 percent increase in completion rates.

NHTSA Collaborations

In addition to its enforcement-related activities to oversee recalls, NHTSA has also collaborated with third parties to improve completion rates. NHTSA officials noted that the agency's collaborative efforts are initiated either through congressional mandates or when an outside entity reaches out to NHTSA to work together. NHTSA officials identified three collaborations that the agency maintains, as described below.

- **Takata-affected vehicle manufacturers.** Since 2017, NHTSA has co-hosted voluntary summits for vehicle manufacturers involved in the Takata recall to share best practices for improving completion rates.[27] NHTSA officials said that the goal of the summits is to share outcomes of strategies being implemented, including collaborating with third parties. In addition to providing a forum for manufacturers to share recall strategies, NHTSA officials present at the summits, including on Takata recall completion rates and the agency's recall efforts. Six manufacturers we spoke with stated that they have taken practices used for the Takata recall, including those discussed at these summits, and applied them to other recalls. These Takata-focused summits do not include manufacturers who are not affected by the Takata recall.
- **General Services Administration (GSA).** According to NHTSA officials, GSA—the largest vehicle operator in the federal government—initiated a collaboration with NHTSA. As of January 2023, GSA manages a fleet of over 227,000 leased vehicles across the country, almost 12 percent of which is under recall at any given time. GSA officials said that GSA is responsible for awareness and transparency related to the recalls on these vehicles as part of its fleet

[27]Participating in the Takata recall summit is voluntary. However, as part of the Takata recall coordinated remedy order, some other manufacturer activities are mandatory. NHTSA co-hosted these summits with the Takata Independent Monitor.

management.[28] According to NHTSA and GSA officials, they collaborate in various ways to improve completion rates. NHTSA participates in GSA's annual FedFleet Conference to discuss emerging vehicle recall issues and regularly presents with GSA at the conference. The two agencies also communicate as needed about high-risk vehicle recalls. For example, GSA officials said that they collaborate with NHTSA to identify recalls with urgent designations (i.e., "Do Not Drive" or "Park Outside") and then GSA reaches out directly to federal agency fleet managers of affected vehicles.

- **NHTSA's state grant program.** Under the State Notification to Consumers of Motor Vehicle Recall Status grant program, NHTSA awards grants to applicant states that agree to design and implement a program that informs vehicle owners of any open recalls on their vehicles.[29] NHTSA has awarded grants to and collaborated with four states—California, Maryland, Ohio, and Texas. Three states in the program attached the recall notification to the state's vehicle registration, and the fourth state attached it to the safety inspection reports they provide owners after completing the inspection. State officials said that the program allowed them to track completion rates, implement paperless registration and recall notifications via text and email, and enhance existing data systems. Generally, these states saw an increase in completion rates after notifying owners of recalls on their vehicles. For example, the Maryland Motor Vehicle Administration reported that about 37 percent of the recalls included in registration renewal notices were remedied by the end of the state program.[30]

[28]GSA officials told us that, because vehicles leased from GSA are in the custody of the leasing agency and under the leasing agency's operational control, those agencies are responsible for completing the recall repair. GSA maintains several efforts to increase awareness of recalls in those agencies, particularly for drivers of these vehicles.

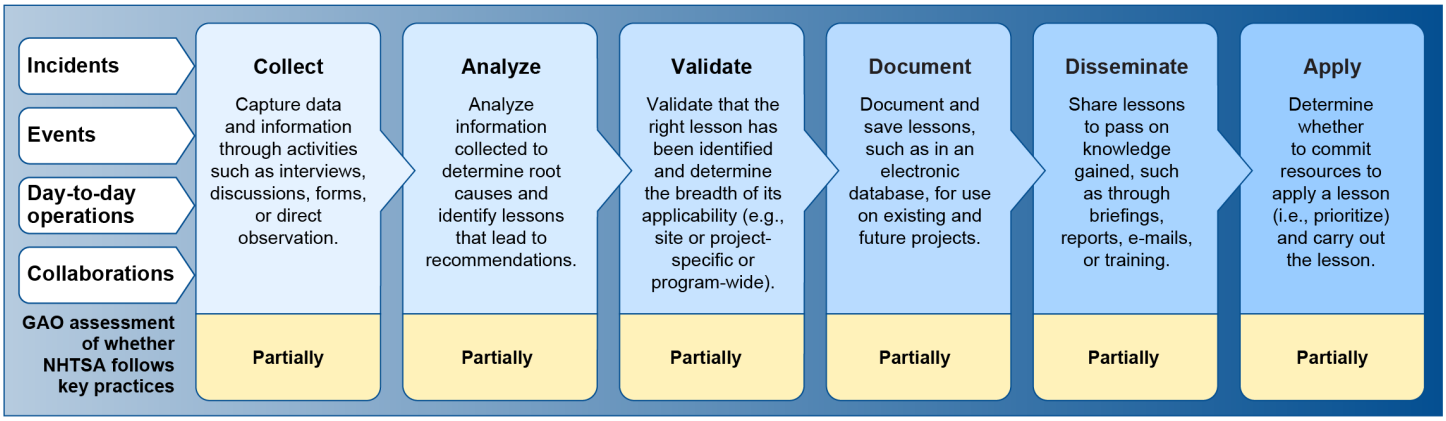
[29]NHTSA began collaborating with states via a grant pilot program in 2017. The program was formalized and expanded in the IIJA setting a statutory deadline for the establishment of the program of November 15, 2023.

[30]Maryland sent out recall notices for over 1 million vehicles throughout its program. These notices included recall notices for all open recalls on a vehicle that was up for registration renewal. Almost half of remedies were for recalls that were at least two years old, indicating that the program was effective in reaching owners who may have been unaware of the recall prior to receiving the recall notice through the program.

NHTSA Has Partially Implemented the Key Practices of a Lessons-Learned Process for Collaborations

While NHTSA and vehicle manufacturers have undertaken various collaborative efforts to improve completion rates, NHTSA may not be fully leveraging lessons from its own collaborations and manufacturer collaborations. In our prior work, we identified six key practices that build off each other to make up the lessons-learned process (see fig. 3). The lessons-learned process is a systematic means for agencies to learn from specific events or day-to-day operations, such as collaborating with third parties.[31] Its use is a principal component of an organizational culture committed to continuous improvement.[32] When implemented, the lessons-learned process can be used to make decisions about when and how to use information from operations to further improve similar efforts.

Figure 3: Comparison of NHTSA's Efforts for Collaborations to Improve Recall Completion Rates Against Key Practices of a Lessons-Learned Process



Source: GAO analysis of National Highway Traffic Safety Administration (NHTSA), U.S. Army, and other agency information. | GAO-24-106356

NHTSA has undertaken various collaborative efforts. However, as shown in figure 3 above, we found that NHTSA has only partially followed the six lessons-learned practices for identifying lessons from its own and manufacturers' collaborations that aim to improve completion rates.

[31]GAO, *VA Construction: VA Should Enhance the Lessons-Learned Process for Its Real-Property Donation Pilot Program*, GAO-21-133 (Washington, D.C.: Dec. 10, 2020).

[32]See GAO, *Federal Real Property Security: Interagency Security Committee Should Implement a Lessons-Learned Process*, GAO-12-901 (Washington, D.C.: Sept. 10, 2012) and *COVID-19 Contracting: Opportunities to Improve Practices to Assess Prospective Vendors and Capture Lessons Learned*, GAO-21-528 (Washington, D.C.: July 29, 2021).

- **Collecting information.** NHTSA collects quarterly reports from states in the grant program and Takata-affected manufacturers.[33] In addition, agency officials told us state grantees are required to send NHTSA data on completion rates based on the number of identified vehicles with unrepaired recalls and those with repaired recalls. As required by NHTSA's Third Amended Coordinated Remedy Order, Takata-affected manufacturers provide NHTSA with completion rate data and information on strategies they are using to increase completion rates. However, three manufacturers stated that NHTSA should do more to collect information on their collaborative efforts to improve completion rates. Apart from information the agency collects related to the Takata recall, these manufacturers said that NHTSA does not collect information on effective practices related to their collaborations. The non-Takata-affected manufacturer we interviewed said NHTSA does not collect any collaboration information from it related to recall campaign efforts.[34]
- **Analyzing information.** According to NHTSA officials, NHTSA systematically analyzes reports from manufacturers involved in the Takata recall. Specifically, NHTSA reads all the Takata recall quarterly reports and convenes an internal group to discuss any questions, needed clarifications, or whether it wants to meet with a manufacturer. However, NHTSA could not describe or provide information indicating that it systematically analyzes information about any other collaborations. For example, NHTSA officials stated that, while they read quarterly reports from state grantees, the agency does not have a formal process to analyze the raw data states provide and instead reviews the information as needed.[35]
- **Validating lessons.** NHTSA has taken steps to validate lessons from the state recall notification grant program by following up with all states that have completed the program to better understand program findings. However, NHTSA does not do so for all other collaborations, including manufacturers' collaborations. Manufacturers we spoke with

[33]NHTSA collects quarterly reports from all manufacturers conducting a recall remedy program, including manufacturers who are not a part of the Takata recall. However, for the purpose of this report, we are focusing on how NHTSA collects information from its identified collaborations described above.

