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Comptroller General  
of the United States

April 23, 2020

The Honorable Elaine L. Chao  
Secretary  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

**Priority Open Recommendations: U.S. Department of Transportation**

Dear Madam Secretary:

The purpose of this letter is to provide an update on the overall status of the U.S. Department of Transportation's (DOT) implementation of GAO's recommendations and to call your personal attention to areas where open recommendations should be given high priority.<sup>1</sup> In November 2019, we reported that on a government-wide basis, 77 percent of our recommendations made 4 years ago were implemented.<sup>2</sup> DOT's recommendation implementation rate was 83 percent. As of March 2020, DOT had 197 open recommendations. Fully implementing these open recommendations should significantly improve DOT's operations.

Since our April 2019 letter, DOT has implemented 8 of our 16 open priority recommendations. This work has addressed concerns related to aviation cybersecurity by strengthening security controls, improving the process for testing such security controls for the satellite navigation and automation based air traffic control (ATC) system, and for addressing security weaknesses. Additionally, DOT has taken steps to improve oversight of federal awards; such oversight will help in addressing the high-risk area of improving funding for surface transportation.

We ask your continued attention to the 8 remaining priority recommendations identified in our 2019 letter. We are adding 8 additional priority recommendations this year related to airport terminal area safety, oversight of new unmanned aircraft system technologies, DOT oversight of the air ambulance industry, Federal Highway Administration's (FHWA) accountability over project decisions, and improvements to DOT's cybersecurity infrastructure. This brings the total number of priority recommendations to 16. (See the enclosure for the list of these recommendations.) The following 16 priority recommendations fall into 7 areas.

**Funding surface transportation.** As we discuss below, funding surface transportation is among the highest risks facing the government. We have identified two priority

<sup>1</sup> Priority recommendations are those that GAO believes warrant priority attention from heads of key departments or agencies. They are highlighted because, upon implementation, they may significantly improve government operation, for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a High Risk or duplication issue.

<sup>2</sup> GAO, *Performance and Accountability Report Fiscal Year 2019*. [GAO-20-1SP](#) (Washington, D.C.: Nov 19, 2019)

recommendations central to maximizing resources and improving performance that have carried over from the 2019 DOT priority recommendation letter.

First, we recommended in December 2016 that DOT issue a directive governing department-wide and modal administration of discretionary grant programs. That directive includes requirements to, among other things, document key decisions and align the grant programs' policy priorities with the evaluation process. Since 2011, we have found challenges with implementation of discretionary grant programs by DOT and its modal administrations, including problems documenting key evaluation and project selection decisions, most recently in June 2019.

In March 2019, DOT issued a memo directing secretarial offices and operating administrations involved in awarding discretionary grants to implement our recommendations and to include them in their policies and procedures. As we reported in June 2019, it is unclear, due to a number of issues, how this action will address our recommendation. For example, we found that while the memo repeated our recommendation, DOT did not take steps to ensure that the various affected offices consistently interpret and implement the recommendation.

DOT officials told us that they wanted to provide the affected offices flexibility to implement the recommendation, but that the Department would assess the need for additional guidance based on revisions to its *Financial Assistance Guidance Manual*. DOT completed these revisions effective January 2020 and all affected offices are expected to complete developing their policies and procedures by May 2020. We will continue to monitor the Department's actions and assess the extent to which they address our recommendation. Given the long-standing nature of the issues we identified, we have also suggested that Congress consider including in the next reauthorization bill for surface transportation language that would require DOT to develop and implement transparency measures for its discretionary grant programs.<sup>3</sup>

Second, we recommended in September 2014 that DOT include in its National Freight Strategic Plan, which is required by law, a written statement articulating the federal role, objectives, and goals in mitigating local congestion caused by national freight movements.<sup>4</sup> As we reported in our April 2019 DOT priority recommendation letter, DOT stated that it planned to release a final National Freight Strategic Plan in 2019. However, as of April 2020, DOT had not issued the National Freight Strategic Plan, and officials stated that they are planning to issue this plan in 2020.

**Addressing Safety Risks.** Six recommendations are critical to addressing transportation safety risks.

First, revising the methodology used to compare safety performance across motor carriers would help ensure that Federal Motor Carrier Safety Administration (FMCSA) can better identify and intervene with carriers at highest risk for crashing. We recommended in February 2014 that DOT revise the Safety Measurement System (SMS) methodology to better account for data accuracy and sufficiency limitations in drawing comparisons of safety performance information across carriers.

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<sup>3</sup> GAO, *Discretionary Transportation Grants: Actions Needed to Improve Consistency and Transparency in DOT's Application Evaluations*. [GAO-19-541](#) (Washington, D.C.: July 26, 2019).

