Medicare Ground Ambulance Data Collection System (GADCS) Report Appendix

Year 1–Year 4 Cohort Analysis

Data Reported Through May 15, 2025

December 2025

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About This Appendix

Section 1834(l)(17) of the Social Security Act requires the Centers for Medicare & Medicaid Services (CMS) to collect cost, revenue, utilization, and other information from representative samples of ground ambulance organizations. CMS developed the Medicare Ground Ambulance Data Collection System (GADCS) to meet this requirement. This appendix updates the December 2024 report titled, *Medicare Ground Ambulance Data Collection System (GADCS) Report, Year 1 and Year 2 Cohort Analysis*,[1] to present findings from analyses of data submitted through May 15, 2025, by all cohorts (Year 1–Year 4) of ground ambulance organizations selected to participate in the GADCS.

This research was funded by CMS under Contract/TO Number GS-10F-0275P/75FCMC22F0002 and carried out within the Payment, Cost, and Coverage Program in RAND Health Care.

[1] Centers for Medicare & Medicaid Services, "Medicare Ground Ambulance Data Collection System (GADCS) Report: Year 1 and Year 2 Cohort Analysis," December 2024. Available online: https://www.cms.gov/files/document/medicare-ground-ambulance-data-collection-system-gadcs-report-year-1-and-year-2-cohort-analysis.pdf.

Executive Summary

GADCS Overview

In response to a new statutory requirement for ground ambulance data collection in Section 1834(l)(17) of the Social Security Act, the Centers for Medicare & Medicaid Services (CMS) developed and implemented the Medicare Ground Ambulance Data Collection System (GADCS). The GADCS collects data on the service volume, costs, and revenue of ambulance organizations through a web-based instrument (or questionnaire) and submission portal. CMS randomly selected four cohorts of organizations defined by their ten-digit National Provider Identifier (NPI),[2] which together approximate the more than 10,500 ground ambulance organizations billing Medicare for ground ambulance services each year.

Each selected organization must submit data for a continuous 12-month data collection period and has five months after the close of the data collection period to submit the data to CMS. Participation in the GADCS is required by law, and selected organizations without sufficient responses are subject to a one-year, 10 percent payment reduction on Ambulance Fee Schedule (AFS) services in a subsequent calendar year. The same statutory change requiring the new Medicare data collection also requires the Medicare Payment Advisory Commission (MedPAC) to submit a report to Congress describing the collected data and assess, among other topics, the adequacy of Medicare payment rates for ground ambulance services.

CMS developed a stratified sampling approach at the NPI level based on historical Medicare fee-for-service (FFS) claims and enrollment data to ensure representation on four key organizational characteristics:

1. enrollment as a Medicare provider versus supplier[3]
2. ownership category (non-profit, for-profit, or government)
3. service area population density (urban, rural, or super rural categories as defined by Medicare)[4]

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[2] CMS assigns a unique ten-digit identification number to health care providers in the United States. The NPI number uniquely identifies health care providers in all administrative and financial transactions. To obtain an NPI, a health care provider must apply through the National Plan and Provider Enumeration System (NPPES). For more information, please visit https://nppes.cms.hhs.gov.

[3] Medicare providers of services are hospitals, skilled nursing facilities, and other facility-based providers enrolled in the Medicare program as providers. Some Medicare providers, primarily Critical Access Hospitals and other hospitals, provide ground ambulance services. Most ground ambulance organizations are Medicare suppliers rather than providers.

[4] CMS defines urban, rural, and super rural areas for ambulance services reimbursement purposes as follows: urban—a Metropolitan Statistical Area (MSA); rural—an area outside of an urban area or a rural census tract within an MSA; and super rural—the lowest quartile of nonmetropolitan ZIP Codes by population density. For additional

4. volume of Medicare ground ambulance transports.[5]

CMS selected four consecutive, annual samples, each covering one-fourth of the total U.S. ground ambulance providers and suppliers (herein "organizations" or "NPIs") billing Medicare for services during a prior year for which Medicare FFS claims data were sufficiently complete. Ground ambulance organizations in all 50 states, as well as the District of Columbia and U.S. territories, were eligible for selection. CMS used data from calendar year 2017 and 2018 as the basis for sampling the first and second ("Year 1" and "Year 2") annual GADCS cohorts. After selecting these two cohorts, CMS delayed GADCS data collection and reporting timelines to allow ground ambulance organizations to focus on patient care during the coronavirus disease 2019 (COVID-19) public health emergency (PHE). CMS used data from 2020 to select the third and fourth ("Year 3" and "Year 4") annual GADCS cohorts. 5,317 ground ambulance organizations were selected for the Year 1 and Year 2 cohorts, and 5,264 organizations were selected for the Year 3 and 4 cohorts, for a total of 10,581 sampled organizations.[6]

The Year 1 and Year 2 cohorts reported data for data collection periods beginning at some point in 2022. Their data collection periods could encompass part or nearly all of 2023 if the organization selected a data collection period starting late in 2022. Similarly, the Year 3 and Year 4 cohorts reported data for data collection periods beginning at some point in 2023 and could encompass part or nearly all of 2024. After the close of each organization's data collection period, they had up to five months to report their data, unless an extension or exemption was granted. Therefore, data reporting continued through 2025.