[34]The non-Takata-affected manufacturer we interviewed noted that NHTSA may not collect this information from them due to the manufacturer's belief that NHTSA has been satisfied with that manufacturer's reporting and status of completion rates.

[35]NHTSA officials noted that analyzing states' data when a grant concludes is difficult due to the varying methods state DMVs take to notify affected owners.

had varying experiences related to NHTSA following up with them to validate information they provided on collaborations.

- **Documenting lessons.** NHTSA has documented lessons related to the Takata recall. For example, in 2021, NHTSA developed a page on its website, *Tips for Increasing Recall Completion Rates*, to document lessons learned from the Takata recall, among other things, in response to a recommendation from the Department of Transportation Office of Inspector General.[36] The Tips webpage shares lessons learned on many topics, such as optimizing completion rates through collaborating with third parties. However, the Tips webpage focuses mainly on the Takata recall and does not contain details or examples, which may limit its applicability to broader recall efforts. Vehicle manufacturers' opinions of the Tips webpage were mixed. One manufacturer highlighted that it only uses the Tips webpage as a resource for new staff. Four manufacturers we spoke with also stated that the Tips contain outdated information and information they were already aware of. Further, when asked, NHTSA officials said they had no other examples of documenting lessons from the agency's or manufacturers' collaborations.
- **Disseminating lessons.** NHTSA has disseminated lessons learned from its state grantees with other entities such as the American Association of Motor Vehicle Administrators, which represents state DMVs and other roadway safety entities, to encourage interest in the program, according to NHTSA officials. However, six of the eight manufacturers we spoke with stated that NHTSA has not shared, or disseminated, lessons learned from its collaborations with them.
- **Applying lessons.** According to officials, NHTSA determines applicability to other settings or entities as information is received and evaluated; however, NHTSA has not applied lessons learned from its own and manufacturers' collaborations beyond the state grant program.[37]

[36]U.S. Department of Transportation, National Highway Traffic Safety Administration, *Tips for Increasing Recall Completion Rates*, accessed Nov. 2, 2023, https://www.nhtsa.gov/vehicle-manufacturers/tips-increasing-recall-completion-rates.

[37]NHTSA has applied lessons learned from its pilot program with one state to make changes to subsequent state recall notification grants, particularly to the application process. Specifically, NHTSA officials said that they started using a rolling process for the state recall notification grant application following the pilot program. We also compared the pilot program application with the following application for the state program and noted that NHTSA had extended the due date for the draft final report and shortened the application itself.

When we asked NHTSA officials why they had not fully implemented a lessons-learned process for collaborations, the officials said that NHTSA has focused more on recall enforcement than on maximizing the benefits of collaborative efforts with third parties. NHTSA officials told us that the agency's Recall Management Division focuses on targeted, data-driven enforcement of low-performing recalls, rather that general and indirect efforts to improve completion rates. They noted that NHTSA also regularly interacts with manufacturers but, overall, it focuses more on enforcement rather than other, general efforts to improve completion rates, like discussing how manufacturers collaborate with third parties.

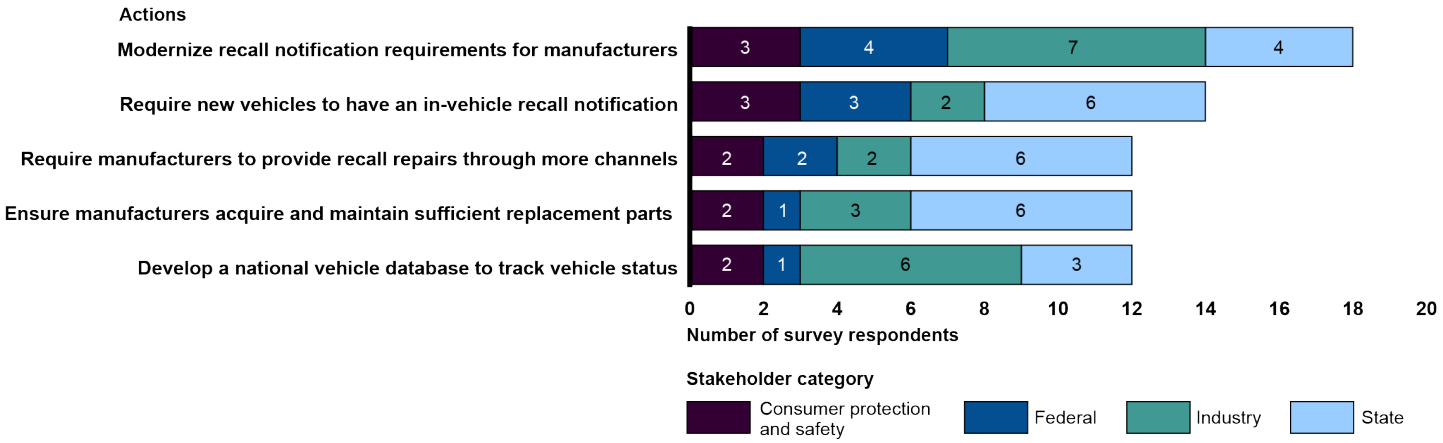
Consistently following the key practices of a lessons-learned process would allow NHTSA to gain valuable insights from its own and manufacturers' collaborations to improve completion rates that it could apply to future recall efforts. For example, when NHTSA more consistently followed lessons-learned key practices to identify lessons from its pilot program with one state, the agency was able to make informed changes to subsequent state recall notification grants. In addition, lessons from such collaborations could result in beneficial changes to NHTSA's recall-related plans or processes. For instance, lessons could inform what actions NHTSA requests a manufacturer take when it determines that a reported completion rate is falling short of performance expectations.

NHTSA could also be better positioned to promote innovative strategies to improve completion rates if it documented and disseminated lessons learned from its own and manufacturers' collaborations. In a December 2020 report, the Takata Independent Monitor noted that manufacturers can capitalize on knowledge and experience from the Takata recall to inform campaigns for future recalls. The Independent Monitor compiled and published various lessons learned from the Takata recall, including lessons from manufacturer collaborations. Now that the Independent Monitorship has ended, a lessons-learned process would allow NHTSA to develop and share lessons from collaborations with third parties going forward, potentially improving completion rates and working toward NHTSA's vision of achieving a 100 percent completion rate for every recall. In fact, NHTSA officials have noted the importance of sharing lessons learned widely since there is no one strategy that always improves completion rates. Notably, five manufacturers we spoke with agreed and stated strategies seem to become less effective over time, emphasizing the importance of this approach.

Stakeholders Identified a Variety of Additional Actions the Federal Government Could Take to Improve Recall Completion Rates

Nearly all stakeholders—32 of 36 responding to the survey—said that it was important for the federal government to take additional actions to improve completion rates for vehicle recalls.[38] Stakeholders who responded to our survey identified 25 additional actions the federal government could take to improve completion rates, related to oversight of manufacturers, consumer education and outreach, as well as research and data, among others.[39] See appendix II for the complete list of actions. When asked which actions the federal government should prioritize to help improve completion rates, stakeholders most frequently selected the five actions in figure 4.

Figure 4: Stakeholder-Identified Top Actions the Federal Government Should Prioritize to Help Improve Completion Rates of Vehicle Recalls, by Stakeholder Category



Source: GAO analysis of survey data. | GAO-24-106356

Notes: The survey asked stakeholders to select up to five actions they think the federal government should prioritize to help improve completion rates. Thirty-six stakeholders responded to the second stage of the survey. The survey did not ask stakeholders to consider feasibility or practicality of proposed actions. Our goal was to encourage stakeholders to think broadly and originally about potential interventions. As a result of this approach, there may be added practical, legal, and other challenges or limitations associated with some of these stakeholder-suggested actions that were not identified in our survey.

[38]Most of the results presented here come from the second stage of the modified two-stage Delphi survey.

[39]The first stage of the survey asked stakeholders to suggest actions the federal government could take to improve recall completion rates. Because of NHTSA's role in vehicle recall oversight, NHTSA would have a role in implementing or overseeing implementation of some of the 25 actions included in the survey, while Congress would need to provide additional or clarified authority to NHTSA or other agencies for other actions.

In addition to asking about actions to prioritize, we also asked stakeholders how effective each of the 25 actions would be at helping improve recall completion rates. Only one action—modernize recall notification requirements for manufacturers—was among the top five actions that stakeholders think the federal government should prioritize and view as effective.[40] Thirty-two of 36 stakeholders responding to the second stage of the survey, the most for any action, responded that they think working with third parties to improve vehicle owner contact data would be effective. This action could involve the federal government helping to facilitate data sharing between manufacturers and third parties with access to current and comprehensive data on vehicle owners (e.g., insurers). See appendix II for stakeholder effectiveness ratings for all actions.