<sup>4</sup> 49 U.S.C. § 70102

The Department does not agree with our conclusions, and has requested that we close the recommendation as not implemented. We continue to believe implementing this recommendation will improve the reliability of data used to assess carriers that pose the greatest safety risks. We note that the National Academies of Sciences conducted a federally mandated evaluation of SMS, including the system's data accuracy and sufficiency, and in 2017 made several recommendations to improve FMCSA's ability to identify high-risk carriers. In June 2018, FMCSA issued an action plan in response to the National Academies of Sciences' recommendations and is developing data improvements and a new methodology, as described in the action plan, to better identify unsafe motor carriers. FMCSA has recently developed and tested a new methodological approach that could potentially account for the limitations we identified. While FMCSA has not yet committed to deploying the new methodology, officials said they hope to do so some time in 2020. Given the focus of the National Academies of Sciences' recommendations, we will review any SMS methodology revisions FMCSA implements to see the extent to which they also address our findings and recommendations.

Second, we recommended in November 2017 that DOT develop and implement a comprehensive plan to better manage departmental initiatives related to automated vehicles. Automated cars and light-duty trucks—from vehicles already on the road equipped with driver assistance technologies to fully driverless cars still in development—pose safety and infrastructure challenges. This plan should include leading principles such as goals, priorities, steps to achieve results, milestones, and performance measures to track progress. In July 2018, DOT released an initial plan related to this recommendation in response to congressional direction.<sup>5</sup> This plan outlines DOT's overall approach for managing policy and research issues related to automated vehicles across DOT's modal administrations. In January 2020, DOT and the National Science and Technology Council released *Ensuring American Leadership in Automated Vehicle Technologies (AV 4.0)*, building on prior policies that DOT has identified as actions regarding its implementation of GAO's recommendation. DOT has yet to identify, for example, performance measures to monitor and gauge results. Without a comprehensive plan, it continues to be unclear whether DOT is adequately tackling automated vehicle challenges.

Third, we made a recommendation in March 2018 that is critical to successfully implementing FTA's additional authorities and responsibilities over rail transit that were enacted in 2012.<sup>6</sup> We recommended that FTA develop and communicate a method for how it will monitor the effectiveness of state safety agencies' enforcement authorities and practices. Without such a method, FTA will lack the information needed to identify ineffective state enforcement, which risks allowing safety deficiencies to remain for long periods of time. FTA agreed and has discussed proposals with us, and we look forward to further discussions about how it is implementing the recommendation.

Fourth, we recommended in August 2019 that FAA's Runway Safety Manager should establish a plan to assess the effectiveness of all of FAA's terminal area-safety efforts, including Airport Surface Detection Equipment, Model X (ASDE-X) and the Runway Safety Program. FAA has many terminal-area safety efforts underway, but has not assessed their effectiveness. Prioritizing this recommendation will help FAA direct its resources toward activities and technologies proven to enhance safety and identify ways to strengthen those efforts. By

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<sup>5</sup> DOT released this initial plan in response to a provision in the Joint Explanatory Statement accompanying the Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 348 (2018).

<sup>6</sup> Fixing America's Surface Transportation Act (FAST Act), Pub. L. No. 112-141, § 20021, 126 Stat. 405, 709 (codified as amended at 49 U.S.C. § 5329).

assessing the effectiveness of its primary efforts, FAA may be better positioned to make decisions about how to target its limited resources within and among these efforts. As of December 2019, FAA has concurred with the recommendation, but needs to take additional steps to address the recommendation. FAA noted that it would identify actions to assess the effectiveness of all of its terminal-area safety efforts in a Runway Safety Evolution Plan, which the agency expects to complete by September 30, 2020. We will review the Runway Safety Evolution Plan when it is available.

Fifth and sixth, we made two recommendations in October 2019 that are critical to addressing FAA's oversight of unmanned aircraft systems (UAS) to reduce risks to public safety.

- FAA should develop an approach to more effectively communicate key information to local law enforcement agencies regarding their expected role with regard to small UAS safety oversight.
- FAA should identify existing or new data and information needed to evaluate the effectiveness of oversight over UAS safety and to develop a mechanism for capturing these data as needed.

These actions should help the agency adapt to an evolving UAS environment. FAA has concurred with these recommendations; we will continue to analyze and evaluate the actions the agency has taken in response.

**Improving Transparency and Communication.** We have identified two priority recommendations that are critical to improving transparency and communication for the DOT.

First, in December 2015, we made a recommendation critical to improving the U.S. aviation sector's preparedness for future communicable disease threats from abroad. We recommended that the Secretary of Transportation should work with relevant stakeholders, such as the Department of Health and Human Services (HHS), to develop a national aviation-preparedness plan for communicable disease outbreaks. Such a plan could establish a mechanism for coordination between the aviation and public health sectors and provides clear and transparent planning assumptions for a variety of types and levels of communicable disease threats.