Purpose of This Appendix

In December 2024, CMS published the *Medicare Ground Ambulance Data Collection System (GADCS) Report: Year 1 and Year 2 Cohort Analysis*, which includes the response rates,

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information on the classification, see Michael Ratcliffe, Charlynn Burd, Kelly Holder, and Alison Fields, "Defining Rural at the U.S. Census Bureau: American Community Survey and Geography Brief," U.S. Census Bureau, ACSGEO-1, December 2016. The list of CMS ZIP Codes and their designations can be found in the ZIP Code to Carrier Locality file available at CMS, "Ambulance Fee Schedule," webpage, last accessed June 19, 2025.

[5] We use the term *Medicare ground ambulance transports* to refer to separately billed Medicare ground ambulance services using Healthcare Common Procedure Coding System (HCPCS) codes A0426, A0427, A0428, A0429, A0432, A0433, and A0434, excluding the ground ambulance mileage HCPCS code A0425. HCPCS code A0432, Paramedic Intercept (PI), rural area, transport furnished by a volunteer ambulance company which is prohibited by state law from billing third-party payers, is where services are provided by an entity that is under contract with the volunteer ambulance company that does not provide the transport but is paid for their paramedic intercept service (only the state of New York meets these requirements).

[6] The two cohorts do not cover exactly half of organizations in any single year due to entry and exit (or "churn") of individual organizations from year to year. See Jonathon Cantor, Sara Heins, Petra W. Rasmussen, Christine Buttorff, and Andrew W. Mulcahy, *Ground Ambulance Industry Trends, 2017–2022: An Analysis of Ground Ambulance Organization Entrance and Exit*, Centers for Medicare & Medicaid Services, Task Order No. GS-10F-0275P 75FCMC22F0002, April 2024, for an in-depth Medicare FFS claims–based assessment of churn in the ground ambulance industry.

summary statistics, and econometric analyses of cost and revenue data for the first two cohorts of organizations that submitted data through July 15, 2024 (Year 1 and Year 2 cohorts).[7] This appendix updates the response rates, summary statistics, and econometric analyses described in the Year 1 and Year 2 cohort analysis, with data from all cohorts of the GADCS reported as of May 15, 2025 (including Year 1 through Year 4 cohorts). Some information in this appendix is a verbatim reference to information in the Year 1 and Year 2 cohort analysis, such as the definitions of terms in footnotes.

Response Rates and Weights

Given the length of time between sampling and reporting, a number of organizations ceased operations. Additionally, some organizations chose not to report data to the GADCS. Of the 10,581 sampled organizations, 9,288 (87 percent) responded and submitted initial information (data collection periods and contact information) to CMS, and 7,696 (73 percent) of organizations submitted and certified their responses in the GADCS portal by May 15, 2025. Some organizations did not report complete responses to the GADCS, and a small number of organizations reported data but had no Medicare FFS claims in their data collection year, so as a result, a total of 7,387 (70 percent of the 10,581 sampled NPIs) Year 1–Year 4 GADCS responses contributed to the analyses presented in this appendix.

Response rates were robust across subgroups of ground ambulance organizations, including the specific groups used in Medicare's stratified random sampling approach outlined above. However, some organizations, including those with relatively lower Medicare transport volume and those in the for-profit ownership category (vs. non-profit or government), had relatively lower response rates.

To prevent biased results from differential non-response in some categories of organizations versus others, we calculated and applied weights in most analyses to scale responses such that the characteristics of the responding organizations did not unduly influence our findings. By weighting the information presented, our findings more accurately approximate the characteristics of the full set of organizations rather than only the smaller set of responding organizations. The weights in this appendix were updated from those used in the Year 1 and Year 2 cohort analysis to include additional Year 1 and Year 2 organizations that certified data after the July 15, 2024, cutoff used for the initial analysis. We also separately weighted the Year 3 and Year 4 organizations.

[7] Centers for Medicare & Medicaid Services. "Medicare Ground Ambulance Data Collection System (GADCS) Report: Year 1 and Year 2 Cohort Analysis," December 2024. Available online: https://www.cms.gov/files/document/medicare-ground-ambulance-data-collection-system-gadcs-report-year-1-and-year-2-cohort-analysis.pdf.