Below we describe the top five actions surveyed stakeholders suggested the federal government prioritize, including sharing the primary strengths and limitations the 42 stakeholders who responded to the survey mentioned in the open-ended questions of the survey and, in some cases, those mentioned by the 27 entities we interviewed.[41] The survey did not ask stakeholders to consider feasibility or practicality of the proposed actions. Because much work has been done to try to improve completion rates, our goal was to encourage stakeholders to think broadly and originally about potential interventions. As a result, there may be added practical, legal, and other challenges or limitations associated with some of these stakeholder-suggested actions. For example, some of the actions may require that Congress provide additional or clarified authority to NHTSA or another agency. While the survey did not ask stakeholders about feasibility or practicality of the proposed actions, we asked NHTSA to weigh in on the strengths and limitations of the top five actions, including considerations such as effectiveness, cost, effect on consumers, and practicality. We also asked NHTSA to consider potential barriers to implementation, such as legal authority and limitations.

[40]We considered stakeholders rating an action as effective if they responded to the survey that an action would be “very effective” or “moderately effective.” For the questions included in the first and second stages of the survey, see appendix III.

[41]We gathered information on the strengths and limitations of the top five actions identified by stakeholders through open-ended questions asked as part of the survey and as part of our interviews with entities that informed the entire report. In total, 42 stakeholders responded to the first- or second-stage survey, including eight vehicle manufacturers who responded to both stages of the survey. We also interviewed 27 entities, as previously described. Not every stakeholder who responded to the survey or entity we interviewed provided information on the strengths and limitations of the top five actions.

Modernize Recall Notification Requirements for Manufacturers beyond First-Class Mail

Eighteen of 36 stakeholders surveyed suggested the federal government prioritize modernizing recall notification requirements for manufacturers beyond First-Class Mail (e.g., email and text). This action could involve changing recall notification requirements to allow more flexibility for manufacturers when contacting vehicle owners about recalls, so that manufacturers could use electronic communications, including email, text message, phone call, or in-vehicle notification instead of First-Class Mail. In 2015, the Fixing America's Surface Transportation Act directed NHTSA to issue a rule to require vehicle manufacturers to notify consumers about open recalls by electronic means in addition to First-Class Mail. NHTSA has not yet completed this rulemaking, but NHTSA officials told us that they are continuing to work on it.[42] Among stakeholders responding to the second stage of our survey, 29 of 36 responded that they think this action would be effective at helping improve completion rates.

Comment from a Consumer Protection and Safety Entity

"Allowing manufacturers to meet the notification requirements via email, text, or other phone alerts could help ensure owners receive the notification even if they move and help reach out to younger owners who may not check their paper mailboxes regularly."

Source: GAO interview. | GAO 24 106356

Strengths. Four of 42 stakeholders who responded to the survey and nine of 27 entities we interviewed told us that electronic communication may be more effective at reaching some vehicle owners compared with First-Class Mail, especially considering changing communication preferences.[43] Two of eight manufacturers who responded to the survey said that they want flexibility in how to notify vehicle owners about recalls, which could allow them to dedicate resources to contacting difficult-to-reach vehicle owners.

NHTSA's 2019 consumer research found that, while mail remains an important means to notify vehicle owners about recalls, using multiple communication channels is most effective.[44] When asked about the

[42]Pub. L. No. 114-94, § 24104(a), 129 Stat. 1312, 1703. In 2016, NHTSA issued a Notice of Proposed Rulemaking, which proposes to require vehicle manufacturers to notify consumers about open recalls by electronic means, but has not yet completed it. Update Means of Providing Recall Notification, 81 Fed. Reg. 60,332 (Sept. 1, 2016). The Department of Transportation's Fall 2023 Unified Agenda includes this rulemaking. DOT/NHTSA, *49 CFR Part 577 Defect and Noncompliance Notification*, RIN: 2127-AL66 (https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202310&RIN=2127-AL66). NHTSA plans to issue a supplemental notice of proposed rulemaking. We previously reported that relatively low prioritization and staff resources hindered NHTSA's progress on this rulemaking. GAO, *Traffic Safety: Implementing Leading Practices Could Improve Management of Mandated Rulemakings and Reports*, GAO-22-104635 (Washington, D.C.: Apr. 26, 2022).

[43]When we previously reported on the results of focus groups in 2017, most consumers reported a preference for receiving recall notification by at least one electronic means, such as by email or text message, in addition to mail. GAO-18-127.

[44]National Highway Traffic Safety Administration, *Effective Recall Communications* (Aug. 2019).

strengths of this action, NHTSA officials noted the ongoing rulemaking on this topic. Officials told us that mandating electronic recall communications in addition to First-Class Mail may generally lead to greater awareness of recalls. NHTSA officials also told us that those who commented on the proposed rule requiring manufacturers to notify owners via electronic means expressed interest in the flexibility in the means of contacting vehicle owners electronically.

Limitations. Two of eight manufacturers who responded to the survey stated that mail remains an effective form of communication to reach vehicle owners. They added that emails and text messages could get marked as spam and not actually reach the vehicle owner. One of those manufacturers acknowledged that some vehicle owners may still prefer mail communications.[45] Two of eight manufacturers who responded to the survey also said that the availability and accuracy of vehicle owners' phone numbers and email addresses may be limited. When asked about limitations of this action, NHTSA officials told us that some who commented on the proposed rule raised concerns about the lack of access to electronic contact information and costs to obtain that information.

Require New Vehicles to Have an In-Vehicle Recall Notification

Fourteen of 36 stakeholders surveyed suggested the federal government prioritize requiring new vehicles to have an in-vehicle notification that would alert the vehicle owner of recalls. This action could involve requiring manufacturers to incorporate the capability to directly communicate with vehicle owners about recalls in new vehicles (e.g., via the vehicle's screen).[46] Such a capability would necessitate that a vehicle have cellular or another wireless connection to receive information on recalls. Among stakeholders responding to the second stage of our survey, 27 of 36 responded that they think this action would be effective at helping improve completion rates.

[45]In 2017, we reported that the majority of focus groups participants reported a preference to receive vehicle recall notifications by mail. GAO-18-127.

[46]This action would entail notifying the vehicle owner about a recall, not remedying the defect through an over-the-air update.

Comment from a Consumer Protection and Safety Stakeholder

"Many manufacturers already have the ability to communicate directly with the owner through the vehicle itself. This avenue provides for a continued relationship between owner and manufacturer."

Source: GAO survey. | GAO-24-106356

Strengths. Two of 42 stakeholders who responded to the survey and one of 27 entities we interviewed noted that the capability to directly communicate with some vehicles already exists and could allow for easy follow up with vehicle owners. An industry entity told us this method of communication would more directly reach drivers of vehicles if the primary driver is different from the vehicle owner (e.g., a college student whose vehicle is owned by their parent). One of eight manufacturers who responded to the survey said that communicating with vehicle owners via in-vehicle notification can improve completion rates as much or better than First-Class Mail. When asked about the strengths of this action, NHTSA officials told us that in-vehicle recall notification is a type of electronic notification and, therefore, their views are similar to their response to the action above about modernizing recall notification requirements.

Limitations. Two of 42 stakeholders who responded to the survey noted that this action would apply only to new vehicles. As such, this action may not have much of an effect on completion rates, considering that many unrepaired vehicles are older vehicles. One industry stakeholder who responded to the survey also indicated that vehicle owners could ignore in-vehicle notifications. When asked about limitations of this action, NHTSA officials told us that their views are similar to their response to the action above about modernizing recall notification requirements.

Require Manufacturers to Provide Recall Repairs through More Channels

Twelve of 36 stakeholders surveyed suggested the federal government prioritize requiring manufacturers to provide recall repairs through more channels (e.g., mobile repair, independent repair facilities, over-the-air updates for software issues, and temporary repair facilities). This action could involve requiring that manufacturers offer additional channels for recall repairs beyond franchised dealers, where appropriate. Among stakeholders responding to the second stage of our survey, 21 of 36 responded that they think this action would be effective at helping improve completion rates.

Comment from an Industry Entity

"Households may only have access to one vehicle or have multiple people relying on the vehicle for work, school, or appointments, so getting a recall repaired is a significant impediment to their lives. Some vehicle owners also live far away from their closest dealer and are reluctant to commit the time necessary to repair a recall."