As of April 2020, DOT has not developed a national aviation-preparedness plan to respond to communicable disease threats from abroad. DOT partially concurs with our recommendation and agrees that an aviation preparedness plan is needed, but continues to suggest that HHS and the Department of Homeland Security (DHS) have responsibility for communicable disease response and preparedness planning, respectively, and that these departments should lead any efforts to address planning for communicable disease outbreaks, including for transportation.

DOT would be in the best position to lead the effort because FAA and DOT have stronger and deeper ties to the relevant stakeholders that would be involved in such a broad effort and is responsible for overseeing the aviation sector. While the DOT and HHS may not agree on which agency should lead the development of a national aviation-preparedness plan, DOT's Office of the Secretary is the liaison to the International Civil Aviation Organization (ICAO) for Annex 9 to the Chicago Convention, an international aviation treaty. Annex 9 obligates each ICAO member state to establish a national aviation-preparedness plan for communicable disease outbreaks that pose a public health risk or public health emergency of international concern.

In the absence of a national aviation-preparedness plan, DOT officials point to ongoing efforts to engage with interagency partners at DHS and HHS, as well as industry stakeholders, to better

collaborate on communicable disease response and preparedness as they relate to civil aviation. For example, in response to the Coronavirus Disease 2019 (COVID-19) outbreak, DOT reported that it has facilitated conference calls between stakeholders, including federal agencies and aviation stakeholders, and it has collaborated with the Centers for Disease Control and Prevention (CDC) within HHS to update interim guidance for airline crews related to communicable diseases, specifically COVID-19, among other things. While these efforts are helpful, we continue to believe that DOT is in the best position to take the lead in working with its relevant stakeholders to develop a national aviation-preparedness plan, which could guide preparation for communicable diseases nationally and for individual airlines and airports, as well as establish a framework for communication and response for the next communicable disease outbreak. Such a plan should help government minimize and quickly respond to future communicable disease events and garner international cooperation in addressing pandemic issues.

Second, we recommended in July 2017 that in order to increase transparency and obtain information to better inform decisions on whether to investigate potentially unfair or deceptive practices in the air ambulance industry, the Secretary of Transportation should assess available federal and industry data and determine what further information could assist in the evaluation of future complaints or concerns regarding unfair or deceptive practices. DOT did not concur with this recommendation, noting that its analysis of whether a complaint alleges conduct that could constitute an unfair or deceptive practice is fundamentally based on the unique facts of each additional case, rather than aggregate data.

The FAA Reauthorization Act of 2018 (the Act), signed into law on October 5, 2018, directed the establishment of an Air Ambulance and Patient Billing (AAPB) Advisory Committee. The Act also required the committee to make recommendations on a variety of topics, including what additional data from air ambulance providers and other sources should be collected by DOT to improve its understanding of the industry. On September 12, 2019, DOT announced the formation of the AAPB Advisory Committee, including the appointment of 13 members. The first meeting of the AAPB Advisory Committee was held in January 2020. Pursuant to the Act, the AAPB Advisory Committee is to submit a report containing its recommendations not later than 180 days after the date of its first meeting. GAO will continue to monitor the work of the AAPB Advisory Committee related to this recommendation.

**Cybersecurity Risks.** As we discuss below, ensuring cybersecurity of the nation is another of the highest risks facing the government. Three priority recommendations will help address cybersecurity risks in aviation and workforce staffing, and improve DOT's risk management.

We recommended in February 2018 that DOT, in cooperation with the Department of Homeland Security (DHS), should take steps to consult, as appropriate with respective sector partners such as DHS and the National Institute of Standards and Technology (NIST), to develop methods for determining the level and type of cybersecurity framework adoption by entities across the transportation systems sector. DOT concurred with the recommendation. As of February 2020, the department had begun taking steps to develop methods to determine the level and type of framework adoption in the respective sectors.

Specifically, officials in the DOT's Office of Intelligence, Security, and Emergency Response, in coordination with the DHS, told us that they planned to develop and distribute a survey to the Transportation Systems sector to determine the level and type of framework adoption. DOT officials stated that the draft survey was undergoing DHS legal review and that the completion of the review and subsequent Office of Management and Budget review would determine when

the survey will be approved for distribution. While the department has ongoing initiatives, implementing our recommendations to gain a more comprehensive understanding of the framework's use by critical infrastructure sectors is essential to the success of protection efforts.

We made two recommendations in July 2019 that are critical to protecting DOT from a growing number of cyber threats to systems and data by taking a risk-based approach to cybersecurity by effectively identifying, prioritizing, and managing cyber risks. We recommended that the Secretary of Transportation should fully develop a cybersecurity risk management strategy that includes key required elements, including a statement of departmental risk tolerance and risk mitigation strategies, and a description of acceptable risk assessment methodologies. We also recommended that the Secretary of Transportation should fully establish and document a process for coordination between cybersecurity risk management and enterprise risk management functions. DOT concurred with both recommendations, and as of January 2020, estimated that it would implement them by October 1, 2020, and January 4, 2021, respectively. GAO continues to track DOT's progress in implementing these recommendations.