Data Validation and Cleaning

We applied a range of internal validation and cleaning steps to ensure that no single organization's response to a GADCS question had undue influence on reported descriptive statistics.[8] For example, for the many GADCS questions where responses were right-skewed (in other words, a small share of organizations reported much larger values than other organizations), we often capped responses at an upper-bound limit such as the 99th percentile of the distribution across all responses to reduce the influence of the largest outliers. The data cleaning processes are described in Appendix B in the Year 1 and Year 2 cohort analysis, and this appendix adheres to those cleaning procedures.

Medicare FFS claims were used to determine if organizations were inactive during their data collection period and to clean responses to GADCS questions on the volume of ground ambulance responses and transports in Section 5. For the Year 3 and Year 4 cohorts, we included additional years of Medicare FFS claims corresponding to their data collection years (2023 and 2024).

Descriptive Statistics

This section describes key descriptive statistics from the data reported in the GADCS for all four cohorts. While all numbers in this appendix have changed compared to those in the Year 1 and Year 2 cohort analysis due to the additional data submitted, the relative shares of categorical or binary items and the medians of continuous measures are consistent with those reported previously. In comparison, there were slightly larger differences in the means for continuous items for the combined Year 1 through Year 4 analysis compared to the Year 1 and Year 2 analysis because the mean is sensitive to any skew in the distribution. As we noted in the Year 1 and Year 2 cohort analysis, most of the variables in the GADCS exhibit some skewness due to the higher volume and/or higher cost organizations.

[8] Our data cleaning process was used for GADCS questions with outlier responses that were potentially invalid (e.g., reporting labor hours and compensation that would result in an hourly wage less than minimum wage) or inconsistent with external data sources (e.g., reporting fewer transports than the count of transports in FFS Medicare claims). It is possible that our systematic approach also recoded some valid outlier responses, which could impart bias on to the mean, although the approach most likely results in less bias than using all responses without data cleaning. For this reason, we also provided median responses where possible, which are less influenced by outlier values.

Table S.1. Selected GADCS Descriptive Statistics

Section	Findings
Section 2 (Organizational Characteristics)	• The most common organization types are fire department–based (42 percent of organizations) followed by independent organizations providing primarily EMS services (26 percent). • Over half (52 percent) of ground ambulance organizations (regardless of ownership type) were part of an organization that also provided public safety services including police or fire services. • Just over half (57 percent) of for-profit organizations, compared with over 99 percent of government organizations, responded to emergency calls for service. • Most government organizations (68 percent) used a static staffing model—where the same number of ambulance units are available at all times—compared with 29 percent of for-profit organizations. • Only 14 percent of for-profit organizations used volunteer labor, compared with 60 percent of non-profit organizations.
Section 3 (Service Area)	• For-profit and very high–volume organizations had larger primary service areas—i.e., areas where the organization is primarily responsible for providing ground ambulance services—on average (1,331 and 1,536 sq. miles, respectively) than government and low-volume organizations (386 and 387 sq. miles, respectively). • Nearly half (49 percent) of organizations reported having a secondary service area—i.e., an area where the organization regularly responds to calls for service when needed through mutual and auto-aid agreements with neighboring communities. • Organizations typically reported an average ground ambulance trip time—which is also called "time on task" and measures the time from when an ambulance begins a response to a call for service to when the same ambulance is ready to respond to another call—under one hour (48 percent) or between one and two hours (44 percent). Only 8 percent of organizations reported an average trip time of over two hours.
Section 4 (Emergency Response Time)	• Emergency response times were right-skewed, with a median response time of eight minutes. A small number of longer response times, particularly from organizations serving rural areas, contributed to a higher mean time of 10.3 minutes. • Just over one-quarter of organizations are incentivized to meet response time targets, such as by contract with a municipality.
Section 5 (Service Volume)	• Of 61.3 million total reported ground ambulance responses, 24 percent did not result in a transport and therefore were not paid by an insurer. • The top 10 percent of organizations ranked by transport volume contributed to 66 percent of the total transports reported via the GADCS. • Roughly 11 percent of ground ambulance responses involved medical treatment at the scene only, without a resulting transport. • Half of organizations reported participating in joint responses. First responders from another organization often participated in joint responses (32 percent).
Section 6 (Service Mix)	• Overall, 74 percent of responses were emergency responses. • Over half (56 percent) of transports were at the basic life support (BLS) level. • Advanced life support, level 1 (ALS1) services accounted for an additional 41 percent of transports. • Advanced life support, level 2 (ALS2) and specialty care transport (SCT) services combined accounted for 3 percent of total transports. • Government organizations had a much higher average share of advanced life support (ALS) versus BLS services compared with for-profit organizations (57 percent versus 34 percent). • For-profit organizations reported substantially higher shares of interfacility transports (43 percent of for-profit organizations had a large percent of their transports as interfacility) versus other organizations (15 percent).
Section 7 (Labor Costs)	• Response personnel—particularly emergency medical technician (EMT)-Basic and EMT-Paramedic staff—accounted for about 85 percent of ground ambulance labor costs. • Across all organizations, 94 percent had EMT–Basic staff, and 76 percent used EMT-Paramedic labor.