Source: GAO interview. | GAO-24-106356

Strengths. Three of 42 stakeholders who responded to the survey and 12 of 27 entities we interviewed identified how more channels for getting recalls repaired could improve convenience for vehicle owners. For example, having more repair channels could alleviate the burden of traveling a long distance to a franchised dealer, especially for those in rural areas. In addition, three interviewees told us that vehicle owners would not risk getting upsold at a dealer if they received a mobile repair in

their driveway.[47] Another entity we interviewed mentioned that independent repair facilities could help fill gaps in completing recall repairs. When asked about the strengths of this action, NHTSA officials told us that, if prescribing or administering such a requirement is within NHTSA's authority, it may allow further flexibility for vehicle owners to get recalls repaired. NHTSA officials added that their *Tips for Increasing Recall Completion Rates* includes strategies similar to this action for manufacturers to consider.[48]

Limitations. While this was a frequently suggested action, half the manufacturers (four of eight) that responded to the survey disagreed and would not recommend the federal government take this action. Three of eight manufacturers who responded to the survey and two entities we interviewed identified reasons these channels may not be appropriate for all recall repairs. For example, mobile repair units cannot complete repairs requiring lifting a vehicle in a vehicle owner's driveway. In addition, over-the-air updates are appropriate only when the remedy is a software update. When asked about limitations of this action, NHTSA officials told us that, if prescribing or administering such a requirement is within NHTSA's authority, those affected may raise concerns over costs and burdens to implement this action, such as costs for manufacturers to collaborate with third parties to establish such additional channels.

Ensure Manufacturers Acquire and Maintain Sufficient Replacement Parts for Recall Repairs

Twelve of 36 stakeholders surveyed suggested the federal government prioritize ensuring manufacturers acquire and maintain sufficient replacement parts for recall repairs. This action could involve the federal government taking additional steps to ensure that manufacturers are doing what they can to maintain enough replacement parts to remedy recall defects. For example, NHTSA could require that manufacturers prioritize producing parts needed for recalls or more closely examining why parts needed for a recall are unavailable or in short supply. Among stakeholders responding to the second stage of our survey, 24 of 36

[47]Upselling involves a dealer trying to sell services or claiming that the vehicle has damage or needs repairs that are not tied to the recall.

[48]NHTSA officials noted that manufacturers currently have a legal obligation to perform recall repairs within a reasonable time. 49 U.S.C. § 30120(c). NHTSA exercises oversight of this requirement, including obtaining information from manufacturers. If NHTSA determines that a manufacturer's remedy program is not likely to be capable of completion within a reasonable time, the Secretary may require a manufacturer to accelerate a recall remedy program under certain circumstances. See 49 U.S.C. § 30120(c)(3).

responded that they think this action would be effective at helping improve completion rates.

Comment from a State Stakeholder

"It is helpful for manufacturers to provide information immediately upon learning of a recall[,] but it often concerns and frightens customers when a fix might not be available."

Source: GAO survey. | GAO-24-106356

Strengths. Four of 42 stakeholders who responded to the survey and five of 27 entities we interviewed expressed concerns about replacement parts not being available when the vehicle owner receives a recall notification. One stakeholder and two interviewees added that the lack of available replacement parts causes vehicle owners frustration. One stakeholder commented that these delays can contribute to vehicle owners' disinterest in following up to complete the repair when the parts are available. When asked about the strengths of this action, NHTSA officials told us that, if prescribing or administering a requirement that manufacturers take certain actions with respect to replacement parts is within NHTSA's authority, it may increase the ability for vehicle owners to get recalls repaired.[49]

Limitations. Three of 42 stakeholders who responded to the survey said that this action would be challenging to implement. For example, two of eight manufacturers responded via the survey that factors, such as supply chain complexity and unforeseeable events, limit manufacturers' ability to ensure the availability of replacement parts. Three of eight manufacturers who responded to the survey also said that they already take actions to ensure there are enough replacement parts available to the extent possible, in part to satisfy their customers. When asked about limitations of this action, NHTSA officials told us that, if prescribing or administering a requirement that manufacturers take certain actions with respect to replacement parts is within NHTSA's authority, some entities may raise concerns over costs and burdens to implement this action. These costs and burdens could include costs for manufacturers to collaborate with third party manufacturers of replacement parts, sufficiency of time available to evaluate potential remedies, and adverse effects on new vehicle production and sales.

Develop a National Vehicle Database That Could Track the Status of Vehicles in the U.S.

Twelve of 36 stakeholders surveyed suggested the federal government prioritize developing a national vehicle database that could track the status of vehicles in the U.S. (e.g., registered, unregistered, inoperable, destroyed). This action could involve the federal government developing or working with external stakeholders to develop a comprehensive

[49]As previously noted, NHTSA exercises oversight over manufacturers conducting recalls, which includes monitoring the availability of remedy parts. NHTSA has the authority to require a manufacturer to accelerate a recall remedy program under certain circumstances. 49 U.S.C. § 30120(c)(3).

database of vehicles in the U.S. so that manufacturers can better track down vehicles with recalls. Among stakeholders responding to the second stage of our survey, 26 of 36 responded that they think this action would be effective at helping improve completion rates.

Comment from an Industry Stakeholder

"More accurately identifying vehicles that are not in operation will allow manufacturers to optimize resources towards the vehicles on the road."

Source: GAO survey. | GAO-24-106356

Strengths. Four of 42 stakeholders who responded to the survey stated that having better information on vehicles that are no longer in use could help improve the accuracy of completion rates. The stakeholders also stated that having better information on vehicles could allow manufacturers to focus their outreach efforts on vehicles that are still on the road. One stakeholder responded that there may be opportunities to leverage the National Motor Vehicle Title Information System—a system states use to verify vehicle titles and prohibit resale of stolen vehicles.[50] When asked about the strengths of this action, NHTSA officials told us that, if NHTSA is authorized to take such action, it may allow for an increased ability to track recall completion and for manufacturers to allocate resources to notify owners of vehicles that are most likely to be on the road, depending on the sources of data and their accuracy.

Limitations. One of 42 stakeholders who responded to the survey said that a national vehicle database may raise privacy concerns. To the extent that such a database would improve data on scrapped, stolen, or exported vehicles, one stakeholder responded that this database would increase completion rates. This would occur through better accounting of vehicles that are inoperable or otherwise unavailable to be repaired rather than increasing the number of vehicles repaired. When asked about limitations of this action, NHTSA officials told us that, if NHTSA is authorized to take such action, there may be potential issues related to data privacy, cybersecurity, and the costs and resources needed to develop and maintain such a database.

Conclusions

Given the risks recalls can pose to the safety of vehicle owners, including injury or even death, it is essential that NHTSA and manufacturers understand how best to focus recall efforts to improve completion rates. NHTSA has a crucial role overseeing vehicle recalls, which includes monitoring completion rates and enforcing the rules that manufacturers must follow for the hundreds of safety defect recalls announced each

[50]The National Motor Vehicle Title Information System is a database that titling agencies can use to verify paper titles. The purpose of the system is to protect consumers from fraud and unsafe vehicles and prevent the resale of stolen vehicles. The U.S. Department of Justice is responsible for oversight of this system and the American Association of Motor Vehicle Administrators operates it.

year. Over the past decade, NHTSA has taken steps to strengthen its oversight of recalls. However, the agency has an opportunity to bolster its efforts by regularly researching the factors that influence vehicle recall repairs.

Moreover, by more fully implementing a lessons-learned process for its own and manufacturers' collaborations, NHTSA will not lose valuable insights that may be applicable to other collaborations and its own recall oversight processes. Without taking such steps, NHTSA, as well as the manufacturers it oversees, cannot be sure that they are using the most effective strategies possible to improve completion rates—an essential step toward ensuring the safety of the owners of recalled vehicles.

Recommendations for Executive Action

We are making the following two recommendations to NHTSA:

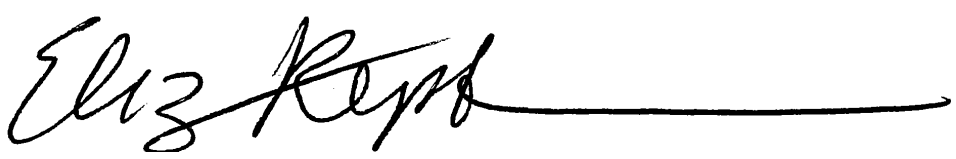
The Administrator of NHTSA should develop a plan for regularly conducting research to identify the factors that influence vehicle remedies in response to recalls. (Recommendation 1)

The Administrator of NHTSA should more fully implement a lessons-learned process to identify lessons from its own and manufacturers' collaborative efforts with third parties that could help to improve recall completion rates. (Recommendation 2)

Agency Comments

We provided a draft of this report to the Department of Transportation and GSA for review and comment. NHTSA concurred with our recommendations (see letter reproduced in app. IV). NHTSA also provided technical comments, which we incorporated as appropriate. GSA had no comments on the draft report.

If you or your staff have any questions concerning this report, please contact us at (202) 512-2834 or repkoe@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.