**Improving management of information technology (IT) workforce planning.** We recommended in November 2016 that DOT, as well as four other agencies, implement IT workforce planning practices to facilitate a more rigorous analysis of gaps between current skills and future needs, as well as develop a strategy for filling gaps. Specifically, we stated that the right mix of expertise to recognize problems early and the requisite authority to address them are contingent upon effective IT workforce planning. In October 2019, we reported the results of our evaluation of DOT's progress in implementing the eight IT workforce planning activities. Specifically, we reported that the Department had fully implemented the activity to develop competency and staffing requirements, but had not yet fully implemented the remaining seven activities, including developing a workforce planning process.<sup>7</sup>

In January 2020, the department stated that its Office of the Chief Information Officer and Office of Human Resource Management had established a workgroup to lead and conduct workforce planning activities, and had defined the strategic goals and objectives for the department's IT workforce. The department also stated that the workgroup was planning on subsequently completing additional activities, including completing a workforce analysis with a competency gap assessment, by the end of calendar year 2020, and developing strategies to address any identified gaps by the end of 2021. We will continue to monitor the department's efforts to implement our recommendation.

**Improving federal grant management.** In October 2019, we made a recommendation to the FHWA that is critical to enhancing accountability over highway emergency relief project decisions. We recommended that the Administrator of FHWA require FHWA division offices to document the rationale for classifying projects as emergency repairs, such as a description of why an emergency repair is necessary and which alternative strategies or repairs were considered, and to more clearly define the circumstances under which projects are classified as emergency repairs, including what constitutes restoration of essential traffic.

The Highway Emergency Relief Program has provided billions of dollars in assistance since 2017, including funds for emergency repairs undertaken during or immediately after a disaster to restore essential traffic that are eligible for 100 percent federal funding. DOT concurred with GAO's recommendation and FHWA stated it plans to issue a memo to its division offices to

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<sup>7</sup> GAO. *Information Technology: Agencies Need to Fully Implement Key Workforce Planning Activities*. [GAO-20-129](#). (Washington, D.C.: October 30, 2019).

implement the recommendation by June 2020. We will continue to monitor the department's efforts to implement our recommendation.

**Improving transportation readiness.** One recommendation made in September 2015 calls for the Maritime Administration (MARAD) to address the need for improved transportation readiness by fully assessing available maritime personnel resources. While MARAD has estimated that there is a shortage of qualified mariners available to crew a full and prolonged activation of the reserve fleet, its estimate does not fully account for all of the potential sources of supply. DOT agreed with this recommendation. DOT released the *National Maritime Strategy* (the Strategy) in March 2020. The Strategy lists, as one of its objectives, "develop an accurate roster of sealift qualified mariners." According to the Strategy, DOT is to have at least considered a timeline for achieving that objective by March 2021.

DOT also informed GAO that a MARAD report to Congress on "*Opportunities and Challenges to Increasing the Number of U.S. Coast Guard Credentialed Mariners*", which may address part of GAO's recommendation, is under the review of the U.S. Office of Management and Budget (OMB). Furthermore, the Mariner Survey project, which DOT planned to survey all appropriately credentialed U.S. merchant mariners in 2020, and again in 2022 to determine the number of qualified mariners willing and able to serve on short notice, has not yet been approved by OMB. Thus far, DOT has not implemented GAO's recommendation to study the potential availability of all qualified mariners.

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In March 2019 we issued our biennial update to our high-risk program, which identifies government operations with greater vulnerabilities to fraud, waste, abuse, and mismanagement or the need for transformation to address economy, efficiency, or effectiveness challenges. Our high-risk program has served to identify and help resolve serious weaknesses in areas that involve substantial resources and provide critical service to the public.

One of our high-risk areas, funding the nation's surface transportation, requires congressional action to develop a sustainable plan while also centering on DOT and the agency's ability to maximize existing resources. Several other government-wide high-risk areas including (1) ensuring cybersecurity of the nation, (2) improving management of IT acquisitions and operations, and (3) strategic human capital management, also have direct implications for DOT and its operation.<sup>8</sup> We urge your attention to the DOT and government-wide high-risk issues as they relate to DOT. Progress on high-risk issues has been possible through the concerted actions and efforts of Congress, OMB, and the leadership and staff in agencies, including within DOT.

Copies of this report are being sent to the Director of the Office of Management and Budget and appropriate congressional committees including the Committees on Appropriations, Budget, and Homeland Security and Governmental Affairs, United States Senate; and the Committees on Appropriations, Budget, and Oversight and Government Reform, House of Representatives.