Section	Findings
	• Organizations reported over 1 billion total hours worked and over $60 billion in total compensation for labor via the GADCS, with roughly 80 percent of each associated with ground ambulance operations. • Across all organizations, average total ground ambulance labor expenses ($4.3 million) were many times larger than the median ($609,000), suggesting (as in several other key GADCS variables) a right-skewed distribution of labor expenses where a small number of large organizations are driving the average cost figures. • While 34 percent of organizations used volunteers, volunteer hours accounted for less than 1 percent of total ground ambulance hours worked.
Section 8 (Facilities Costs)	• Urban organizations' facilities were over twice as large as rural and super rural facilities (33,000 square feet versus less than 15,000 square feet for rural and super rural organizations). • For-profit organizations had higher ground ambulance–related facility costs than non-profit organizations ($219,000 for for-profits versus $151,000 for non-profits on average), driven by larger square footage facilities, fewer facilities owned outright or donated, and higher taxes.
Section 9 (Vehicle Costs)	• Fire trucks cost over twice as much as ground ambulances per vehicle, and public safety–based organizations, either in accordance with state or local laws or based on community preferences, often sent these vehicles on ground ambulance calls. • Other than the cost of vehicles themselves, fuel and maintenance were the largest vehicle costs, with a median cost of approximately $24,000 and $22,000 per organization annually.
Section 10 (Equipment, Consumable, and Supply Costs)	• Most (59 percent) organizations reported making a capital medical equipment purchase during the data collection period. • Nearly all (97 percent) organizations reported costs for other medical equipment and supplies, with an average cost of just over $75,000 annually.
Section 11 (Other Costs)	• Most (92 percent) organizations reported purchasing contracted services from a third party. • The most common contracted service was billing (79 percent of organizations), with an average annual ground ambulance–related expense per organization of $95,000 (median of $24,000). • The most common other expense was training (60 percent of organizations), where organizations spent nearly $19,000 on average annually.
Section 13 (Revenues)	• Traditional FFS Medicare accounted for 29 percent of transport revenue per NPI on average, while Medicare Advantage ("Medicare managed care") plans accounted for an additional 18 percent of total transport revenue. • The average Traditional Medicare share of total aggregated transport revenue varied across organization-level service area population density, ownership category, and other characteristics, ranging from 21 percent (public safety NPIs) to 35 percent (super rural NPIs). Traditional Medicare, Medicare Advantage, and commercial insurers together accounted for approximately 75 percent of transport revenue on average. • About one in five organizations reported that they did not always bill patients in one or more payer categories for transports.

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: FFS = fee-for-service. Although there are 13 sections in the GADCS, we only include 11 in this table. Section 1 (General Instructions) only has instructions for organizations, so it does not have any results to include in this report, and Section 12 (Total Cost) has a single question on organizations' total costs. We used responses from Section 12 only in our data validation findings (reported in Appendix B in the Year 1 and Year 2 cohort analysis and in Chapter 5 of this appendix).

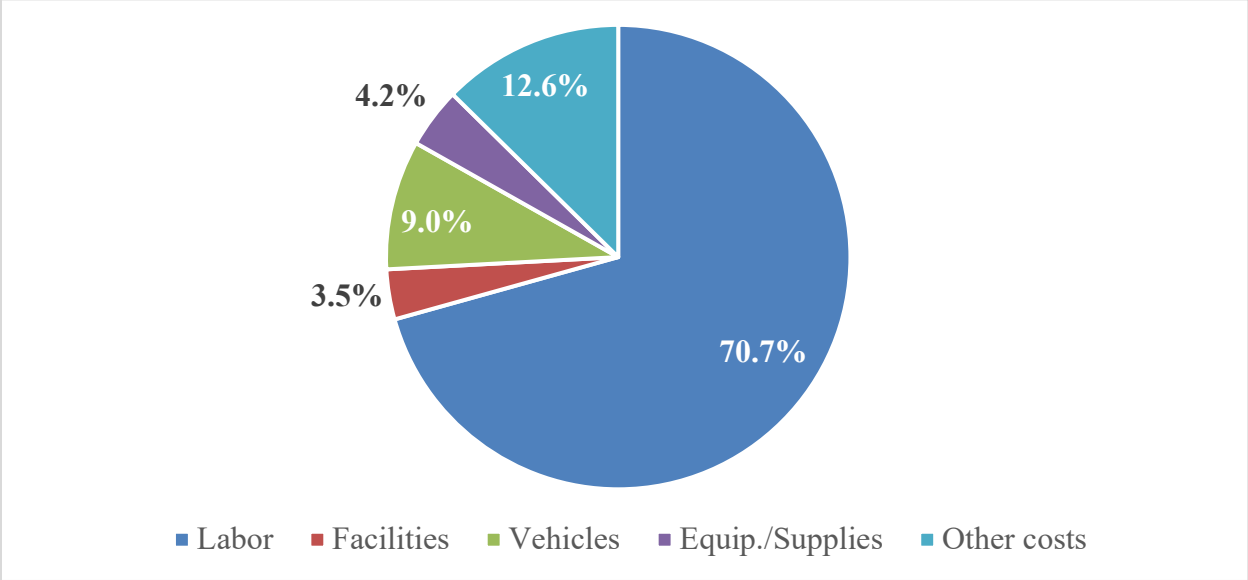
While the majority of findings in this appendix mirror those in the Year 1 and Year 2 cohort analysis, there are two differences of note. The first is that aggregate labor costs are generally higher in the later cohorts, which may be due to some larger organizations reporting data or an overall upward trend in labor costs or both. The relative contribution of labor costs to other costs is similar to the previous analysis. The second difference is a shift towards Medicare Advantage as a primary revenue source, overtaking Traditional Medicare's share of revenue for some