Elizabeth Repko
Director, Physical Infrastructure

Appendix I: Objectives, Scope, and Methodology

This report examines (1) the primary factors that influence vehicle repairs in response to recalls, and the extent to which the National Highway Traffic Safety Administration (NHTSA) has conducted research to identify these factors; (2) how NHTSA has identified lessons learned from its and manufacturers' efforts to collaborate with third parties to improve recall completion rates; and (3) additional actions selected stakeholders have identified that the federal government could take to improve recall completion rates. For the purpose of this report, we use "recalls" to refer to safety defect recalls, which are initiated when a defect in a vehicle creates an unreasonable safety risk. While recalls also extend to vehicle equipment, we have limited our scope to recalls in passenger vehicles, not equipment.[1]

To address these objectives, we interviewed NHTSA officials. We also selected and interviewed 27 entities—eight manufacturers and 19 other entities (see table 1). We selected and interviewed eight manufacturers about their analyses of vehicle recall completion data and other research to identify factors that influence vehicle recall completion rates. We selected manufacturers with a variation in the number of vehicles recalled in 2022, involvement in the Takata air bag recall, use of over-the-air updates to remedy defects, and vehicle sales in 2022, among other factors. The other entities we interviewed included industry associations and safety groups we selected based on a variety of factors, such as that they were interviewed for previous GAO reports, recommended by other interviewees, and identified through the literature review. We also selected industry associations and safety groups that surveyed vehicle owners or reported on factors affecting whether vehicle owners seek repairs for recalls. The other entities also include entities with which NHTSA or manufacturers collaborated to improve completion rates, as described below.

Table 1: Interviewees

Advocates for Highway and Auto Safety
Alliance for Automotive Innovation
American Car Rental Association
American Property Casualty Insurance Association
BMW of North America, LLC

[1]Passenger vehicles include cars, pickup trucks, sport utility vehicles, large passenger vans, and minivans, but exclude other vehicles, such as motorcycles, recreational vehicles, and commercial trucks.

California Department of Motor Vehicles
CARFAX
CCC Intelligent Solutions
Center for Auto Safety
Consumer Reports
Consumers for Auto Reliability and Safety
E-ZPass
Ford Motor Company
General Motors, LLC
General Services Administration
Kia America, Inc.
Maryland Motor Vehicle Administration
Mazda North America Operations
National Association of Mutual Insurance Companies
National Automobile Dealers Association
National Independent Automobile Dealers Association
National Safety Council
Ohio Department of Public Safety
Stellantis
Tesla Motors, Inc.
Texas Department of Public Safety
Toyota Motor Engineering and Manufacturing

Source: GAO. | GAO-24-106356

To determine the primary factors that influence vehicle repairs in response to recalls, we conducted a literature review to identify reports and studies that explore why vehicle owners do or do not repair vehicles subject to recalls. Specifically, we conducted searches that spanned literature published in the last 10 years—including scholarly articles, industry articles, and government reports—by searching databases such as ProQuest, EBSCO, Scopus, Dialog, and the Transportation Research Information Database. We reviewed the relevant reports and studies to identify factors that influence vehicle repairs in response to recalls.

In addition, we interviewed NHTSA officials and the 27 selected entities about the primary factors that influence vehicle repairs in response to recalls. We summarized the primary factors that literature, as well as NHTSA officials and interviewed entities identified that influence vehicle

repairs in response to recalls, including any changes to these factors in the past 5 years.[2] See table 2.

Table 2: Factors That Influence Vehicle Owners to Respond to Safety Defect Recalls, according to Literature Review and Interviewees

Primary factor	Number of times primary factor was mentioned in relevant literature[a]	Number of times primary factor was mentioned by interviewees[b]	Total number of times primary factor was mentioned in literature and by interviewees
Convenience	5	24	29
Owner perception of safety risk	5	13	18
Owner awareness	0	16	16
Parts availability	3	11	14
Vehicle age	4	10	14
Quality of owner contact information	3	8	11
Whether or not owner has relationship with dealership	3	8	11
Quality of recall communications	3	5	8
Upselling at dealership	0	8	8

Sources: GAO analysis of literature and interviews with NHTSA officials and other entities. | GAO-24-106356

[a]Once GAO identified relevant literature from the previous 10 years, reports and studies were grouped into five groups of literature based on similarities between the reports and studies, such as authorship. The factors were then assigned either a "1" or "0" to indicate whether they appeared in the list of factors for each of the five literature groups. A "1" indicated that it appeared in the group factors and "0" that it did not. All the "1"'s for each factor were then added across each literature group.

[b]GAO interviewed officials from the National Highway Traffic Safety Administration (NHTSA) and 27 entities and asked them all what primary factors influence vehicle repairs in response to vehicle safety defect recalls.

To determine the extent to which NHTSA has sought to identify the factors that influence vehicle repairs in response to recalls, we reviewed NHTSA research documentation and reports to Congress, and interviewed NHTSA officials. We compared NHTSA's efforts to identify these factors against the agency's objective to provide consumers with reliable, timely, and accurate traffic safety information. We also compared their efforts with a relevant enterprise risk management practice that involves examining strategic objectives by regularly considering how

[2]We last examined this issue in-depth and conducted focus groups in 2017. GAO, *Auto Recalls: NHTSA Should Take Steps to Further Improve the Usability of Its Website*, GAO-18-127 (Washington, D.C.: Dec. 4, 2017).

uncertainties, both risks and opportunities, could affect the agency's ability to achieve its mission.[3]

To determine how NHTSA has identified lessons learned from its and manufacturers' collaborative efforts to improve recall completion rates, we reviewed documentation and interviewed NHTSA officials and 27 selected entities (see table 1), including those related to the agency's and selected manufacturers' collaborations. We defined a collaboration as any formal or informal collaborative effort NHTSA or manufacturers engaged in with another entity in the last 5 years to improve completion rates that is voluntary for at least one party. We interviewed NHTSA officials about what the agency has learned from past collaborations and how the agency has incorporated the lessons learned from its own and manufacturers' collaborations to improve completion rates. We interviewed selected third parties with whom NHTSA had collaborated and with whom the selected manufacturers have collaborated to gather their perspectives. These third parties included state departments of motor vehicles (DMV), large vehicle fleet managers, and associations representing insurers and large vehicle fleet owners.[4] We selected these third parties based on the document review and recommendations from stakeholders we interviewed.

For each collaboration, we reviewed available NHTSA and industry documentation and asked interviewees about the collaboration's planning, communication, desired outcomes, and results, if available. We also reviewed available NHTSA documentation to understand how the agency (1) tracks collaborations, their results, and any lessons learned and (2) incorporates any lessons learned from its own and manufacturer collaborations into its efforts to oversee completion rates. We also examined reports on the collaborations manufacturers used to reach vehicle owners and improve completion rates, such as reports about the Takata recall, to understand the outcomes of manufacturer collaborations. We analyzed the responses from the interviews to identify common

[3]See GAO, *Enterprise Risk Management: Selected Agencies' Experiences Illustrate Good Practices in Managing Risk*, GAO-17-63 (Washington D.C.: Dec. 1, 2016) and U.S. Department of Transportation, National Highway Traffic Safety Administration, *The Road Ahead: National Highway Traffic Safety Administration Strategic Plan 2016-2020* (Oct. 2016).

[4]For NHTSA, the selected third parties include entities involved in the three collaborations identified by the agency: the General Services Administration, state DMVs (4), and vehicle manufacturers affected by the Takata air bag recall (7). For manufacturers, the selected third parties include the National Safety Council, E-ZPass, American Car Rental Association, and CCC Intelligent Solutions, as well as other manufacturers.

themes and practices. We also assessed NHTSA's efforts to identify lessons learned from collaborations and compared these efforts against GAO-identified key practices of a lessons-learned process.[5] We determined the extent to which NHTSA's efforts aligned with each key practice as follows: (1) Fully: NHTSA's efforts for all of its collaborations and manufacturers' collaborations aligned with the practice; (2) Partially: NHTSA's efforts for some of its and manufacturers' collaborations aligned with the practice; or (3) Not: NHTSA's efforts for neither its collaborations nor manufacturers' collaborations aligned with the practice.

To determine possible additional actions the federal government could take to improve vehicle recall completion rates, we conducted a modified two-stage Delphi survey of knowledgeable stakeholders, which consisted of two web-based questionnaires. We selected 65 knowledgeable stakeholders who could provide a range of perspectives on vehicle recalls. These stakeholders fit into four broad categories: federal, state, industry, and consumer protection and safety. See table 3. We identified stakeholders, such as industry associations and consumer advocacy groups, by reviewing previous GAO reports, background research, and interviews for other parts of this report, as described above.[6]

We selected stakeholders with federal experience related to NHTSA based on whether they had conducted work specific to vehicle recalls or are responsible for other types of recalls, among other factors. We selected state DMVs based on whether they have taken steps to notify vehicle owners about recalls, the number of vehicles with open recalls in the state, population, and geographic region. Within industry, we selected manufacturers based on average completion rate and the number of their vehicles' air bags affected by the Takata recall. We selected other stakeholders based on factors such as whether they had been recommended to us during an interview, had testified before Congress on vehicle recalls, or conducted work specifically related to vehicle recalls.

[5]GAO identified six lessons-learned key practices in GAO, *Telecommunications: GSA Needs to Share and Prioritize Lessons Learned to Avoid Future Transition Delays,* GAO-14-63 (Washington, D.C.: Dec. 5, 2013).