In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

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<sup>8</sup> [GAO-19-157SP](#). See pages 86-90 for Funding the Nation's Surface Transportation System, pages 178-184 for Ensuring the Cybersecurity of the Nation, pages 123-127 for Improving the Management of IT Acquisitions and Operations, and pages 75-77 for Strategic Human Capital Management.

I appreciate DOT's continued commitment to these important issues. If you have any questions or would like to discuss any of the issues outlined in this letter, please do not hesitate to contact me or Dan Bertoni, Managing Director, Physical Infrastructure at [bertonid@gao.gov](mailto:bertonid@gao.gov) or 202-512-2834. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Our teams will continue to coordinate with your staff on all of the 197 open recommendations. Thank you for your attention to these matters.

Sincerely yours,

A handwritten signature in black ink, reading "Gene L. Dodaro". The signature is written in a cursive style with a large, stylized "D" and a long horizontal flourish extending to the right.

Gene L. Dodaro  
Comptroller General  
of the United States

Enclosure(s)— 1

Cc:

Russ Vought, Acting Director, OMB  
James C. Owens, Deputy Administrator, NHTSA  
Steve Dickson, Administrator, FAA  
Nicole R. Nason, Administrator, FHWA  
Jim Mullen, Deputy Administrator, FMCSA  
K. Jane Williams, Acting Administrator, FTA  
Mark H. Buzby, Administrator, MARAD  
Madeline Chulumovich, Office of the Secretary, DOT

Enclosure

## Department of Transportation (DOT) Priority Recommendations

### Funding Surface Transportation

*DOT Discretionary Grants: Problems with Hurricane Sandy Transit Grant Selection Process Highlight the Need for Additional Accountability.* [GAO-17-20](#). Washington, D.C.: December 14, 2016.

**Recommendation:** Given DOT's new discretionary grant programs and similar challenges we have found with previous DOT programs, the Secretary of Transportation should issue a directive that governs department-wide and modal administration discretionary grant programs. Such a directive should include requirements to: (1) develop a plan for evaluating project proposals in advance of issuing a notice of funding availability that defines the stages of the process, including how the process will be overseen to ensure a consistent review of applications; (2) document key decisions, including the reason for any rating changes and the officials responsible for those changes, and how high-level concerns raised during the process were addressed; and (3) align stated program purpose and policy priorities with the evaluation and selection process.

**Action needed:** DOT concurred with this recommendation. In March 2019, DOT issued a one-page memo, directing all offices and departments that administer discretionary grants to update their policies and procedures to address GAO's recommendation. Due to a number of issues, however, it is unclear how this action will address our recommendation to create clear department-wide requirements aimed at improving transparency and consistency. DOT did not take steps to ensure that the various affected offices consistently interpret and implement the recommendation. In addition, DOT did not communicate to offices how they should sufficiently document their decisions to ensure that the rationale for those decisions—including the reasons individual projects were selected or not selected—is clear. Lack of information regarding how offices should implement the memo raises significant questions about whether various offices will interpret and implement the recommendations differently, and enhances the risk that DOT will continue to lack a department-wide approach to ensure that discretionary grant programs are consistently and transparently administered. DOT officials told us they wanted to provide the affected offices flexibility to implement the recommendation, but that the Department would assess the need for additional guidance based on revisions to its Financial Assistance Guidance Manual. DOT completed these revisions effective January 2020 and all affected offices are expected to complete developing their policies and procedures by May 2020. We will continue to monitor the Department's actions and assess the extent to which they address our recommendation. As we reported in June 2019, given the long-standing nature of the issues we identified, we have also suggested that Congress consider including language in the next reauthorization bill that would require DOT to develop and implement transparency measures for its discretionary grant programs.

**High Risk Area:** [Funding the Nation's Surface Transportation System](#)

**Director:** Elizabeth Repko

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*Freight Transportation: Developing National Strategy Would Benefit from Added Focus on Community Congestion Impacts.* [GAO-14-740](#). Washington, D.C.: September 19, 2014.

**Recommendation:** Include in the National Freight Strategic Plan a written statement articulating the federal role in freight-related local congestion impacts, by clearly identifying potential objectives and goals (under the general area DOT has established for the Freight Transportation Conditions and Performance Report of reducing adverse environmental and community impacts) for mitigating local congestion caused by national freight movements and the role federal and state stakeholders could play in achieving each objective and goal, and including a written strategy for improving the availability of national data needed to quantify, assess, and establish measures on freight trends and impacts on local traffic congestion.

**Action needed:** DOT concurred with this recommendation. To fully implement this recommendation, DOT should complete and issue a National Freight Strategic Plan. As part of the development of the National Freight Strategic Plan, DOT should articulate the federal role, objectives, and goals in mitigating local congestion caused by national freight movements. DOT stated that it is continuing work on the National Freight Strategic Plan and intends to release the plan in 2020.