organization types. This mirrors the general trend towards increased enrollment in Medicare Advantage plans among Medicare beneficiaries in recent years.[9]

Decomposing Total Ground Ambulance Costs

After aggregating ground ambulance costs across all reporting organizations, 71 percent of total expenses were for labor costs, 9 percent for vehicle expenses, 3 percent for facilities expenses, 4 percent for equipment and supply costs, and 12 percent for "other" costs, including contracted services (e.g., dispatch, billing, and maintenance contracts), training, licenses, and other expenses combined (Figure S.1).

Figure S.1. Relative Contribution to Aggregated Total Ground Ambulance Costs



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: "Equip." is equipment.

Limitations

There are limitations of the GADCS and our analysis, which are described in the Year 1 and Year 2 cohort analysis and which we repeat here. It is important to emphasize that the GADCS was not designed to do the following:

- assess the quality of ground ambulance services, facilities, or vehicles, or related clinical outcomes,

[9] M. Freed, J.F. Biniek, A. Damico, and T. Neuman, "Medicare Advantage in 2024: Enrollment Update and Key Trends," August 2024. Available online: https://www.kff.org/medicare/issue-brief/medicare-advantage-in-2024-enrollment-update-and-key-trends/.

- determine Medicare payments for ground ambulance services under the Ambulance Fee Schedule,
- determine guidelines for Medicare's coverage for ground ambulance services,
- provide information on communities' broader first response financing needs, or
- quantify the extent of uncompensated care (e.g., bad debt and charity care).

In addition, there are several methodological and data limitations. First, ground ambulance organizations self-report data via the GADCS. Despite GADCS system-side logic validation and logic checks and the additional validation and cleaning steps, there may be errors and systematic biases in the reported data and, therefore, in our analyses. This occurrence may also lead to some responses not aligning with external data sources with similar information. For example, in a small organization, staff often wear multiple "hats" (e.g., helping with administration while also serving as an emergency medical technician), thus allocating their labor costs to multiple categories may lead to wage rates that do not align with Bureau of Labor Statistic wage rates for specific job categories.

Broadly, our findings show that many organizations operate shared services, such as fire departments or public safety organizations. These shared services complicate an "apples to apples" comparison of ground ambulance expenses and revenue if organizations are not able to fully separate and report only a ground ambulance share of expenses and revenue. Allocating total, organization-level costs to ground ambulance and other functions is a recurring challenge. For example, we think that organizations may have under-reported revenue (or amounts paid) by local governments and from other sources beyond payments for ground ambulance services because some organizations have higher total costs reported than total revenues. Since many EMS systems are operated from or in conjunction with local governments because of their critical roles in emergency first response systems, it may always be challenging to accurately report data on shared revenues and costs. However, further adjustments to analyses could generate methods to account for any data gaps. Additionally, refinement of the GADCS or education and outreach to specific ground ambulance organizations could help address these concerns in future rounds of data collection.

Finally, the regression results in this appendix are generally similar to those presented in the Year 1 and Year 2 cohort analysis; however, changes in the magnitudes of specific effects and significance levels may reflect the increase in sample size and differences among newly reporting organizations included in the analyses. While our regression models included several covariates (presented in Chapter 4 of this appendix), certain information was not included in the model that may affect the outcomes because they were not data elements captured through the GADCS. This includes payer mix across services, patient mix, varying state and local

regulations, and reporting differences across ground ambulance organizations.[10] In addition, the models suggest associations between different organizational characteristics and costs and revenue per service. While this allows us to examine differences across organizational characteristics while holding other factors included in the model equal, these results should not be interpreted causally.