[6]We selected stakeholders for the two-stage survey independently of selecting vehicle manufacturers and other entities to interview to inform the other two study objectives. In some cases, an entity was selected to receive the survey and for interview.

Table 3: Survey Stakeholder Selection

Stakeholder category	Number of stakeholders selected
Federal	14
State	15
Industry	24
Consumer Protection and Safety	12

Source: GAO. | GAO-24-106356

The first stage of the survey consisted of five open-ended questions to solicit potential actions the federal government could take to improve vehicle recall completion rates (see app. III). We received 40 responses for a 62 percent response rate. We conducted a content analysis of the responses to identify themes, which resulted in a list of 25 actions the federal government could take to improve completion rates (see app. II). Because the content analysis relied on the judgment of coders to determine whether qualitative data reflect particular actions, we took several steps to ensure that this judgment remained objective, accurate, and consistent. These steps included using two independent coders to ensure consistent judgment of the actions. The independent coders were in general agreement on the actions. Based on this high level of agreement between coders, as well as a review by a third independent analyst, we are confident that our content analysis represents an objective, accurate, and consistent assignment of the coded actions.

The second stage of the survey consisted primarily of close-ended questions asking the knowledgeable stakeholders to evaluate the 25 actions identified through the first stage of the survey (see app. III). The second-stage questionnaire asked the knowledgeable stakeholders to rate the actions in terms of effectiveness at helping to improve completion rates and to select five actions for the federal government to prioritize. This questionnaire also included several open-ended questions that asked the knowledgeable stakeholders to elaborate on their responses. We administered both stages of the survey to the same group of knowledgeable stakeholders, except for eight stakeholders who declined to participate.

We received 36 responses to the second stage of the survey for a 63 percent response rate. We analyzed the responses to identify the top five actions knowledgeable stakeholders suggested the federal government prioritize. To identify the strengths and limitations of the top five actions, we considered knowledgeable stakeholders' written responses to the

open-ended questions in the survey, as well as interviews with selected entities and relevant literature.[7] We also asked NHTSA officials about their perspectives on the strengths and limitations of the top five actions stakeholders suggested the federal government prioritize.

Because this was not a sample survey, it had no sampling errors. However, the practical difficulties of conducting any survey can introduce non-sampling errors, such as difficulties interpreting a particular question, which can introduce unwanted variability into the survey results. We took steps to minimize non-sampling errors by pretesting each stage of the survey with three knowledgeable stakeholders. We conducted pretests to help ensure that the questions were clear, to obtain any suggestions for clarification, and to minimize the burden the questionnaires placed on respondents. An independent survey specialist within GAO also reviewed a draft of the second-stage questionnaire prior to its administration. We made appropriate revisions to the content and format of the questionnaires based on the pretests and independent review.

The first stage of the survey was administered from April 2023 to May 2023. The second stage of the survey was administered from July 2023 to August 2023. To increase the response rate, we followed up with emails and personal phone calls to the knowledgeable stakeholders to encourage participation in our survey. The information and perspectives that we obtained from the survey may not be generalized to all knowledgeable stakeholders that have an interest or knowledge of vehicle recalls.

We conducted this performance audit from November 2022 to January 2024 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.

[7]For objective 3, we gathered information on the strengths and limitations of the top five actions identified by stakeholders through open-ended questions asked as part of the survey and as part of our interviews with entities that informed the entire report. In total, 42 stakeholders responded to the first- or second-stage survey, including eight vehicle manufacturers who responded to both stages of the survey. We also interviewed 27 entities, as previously described.

Appendix II: Stakeholder Responses to Survey on Additional Federal Actions to Improve Recall Completion Rates

As part of our modified two-stage Delphi survey, we first asked a nongeneralizable sample of 65 stakeholders to suggest actions the federal government could take to improve the completion rates of vehicle recalls. Among the 65 stakeholders to whom we sent the first stage of the survey, eight declined to participate. We received 40 responses to the first stage of the survey, for a response rate of 62 percent.[1] Stakeholders responding to the first stage of the survey identified 25 actions the federal government could take to help improve completion rates. For additional information on the stakeholder selection and survey, see appendix I. For the questions included in the first stage of the survey, see appendix III.

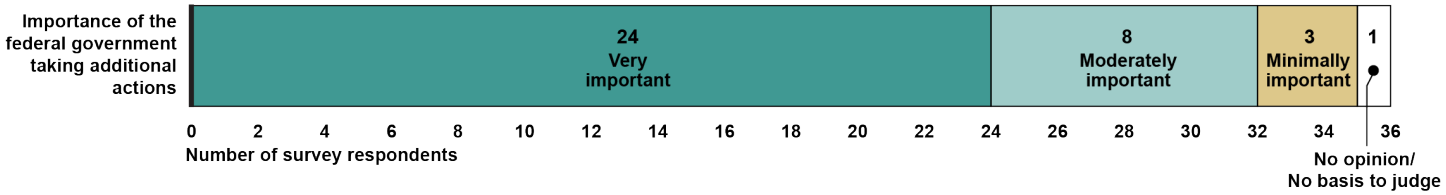
In the second stage of the survey, we asked stakeholders from the same group their thoughts on the 25 actions the federal government could take to improve completion rates. Among the 57 stakeholders to whom we sent the second stage of the survey, one declined to participate. We received 36 responses to the second stage of the survey, for a response rate of 63 percent.[2] We asked stakeholders to: rate how important they think it is for the federal government to take additional actions to improve completion rates (see fig. 5); rate how effective they think each of the 25 actions would be at helping improve completion rates (see fig. 6); and select five actions they think the federal government should prioritize (see fig. 7). The survey did not ask stakeholders to consider feasibility or practicality of the actions. Figure 6 below lists the 25 actions, beginning with the action stakeholders rated most effective at helping to improve completion rates and ending with the action rated least effective.[3] Figure 7 also lists the actions in descending order, starting with the action selected by the most number of stakeholders as a priority. For the questions included in the second stage of the survey, see appendix III.

[1]We did include the stakeholders who declined to participate in the first stage of the survey when calculating the response rate, but we removed those eight stakeholders from the sample for the second stage of the survey.

[2]We did include the stakeholder who declined to participate in the second stage of the survey when calculating the response rate.

[3]We consider stakeholders rating an action as effective if they responded that an action would be “very effective” or “moderately effective.”

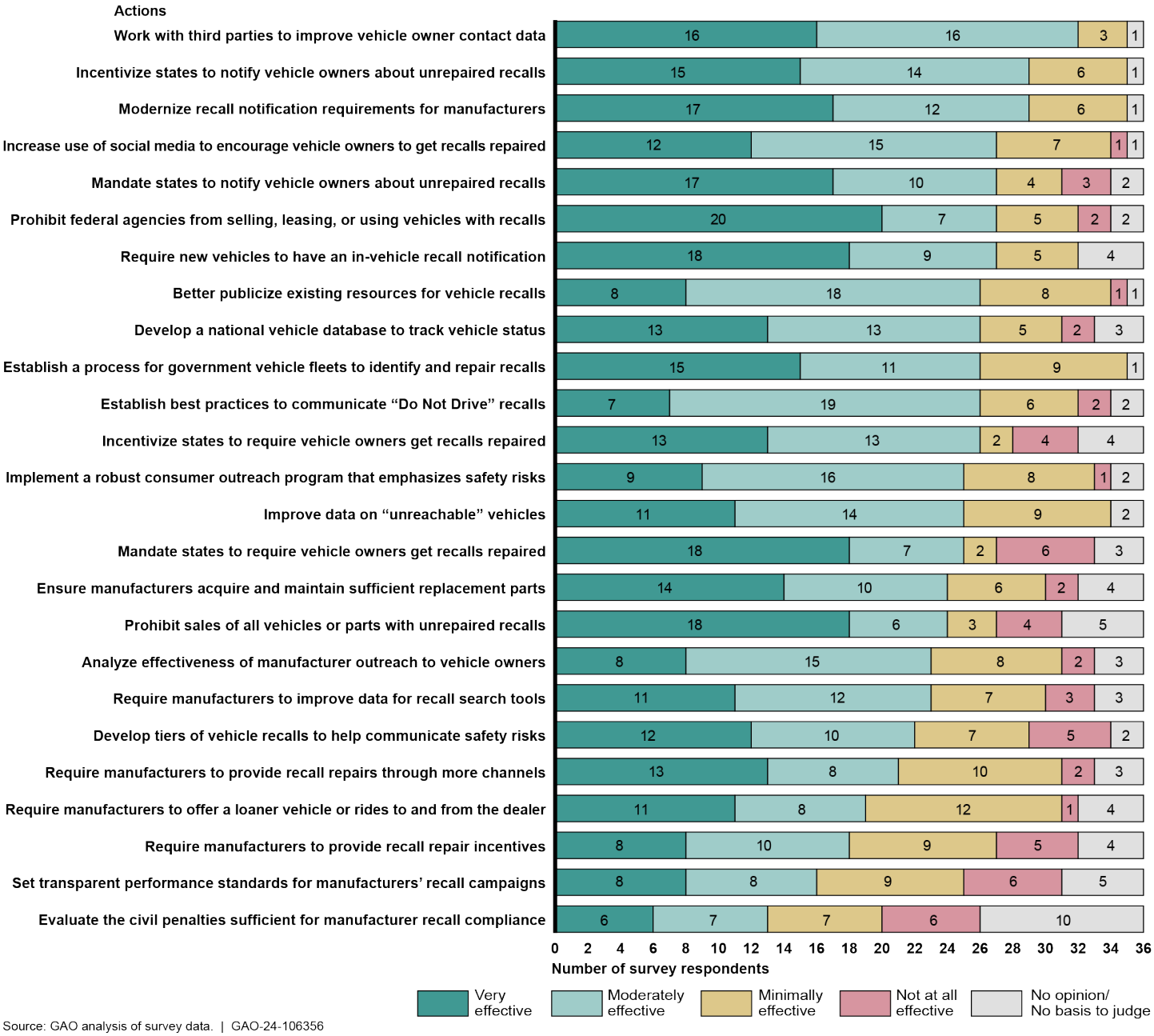
Figure 5: Selected Stakeholder Views on the Importance of the Federal Government Taking Additional Actions to Improve Completion Rates of Vehicle Recalls