#### **High Risk Area:** [Funding the Nation's Surface Transportation System](#)

**Director:** Elizabeth Repko

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#### **Addressing Safety Risks**

*Federal Motor Carrier Safety: Modifying the Compliance, Safety, Accountability Program Would Improve the Ability to Identify High Risk Carriers.* [GAO-14-114](#). Washington, D.C.: February 3, 2014.

**Recommendation:** To improve the Compliance, Safety, Accountability (CSA) program, the Secretary of Transportation should direct the FMCSA Administrator to revise the SMS methodology to better account for limitations in drawing comparisons of safety performance information across carriers; in doing so, the Secretary of Transportation should direct the FMCSA Administrator to conduct a formal analysis that specifically identifies limitations in: (1) the data used to calculate SMS scores including variability in the carrier population and the quality and quantity of data available for carrier safety performance assessments, and (2) the resulting SMS scores, including their precision, confidence, and reliability for the purposes for which they are used.

**Action needed:** FMCSA did not agree with our recommendation, disputing the methodology and conclusions in our report. However, we continue to believe that addressing Safety Measurement System (SMS) methodology limitations has merit and could help the agency better target FMCSA's resources to the carriers that pose the highest risk of crashing. For example, we found FMCSA requires a minimum level of information for a carrier to receive an SMS score; however, this requirement is not strong enough to produce sufficiently reliable scores. As a result, FMCSA identified many carriers as high risk that were not later involved in a crash, potentially causing FMCSA to miss opportunities to intervene with higher risk carriers. To fully implement this recommendation, FMCSA should revise SMS methodology to account for data limitations that limit comparisons so that the FMCSA is better positioned to identify and mitigate carriers that pose the greatest safety risks. FMCSA has recently developed and tested

a new methodological approach that could potentially account for the limitations we identified. While FMCSA has not yet committed to deploying the new methodology, they hope to do so some time in 2020.

**Director:** Elizabeth Repko

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*Automated Vehicles: Comprehensive Plan Could Help DOT Address Challenges.* [GAO-18-132](#). Washington, D.C.: November 30, 2017.

**Recommendation:** The Secretary of Transportation should develop and implement a comprehensive plan to better manage departmental initiatives related to automated vehicles. This plan should include leading principles such as goals, priorities, steps to achieve results, milestones, and performance measures to track progress.

**Action needed:** DOT concurred with this recommendation. In January 2020, DOT released *Ensuring American Leadership in Automated Vehicle Technologies (AV 4.0)*, building on prior policies that DOT has as actions regarding its implementation of GAO's recommendation. However, without incorporating leading principles of comprehensive planning, it continues to be unclear whether DOT is adequately tackling automated vehicle challenges.

**Director:** Elizabeth Repko

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*Rail Transit: Federal Transit Administration Can Strengthen Safety Oversight by Improving Guidance to States.* [GAO-18-310](#). Washington, D.C.: March 20, 2018.

**Recommendation:** The Office of Transit Safety and Oversight should develop and communicate a method for how it will monitor the effectiveness of the enforcement authorities and practices of state safety agencies.

**Action needed:** DOT concurred with this recommendation. DOT should continue its progress to developing and communicating a methodology for how it will monitor the effectiveness of state safety agencies' enforcement.

**Director:** Andrew Von Ah

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*Aviation Safety: Opportunities Exist for FAA to Improve Airport Terminal Area Safety Efforts.* [GAO-19-639](#) Washington, D.C.: August 30, 2019.

**Recommendation:** The Runway Safety Manager should establish a plan to assess the effectiveness of all of FAA's terminal area-safety efforts, including Airport Surface Detection Equipment, Model X (ASDE-X) and the Runway Safety Program.

**Action Needed:** FAA agreed with this recommendation. FAA noted that it will identify actions to assess the effectiveness of all of its terminal-area safety efforts in a Runway Safety Evolution Plan, the agency expects to complete by September 30, 2020. We will review the Runway Safety Evolution Plan when it is available.

**Director:** Heather Krause

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*Unmanned Aircraft Systems: FAA's Compliance and Enforcement Approach for Drones Could Benefit from Improved Communication and Data.* [GAO-20-29](#). Washington D.C.: October 17, 2019.

**Recommendation:** The Administrator of the FAA should develop an approach to more effectively communicate key information to local law enforcement agencies regarding their expected role with regard to small UAS safety oversight.

**Recommendation:** The Administrator of the FAA should identify existing or new data and information needed to evaluate oversight activities and develop a mechanism for capturing these data as needed.

**Action Needed:** DOT concurred with these recommendations. When we confirm what actions the agency has taken in response to these recommendations, we will provide updated information.

**Director:** Heather Krause

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### **Improving Transparency and Communication**

*Air Travel and Communicable Diseases: Comprehensive Federal Plan Needed for U.S. Aviation System's Preparedness.* [GAO-16-127](#). Washington, D.C: December 16, 2015.