Organization of This Appendix

The data collected via the GADCS provide an unprecedented overview of the U.S. ground ambulance industry, the characteristics of diverse organizations, and major drivers of both costs and revenue. The findings described in this appendix reinforce several common themes from prior studies—for example, highly skewed distributions of service volume, costs, and revenue; considerable variation in costs across organizations of different types; and the preeminence of labor costs as a driver of total expenses. In addition, our findings provide robust and generalizable information on key aspects of ground ambulance operations that previously were opaque to policymakers and to the industry itself due to the lack of data. These findings will provide Congress, MedPAC, and CMS with a foundation for both future analysis and policymaking.

The remainder of this appendix mirrors the results in the Year 1 and Year 2 cohort analysis using data reported from all sampled cohorts as of May 15, 2025. Similar to the previous analysis, we do not report cells where the unweighted number of ground ambulance organizations was less than 20. We first present results on the response rates, then summary statistics of the data reported in each instrument section, then we report information on econometric analyses of the costs and revenues per service, and finally, the results of the data validation.

[10] Regression models examined three ground ambulance service measures: (1) ground ambulance responses, (2) ground ambulance transports, and (3) relative value units (RVUs), with analyses reporting each measure according to cost and revenue dimensions. RVUs differentiate between the relative resources involved in furnishing different services on Medicare Fee Schedules—for example, the AFS. The quantity of RVUs assigned to one service versus another translates into payment rates that, all else equal, differ exactly in terms of this ratio.

Contents

Figures and Tables

Figures

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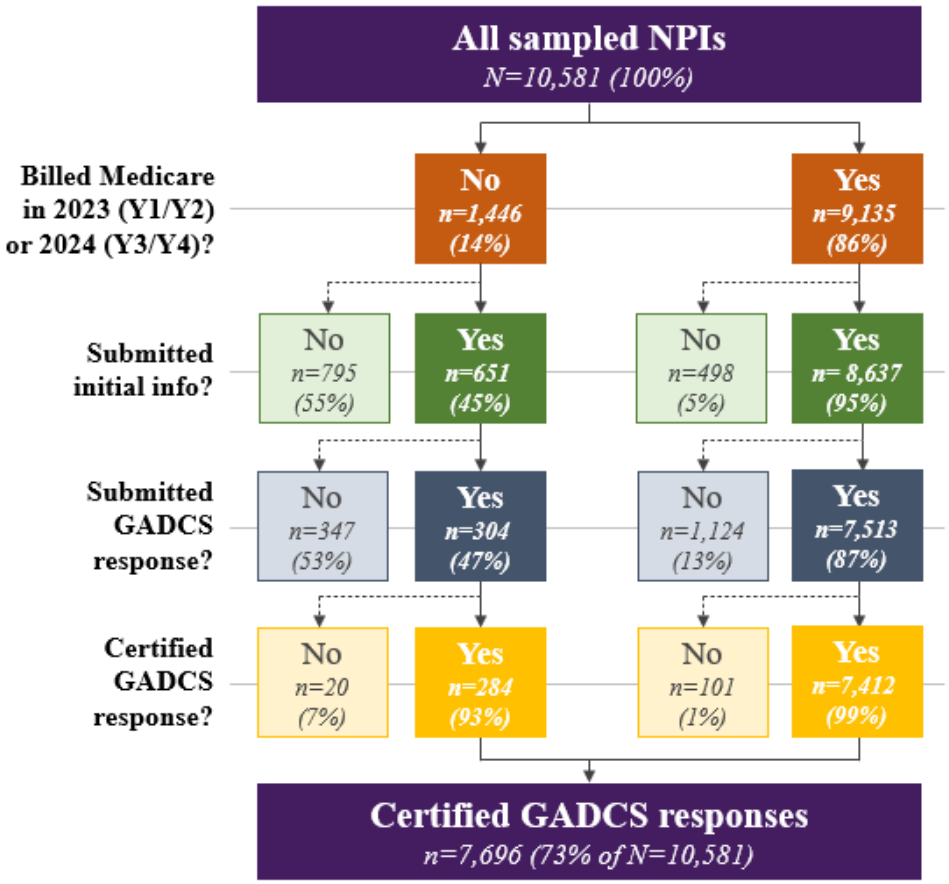
Chapter 1: GADCS Response Rate

Figure 1.1 provides a detailed accounting of the response and follow-up rates during the GADCS reporting process. The top box indicates the total number of sampled NPIs (n = 10,581, represented by the purple box). At the next level (orange-shaded), we distinguish between organizations that are "active" and capable of reporting GADCS data and those that appear "inactive," indicating that they no longer billed Medicare during their data collection period. 9,288 organizations (651 + 8,637 = 9,288, or 87 percent of the 10,581 sampled organizations) reported initial information to CMS (data collection periods and contact information). 7,696 (73 percent) certified their responses in the GADCS portal by May 15, 2025.