Source: GAO analysis of survey data. | GAO-24-106356

Note: None of the 36 of 57 stakeholders responding to the second stage of the survey selected “not at all important” in response to the question about how important they think it is for the federal government to take additional actions to improve completion rates.

Figure 6: Selected Stakeholder Views on the Effectiveness of the Actions the Federal Government Could Take to Help Improve Completion Rates of Vehicle Recalls



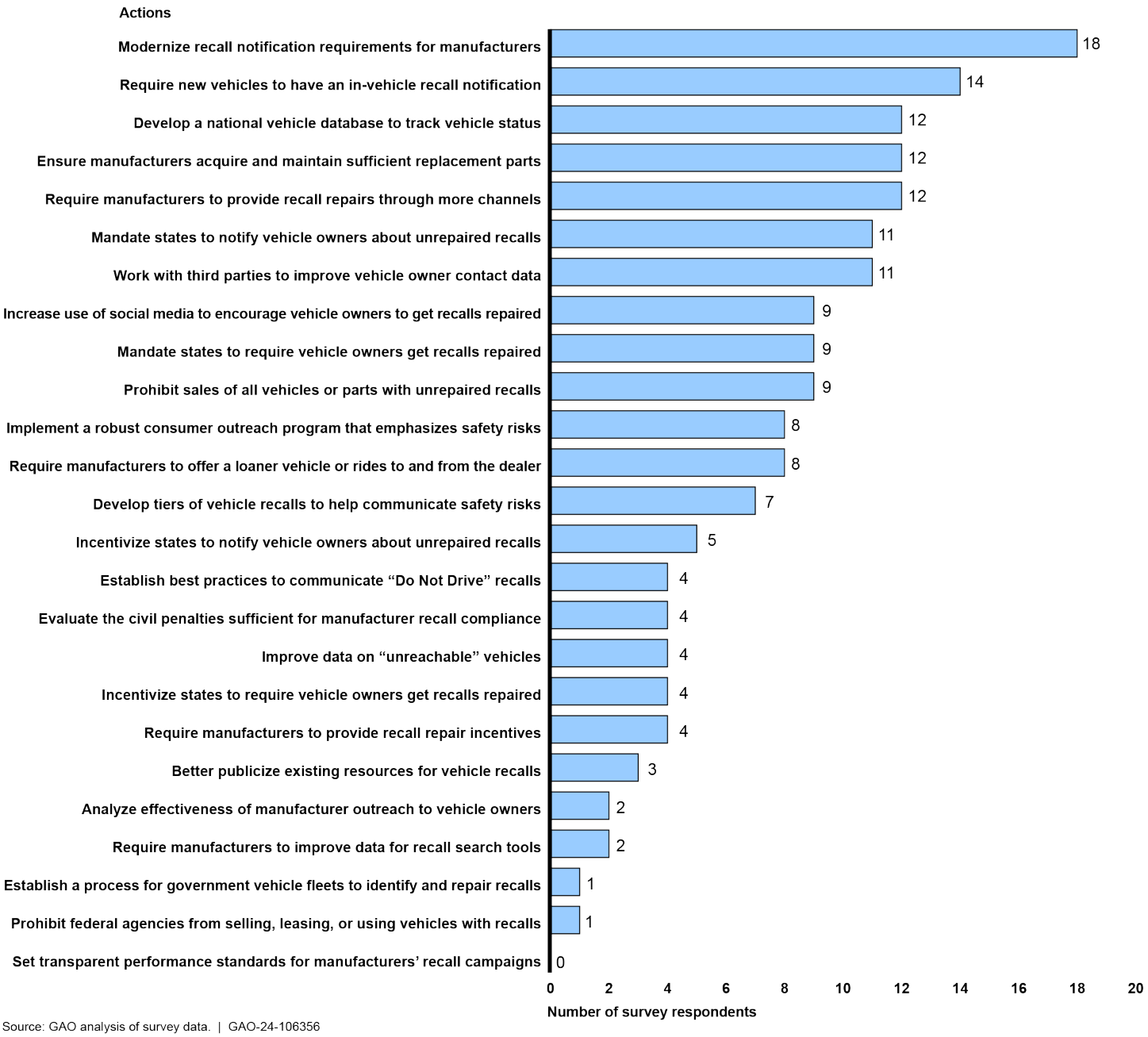
Source: GAO analysis of survey data. | GAO-24-106356

Notes: The second stage of the survey asked stakeholders to rate each of the 25 actions on how effective they think the action would be at helping to improve completion rates of vehicle recalls.

The actions in the figure are listed in rank order from most to least effective as determined by the 36 of 57 stakeholders who responded to the second stage of the survey. We consider stakeholders rating an action as effective if they selected “very effective” or “moderately effective” for an action, so the actions are ranked based on the combined “very effective” and “moderately effective” ratings.

See appendix III for the exact wording of the actions as they appeared in the second stage of the survey.

Figure 7: Selected Stakeholder Views on the Actions They Think the Federal Government Should Prioritize to Help Improve Completion Rates of Vehicle Recalls



Source: GAO analysis of survey data. | GAO-24-106356

Notes: The second stage of the survey asked stakeholders to select up to five actions they think the federal government should prioritize to help improve completion rates of vehicle recalls.

While 36 of 57 stakeholders responded to the second stage of the survey, not all stakeholders selected five actions in response to this question.

See appendix III for the exact wording of the actions as they appeared in the second stage of the survey.

Appendix III: Modified Two-Stage Delphi Survey

See below for the questions included in each stage of the survey. We have reproduced the questions, but not the introduction and background information included in each questionnaire.

First-Stage Questionnaire

Q1. In regard to **oversight of vehicle manufacturers**, what actions, if any, do you suggest NHTSA take to improve the completion rates for vehicle recalls?

Q2. In regard to **consumer education and outreach,** what actions, if any, do you suggest NHTSA take to improve the completion rates for vehicle recalls?

Q3. In regard to **research and data**, what actions, if any, do you suggest NHTSA take to improve the completion rates for vehicle recalls?

Q4. What **other** actions, if any, do you suggest NHTSA take to improve the completion rates for vehicle recalls?

Q5. What actions, if any, do you suggest **Congress** take to improve the completion rates for vehicle recalls?

Second-Stage Questionnaire

Q1. How important do you think it is for the federal government to take additional actions to improve completion rates of vehicle recalls?

- Very important
- Moderately important
- Minimally important
- Not at all important
- No opinion/No basis to judge

Q2. Below is a list of possible actions related to **oversight of manufacturers** that the federal government could take to help improve completion rates of vehicle recalls. Please rate how **effective** you think each action would be at helping improve completion rates of vehicle recalls.

	Very effective	Moderately effective	Minimally effective	Not at all effective	No opinion/ No basis to judge
A. Modernize recall notification requirements for manufacturers beyond first-class mail (e.g., allowing notification via email and text)	○	○	○	○	○
B. Require new vehicles to have an in-vehicle notification that would alert the driver of recalls	○	○	○	○	○
C. Require manufacturers to provide recall repairs through more channels (e.g., mobile repair, independent repair shops, over-the-air updates, and temporary repair facilities)	○	○	○	○	○
D. Require manufacturers to provide incentives to encourage vehicle owners to get recalls repaired (e.g., gift cards and coupons)	○	○	○	○	○
E. Require manufacturers to offer a loaner vehicle or rides to and from the dealer when vehicle owners are getting their recalls repaired	○	○	○	○	○
F. Ensure manufacturers acquire and maintain sufficient replacement parts for recall repairs	○	○	○	○	○
G. Set transparent performance standards for manufacturers' recall campaigns to improve recall completion rates	○	○	○	○	○

Q3. Below is a list of possible actions related to **consumer education and outreach** that the federal government could take to help improve completion rates of vehicle recalls. Please rate how **effective** you think each action would be at helping improve completion rates of vehicle recalls.