**Recommendation:** To help improve the U.S. aviation sector's preparedness for future communicable disease threats from abroad, the Secretary of Transportation should work with relevant stakeholders, such as the Department of Health and Human Services, to develop a national aviation-preparedness plan for communicable disease outbreaks. Such a plan could establish a mechanism for coordination between the aviation and public health sectors and provides clear and transparent planning assumptions for a variety of types and levels of communicable disease threats.

**Action needed:** DOT partially concurred with our recommendation and agrees that an aviation preparedness plan is needed, but continues to suggest that the Department of Health and Human Services (HHS) and the Department of Homeland Security (DHS) have responsibility for communicable disease response and preparedness planning, respectively, and that these departments should lead any efforts to address planning for communicable disease outbreaks, including for transportation. DOT would be in the best position to lead the effort because FAA and DOT have stronger and deeper ties to the relevant stakeholders that would be involved in such a broad effort and is responsible for overseeing the aviation sector. While the DOT and HHS may not agree on which agency should lead the development of a national aviation-preparedness plan, DOT's Office of the Secretary is the liaison to ICAO for Annex 9 to the Chicago Convention, an international aviation treaty. Annex 9 obligates each ICAO member state to establish a national aviation-preparedness plan for communicable disease outbreaks that pose a public health risk or public health emergency of international concern.

As of April 2020, the Department of Transportation (DOT) has not developed a national aviation-preparedness plan to respond to communicable disease threats from abroad. In the absence of a national aviation-preparedness plan, DOT officials point to ongoing efforts to engage with interagency partners at DHS and HHS, as well as industry stakeholders, to better collaborate on communicable disease response and preparedness as they relate to civil aviation. For example, in response to the COVID-19 outbreak, DOT reported that it has facilitated conference calls between stakeholders, including federal agencies and aviation stakeholders, and it has collaborated with the Centers for Disease Control and Prevention (CDC) within HHS to update interim guidance for airline crews related to communicable diseases, specifically COVID-19, among other things. Despite these efforts, we continue to believe that DOT is in the best position to work with its relevant stakeholders to develop a national aviation-preparedness plan, which could guide preparation for communicable diseases nationally and for individual airlines and airports, as well as establish a framework for communication and response for the next communicable disease outbreak.

**Director:** Heather Krause

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*Air Ambulance: Data Collection and Transparency Needed to Enhance DOT Oversight.* [GAO-17-637](#). Washington, D.C.: Jul 27, 2017.

**Recommendation:** To increase transparency and obtain information to better inform decisions on whether to investigate potentially unfair or deceptive practices in the air ambulance industry, the Secretary of Transportation should assess available federal and industry data and determine what further information could assist in the evaluation of future complaints or concerns regarding unfair or deceptive practices.

**Action Needed:** In September 2017, DOT did not concur with this recommendation, noting that its analysis of whether a complaint alleges conduct that could constitute an unfair or deceptive practice is fundamentally based on the unique facts of each additional case, rather than aggregate data. However, the FAA Reauthorization Act of 2018 (the Act), signed into law on October 5, 2018, directed the establishment of an Air Ambulance and Patient Billing (AAPB) Advisory Committee and required it to make recommendations on a variety of topics, including the recommendations from this GAO report. The AAPB Advisory Committee was formed in September 2019 and held its first meeting in January 2020. The Act requires the AAPB Advisory Committee to issue a report within 180 days of its first meeting to the Secretary of DOT, the Secretary of HHS, and appropriate committees of Congress. Pursuant to the Act, DOT's report is to include information on how DOT will conduct oversight of air ambulance providers, including the information sources DOT will use to conduct such oversight. This report will provide DOT an opportunity to document its response to GAO's recommendation to assess available data to inform its assessment on whether to pursue investigations regarding unfair or deceptive practices in the air ambulance industry.

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## Cybersecurity Risks

*Critical Infrastructure Protection: Additional Actions Are Essential for Assessing Cybersecurity Framework Adoption.* [GAO-18-211](#). Washington, D.C.: February 15, 2018.

**Recommendation:** The Secretary of Transportation, in cooperation with the Secretary of Homeland Security, should take steps to consult with respective sector partner(s), such as the SCC, DHS and NIST, as appropriate, to develop methods for determining the level and type of framework adoption by entities across their respective sector.

**Action needed:** DOT concurred with the recommendation. As of February 2020, the department had begun taking steps to develop methods to determine the level and type of framework adoption in the respective sectors. Specifically, officials in the DOT's Office of Intelligence, Security, and Emergency Response, in coordination with the Department of Homeland Security (DHS), told us that they planned to develop and distribute a survey to the Transportation Systems sector to determine the level and type of framework adoption. DOT officials stated that the draft survey was undergoing DHS legal review and that the completion of the review and subsequent Office of Management and Budget review would determine when the survey is approved for distribution. While the department has ongoing initiatives, implementing our recommendations to gain a more comprehensive understanding of the framework's use by critical infrastructure sectors is essential to the success of protection efforts.