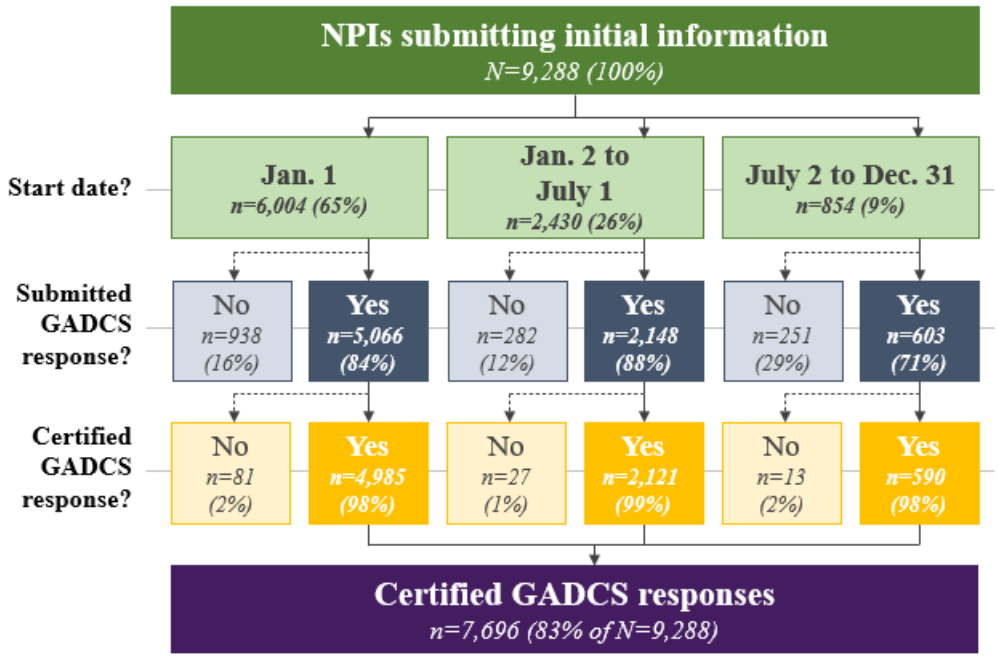
Figure 1.1. Flow Chart of the Number of Included Observations at Each Step in the GADCS Process



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Lighter-shaded boxes indicate organizations that did not contribute GADCS data used in our analysis. Except for the final percentage for complete GADCS responses, all other percentages are relative to the count of organizations in the prior box. Percentages may not add to 100 due to rounding. Y1 = Year 1 cohort. Y2 = Year 2 cohort. Y3 = Year 3 cohort. Y4 = Year 4 cohort.

Figure 1.2 provides further detail on the percentage of responding NPIs that reported initial information to CMS (9,288) and subsequently certified their data in the GADCS portal by data collection period. Of those organizations submitting initial information, 83 percent (7,696) certified their GADCS responses. The majority of organizations used a calendar year data collection period (65 percent).

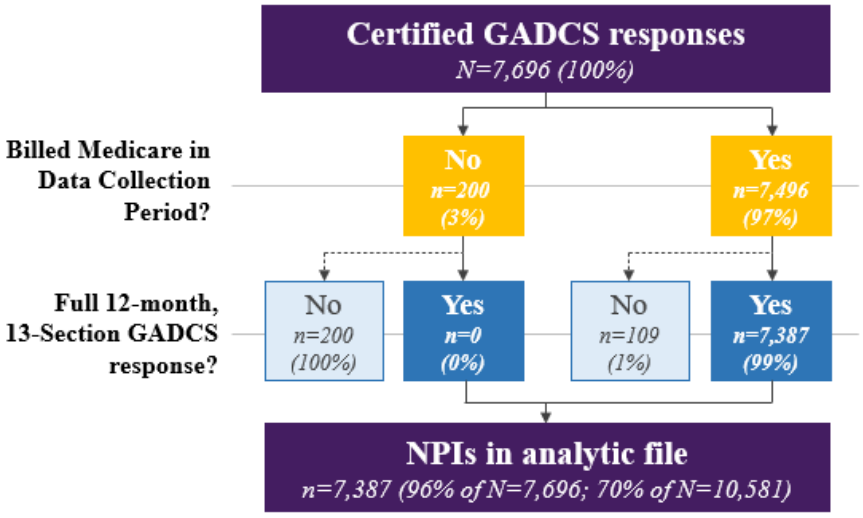
Figure 1.2. GADCS Response and Certification Among Organizations Submitting Initial Information, by Data Collection Start Date



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025, and initial data submissions to Palmetto GBA.