	Very effective	Moderately effective	Minimally effective	Not at all effective	No opinion/ No basis to judge
H. Implement a robust consumer outreach program that emphasizes the safety risks of unrepaired recalls	○	○	○	○	○
I. Better publicize existing tools and resources for vehicle recalls (e.g., VIN search tools, NHTSA complaint hotline)	○	○	○	○	○
J. Increase use of social media to encourage vehicle owners to get recalls repaired	○	○	○	○	○
K. Develop and communicate tiers of vehicle recalls (e.g., based on risk or vehicle use) to help communicate the safety risks associated with recalls	○	○	○	○	○
L. Establish best practices for manufacturers and NHTSA to communicate “Do Not Drive” recalls to consumers (e.g., increasing notifications)	○	○	○	○	○

Q4. Below is a list of possible actions related to **research and data** that the federal government could take to help improve completion rates of vehicle recalls. Please rate how effective you think each action would be at helping improve completion rates of vehicle recalls.

	Very effective	Moderately effective	Minimally effective	Not at all effective	No opinion/ No basis to judge
M. Analyze the effectiveness of manufacturer outreach to vehicle owners affected by recalls (e.g., the extent to which manufacturers use language in their communications that is easily understood by the public)	○	○	○	○	○
N. Evaluate the level of civil penalties sufficient for manufacturers to comply with recall related requirements	○	○	○	○	○
O. Work with third parties that have access to current and comprehensive data on vehicle owners (e.g., insurers, state DMVs) to improve the data that manufacturers use to contact vehicle owners about recalls	○	○	○	○	○
P. Require manufacturers to improve recall data for VIN search tools (e.g., update recall information more frequently, report that recalls were repaired)	○	○	○	○	○
Q. Develop a national vehicle database that could track the status of vehicles in the U.S. (e.g., registered, unregistered, inoperable, destroyed)	○	○	○	○	○
R. Improve data on “unreachable” vehicles (e.g., scrapped, stolen, exported vehicles) to calculate more accurate vehicle recall completion rates	○	○	○	○	○

Q5. Below is a list of possible actions related **to state DMVs** that the federal government could take to help improve completion rates of vehicle recalls. Please rate how effective you think each action would be at helping improve completion rates of vehicle recalls.

	Very effective	Moderately effective	Minimally effective	Not at all effective	No opinion/ No basis to judge
S. Incentivize state DMVs to notify vehicle owners about unrepaired recalls on their vehicles (e.g., through the existing grant program or other means)	○	○	○	○	○
T. Mandate state DMVs to notify vehicle owners about unrepaired recalls on their vehicles (e.g., at the time of vehicle registration or inspection)	○	○	○	○	○
U. Incentivize state DMVs to require vehicle owners get recalls repaired (e.g., before registration, to pass inspection)	○	○	○	○	○
V. Mandate state DMVs to require vehicle owners get recalls repaired (e.g., before registration, to pass inspection)	○	○	○	○	○

Q6. Below is a list of **other possible actions** the federal government could take to help improve completion rates of vehicle recalls. Please rate how effective you think each action would be at helping improve completion rates of vehicle recalls.

	Very effective	Moderately effective	Minimally effective	Not at all effective	No opinion/ No basis to judge
W. Establish a process for federal, state, and municipal vehicle fleets to more easily identify recalls and get vehicle recalls repaired	○	○	○	○	○
X. Prohibit federal agencies from selling, leasing, or using vehicles with unrepaired recalls	○	○	○	○	○
Y. Prohibit the sale of all vehicles or affected parts with unrepaired recalls, including used vehicles and salvaged parts.	○	○	○	○	○

Q7. For any of the actions listed in questions 2 through 6 in which you selected “Not at all effective”, please briefly explain why the action would not be effective.

Q8. Among the actions listed in questions 2 through 6, which actions, if any, do you **not recommend** the federal government take to help improve completion rates of vehicle recalls?

Q9. Optional: If you would like to further expand on any of your responses to questions 2 through 6, please do so below:

Q10. Among the actions listed below, which **five actions** do you think the federal government should prioritize to help improve completion rates of vehicle recalls? [Select up to 5 of the actions.]

- A. Modernize recall notification requirements for manufacturers beyond first-class mail (e.g., allowing notification via email and text)
- B. Require new vehicles to have an in-vehicle notification that would alert the driver of recalls
- C. Require manufacturers to provide recall repairs through more channels (e.g., mobile repair, independent repair shops, over-the-air updates, and temporary repair facilities)

- D. Require manufacturers to provide incentives to encourage vehicle owners to get recalls repaired (e.g., gift cards and coupons)
- E. Require manufacturers to offer a loaner vehicle or rides to and from the dealer when vehicle owners are getting their recalls repaired
- F. Ensure manufacturers acquire and maintain sufficient replacement parts for recall repairs
- G. Set transparent performance standards for manufacturers' recall campaigns to improve recall completion rates
- H. Implement a robust consumer outreach program that emphasizes the safety risks of unrepaired recalls
- I. Better publicize existing tools and resources for vehicle recalls (e.g., VIN search tools, NHTSA complaint hotline)
- J. Increase use of social media to encourage vehicle owners to get recalls repaired
- K. Develop and communicate tiers of vehicle recalls (e.g., based on risk or vehicle use) to help communicate the safety risks associated with recalls
- L. Establish best practices for manufacturers and NHTSA to communicate "Do Not Drive" recalls to consumers (e.g., increasing notifications)
- M. Analyze the effectiveness of manufacturer outreach to vehicle owners affected by recalls (e.g., the extent to which manufacturers use language in their communications that is easily understood by the public)
- N. Evaluate the level of civil penalties sufficient for manufacturers to comply with recall related requirements
- O. Work with third parties that have access to current and comprehensive data on vehicle owners (e.g., insurers, state DMVs) to improve the data that manufacturers use to contact vehicle owners about recalls
- P. Require manufacturers to improve recall data for VIN search tools (e.g., update recall information more frequently, report that recalls were repaired)
- Q. Develop a national vehicle database that could track the status of vehicles in the U.S. (e.g., registered, unregistered, inoperable, destroyed)

- R. Improve data on “unreachable” vehicles (e.g., scrapped, stolen, exported vehicles) to calculate more accurate vehicle recall completion rates
- S. Incentivize state DMVs to notify vehicle owners about unrepaired recalls on their vehicles (e.g., through the existing grant program or other means)
- T. Mandate state DMVs to notify vehicle owners about unrepaired recalls on their vehicles (e.g., at the time of vehicle registration or inspection)
- U. Incentivize state DMVs to require vehicle owners get recalls repaired (e.g., before registration, to pass inspection)
- V. Mandate state DMVs to require vehicle owners get recalls repaired (e.g., before registration, to pass inspection)
- W. Establish a process for federal, state, and municipal vehicle fleets to more easily identify recalls and get vehicle recalls repaired
- X. Prohibit federal agencies from selling, leasing, or using vehicles with unrepaired recalls
- Y. Prohibit the sale of all vehicles or affected parts with unrepaired recalls, including used vehicles and salvaged parts

Q11. Optional: If you would like to expand on any of your above responses, please do so below:

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

December 12, 2023

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

Dear Ms. Repko:

The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries, and reduce the economic impacts of crashes occurring on the Nation's roadways. NHTSA's Office of Defects Investigation administers the Agency's safety recall program, including the monitoring and verification of recall notifications and remedies and providing accurate and timely public recall information.

NHTSA and its Office of Defects Investigation is firmly committed to a continuous enhancement of the Agency's recall program. Upon review of the GAO's draft report, NHTSA concurs with GAO's two recommendations to (1) develop a plan for regularly conducting research to identify the factors that influence vehicle remedies in response to recalls, and (2) more fully implement a lessons-learned process to identify lessons from NHTSA's and manufacturers' collaborative efforts with third parties that could help to improve recall completion rates. We will provide a detailed response to these recommendations within 180 days of the final report's issuance

We appreciate the opportunity to offer additional perspective on the draft report. Please contact Gary Middleton, Director of Audit Relations and Program Improvement, at (202) 366-6512 with any questions or if GAO would like to obtain additional details about these comments.

Sincerely,

Philip A. McNamara
Assistant Secretary for Administration

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Elizabeth Repko at (202) 512-2834 or repkoe@gao.gov

Staff Acknowledgments

In addition to the contact named above, Joanie Lofgren (Assistant Director); Marcia Fernandez (Analyst-in-Charge); Emily Crofford; Sarah Green; Richard Jorgensen; Fritz Manzano; Josh Ormond; Amy Rosewarne; Kelly Rubin; Ryan Sipple; Anna Beth Smith; Pamela Snedden; Andrew Stavisky; and Alicia Wilson made key contributions to this report.

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