**High Risk Area:** [Ensuring the Cybersecurity of the Nation](#)

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*Cybersecurity: Agencies Need to Fully Establish Risk Management Programs and Address Challenges.* [GAO-19-384](#). Washington, D.C.: July 25, 2019.

**Recommendation:** The Secretary of Transportation should fully develop a cybersecurity risk management strategy that includes the key elements identified in this report.

**Recommendation:** The Secretary of Transportation should fully establish and document a process for coordination between cybersecurity risk management and enterprise risk management functions.

**Action Needed:** DOT concurred with both recommendations. Regarding the first recommendation, the department stated that it intends to establish a cybersecurity risk management strategy that includes the missing elements by October 1, 2021. For the second recommendation, DOT stated that it will establish and document a process for coordination between cybersecurity risk management and enterprise risk management functions by January 4, 2021. GAO continues to track its progress in implementing these recommendations.

**High Risk Area:** [Ensuring the Cybersecurity of the Nation](#)

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**Improving management of information technology (IT) workforce planning**

*IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps.* [GAO-17-8](#). Washington, D.C.: November 30, 2016.

**Recommendation:** To facilitate the analysis of gaps between current skills and future needs, the development of strategies for filling the gaps, and succession planning, the Secretary of

Transportation should require the Chief Information Officer, Chief Human Capital Officer, and other senior managers as appropriate to address the shortfalls in IT workforce planning noted in this report, including the following actions: (1) establish a time frame for when the department is to finalize its draft workforce planning process and maintain that process; (2) develop staffing requirements for all positions; (3) assess competency and staffing needs regularly for all positions; (4) assess gaps in staffing for all components of the workforce; (5) develop strategies and plans to address gaps in competencies and staffing; (6) implement activities that address gaps, including an IT acquisition cadre, cross-functional training of acquisition and program personnel, a career path for program managers, and use of special hiring authorities, if justified and cost-effective; (7) monitor the department's progress in addressing competency and staffing gaps; and (8) report to department leadership on progress in addressing competency and staffing gaps.

**Action Needed:** DOT concurred with the recommendation. In January 2020, the department stated that its Office of the Chief Information Officer and Office of Human Resource Management had established a workgroup to lead and conduct workforce planning activities, and had defined the strategic goals and objectives for the department's IT workforce. The department also stated that the workgroup was planning on subsequently completing additional activities, including completing a workforce analysis with a competency gap assessment, by the end of calendar year 2020, and developing strategies to address any identified gaps by the end of 2021. We will continue to monitor the department's efforts to implement our recommendation.

**High Risk Area:** [Improving the Management of IT Acquisitions and Operations](#)

**Director:** Carol C. Harris

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**Improving federal grant management**

*Highway Emergency Relief: Federal Highway Administration Should Enhance Accountability over Project Decisions.* [GAO-20-32](#). Washington, D.C.: Oct 17, 2019.

**Recommendation:** The Administrator of FHWA should require FHWA division offices to document the rationale for classifying projects as emergency repairs, such as a description of why an emergency repair is necessary and which alternative strategies or repairs were considered, and to more clearly define the circumstances under which projects are classified as emergency repairs, including what constitutes restoration of essential traffic.

**Action Needed:** DOT concurred with the recommendations and stated it plans to implement it by June 2020. GAO continues to track its progress in implementing it.

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**Improving transportation readiness**

*International Food Assistance: Cargo Preference Increases Food Aid Shipping Costs, and Benefits are Unclear.* [GAO-15-666](#). Washington, D.C.: September 25, 2015.

**Recommendation:** The Secretary of Transportation should direct the Administrator of MARAD to study the potential availability of all qualified mariners needed to meet a full and prolonged activation of the reserve sealift fleet. In the study, MARAD should identify potential solutions to address the mariner shortfall if one is still identified.

**Action Needed:** DOT concurred with the recommendation. To fully implement this recommendation, the Maritime Administration should reach out to all mariners identified by the U.S. Coast Guard as having unlimited credentials to both verify their qualifications as well as ascertain their availability and willingness to crew the reserve sealift fleet in a full and prolonged activation. In addition, the Maritime Administration should identify potential solutions to addressing any mariner shortfall that may be identified. DOT has not indicated that it implemented GAO's recommendation to study the potential availability of all qualified mariners needed to meet a full and prolonged activation of the reserve sealift fleet, including reaching out to all potentially qualified mariners to verify their qualifications as well as ascertain their availability and willingness to crew the reserve sealift fleet in a full and prolonged activation.

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