Figure 1.3 shows the number of organizations with full, 12-month GADCS responses. Some organizations answered that they did not bill Medicare during the data collection period (Section 2, Question 1), or did not have claims for their data collection period. These organizations did not submit any further information to the GADCS. They are counted as "responders" in Figures 1.1 and 1.2, but were excluded from further analyses. Only organizations with full, 12-month GADCS responses and that had certified responses in the GADCS portal by May 15, 2025 were included in the analyses in this Appendix.

Figure 1.3. Shares of Organizations With Complete GADCS Responses Contributing to Analytic File



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025. Organizations are flagged as having billed Medicare during the data collection period if they billed in 2022 or 2023 for Y1/Y2 or in 2023 or 2024 for Y3/Y4.

Response Rates by Organization Characteristics

Table 1.1 presents unweighted response rates for all sampled organizations as of May 15, 2025, using the original sampling frames as the denominator and presenting separate rates for combinations of organizational characteristics.

Table 1.1. Response Rates, by Sampling Strata Characteristics

	Urban		Rural		Super Rural		Overall	
	n	%	n	%	n	%	n	%
Government suppliers								
Low volume	605	66.6	481	67.5	510	67.8	1,596	67.3
Medium volume	801	87.9	364	86.1	238	82.9	1,403	86.6
High volume	449	93.2	273	92.9	50	92.6	772	93.0
Very high volume	217	94.3	39	95.1	N/A	N/A	256	94.5
For-profit suppliers								
Low volume	98	33.0	44	29.3	72	43.1	214	34.9
Medium volume	119	45.2	53	51.0	44	65.7	216	49.8
High volume	180	52.5	111	72.1	38	71.7	329	59.8
Very high volume	423	71.8	85	81.0	N/A	N/A	508	73.2

	Urban		Rural		Super Rural		Overall	
Non-profit suppliers								
Low volume	322	55.5	283	55.8	197	61.2	802	56.9
Medium volume	335	71.3	158	72.1	48	71.6	541	71.6
High volume	127	75.6	78	79.6	20	90.9	225	78.1
Very high volume	89	85.6	31	91.2	N/A	N/A	120	87.0
Providers	149	62.3	91	65.9	165	73.0	405	67.2
All respondents	3,914	70.1	2,091	70.2	1,382	68.5	7,387	69.8

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Percentages may not add to 100 due to rounding. "N/A" indicates not applicable. In these cases, counts, and percentages in the high-volume category reflect the combined high- and very high–volume category values.

Adjustments for Differential Non-Response

Except where noted, we calculated and applied weights to address concerns stemming from differential response rates across categories of organizations. Table 1.2 compares the organizational characteristics of all sampled NPIs with NPIs that completed the GADCS, both before and after weights are applied. The first set of columns presents the characteristics for all NPIs (n = 10,581) that were sampled for the GADCS. The second set of columns presents the characteristics for all NPIs that were included in the analytic file (n = 7,387), which includes all active NPIs with a certified and full, 12-month GADCS response to all 13 sections (inactive NPIs and NPIs without a full, 12-month certified response to all 13 sections were excluded). Finally, the third set of columns presented the weighted characteristics for all NPIs in the analytic file (n = 9,608). Depending on the skip logic of the GADCS, not all organizations were shown the full set of questions, so subsequent tables and figures may not use the full weighted sample for analysis.

Table 1.2. Summary of Unweighted and Weighted Samples

	All Sampled NPIs		NPIs That Completed the GADCS			
	Unweighted		Unweighted		Weighted	
	n	%	n	%	n	%
Total	10,581	100.0	7,387	100.0	9,608[a]	100.0
Provider vs. supplier						
Supplier	9,978	94.3	6,982	94.5	9,094	94.7
Provider	603	5.7	405	5.5	514	5.3
Ownership type						
For-profit or unclassifiable	2,327	22.0	1,274	17.2*	1,869	19.5*
Government	5,298	50.1	4,177	56.5*	5,126	53.4*

	All Sampled NPIs		NPIs That Completed the GADCS			
Non-profit	2,956	27.9	1,936	26.2*	2,612	27.2
Urbanicity						
Urban	5,584	52.8	3,914	53.0	5,112	53.2
Rural	2,980	28.2	2,091	28.3	2,641	27.5
Super rural	2,017	19.1	1,382	18.7	1,854	19.3
Medicare transport volume						
Low volume	4,596	43.4	2,708	36.7*	4,064	42.3
Medium volume	3,001	28.4	2,304	31.2*	2,791	29.0
High volume	1,804	17.0	1,426	19.3*	1,689	17.6
Very high volume	1,180	11.2	949	12.8*	1,063	11.1

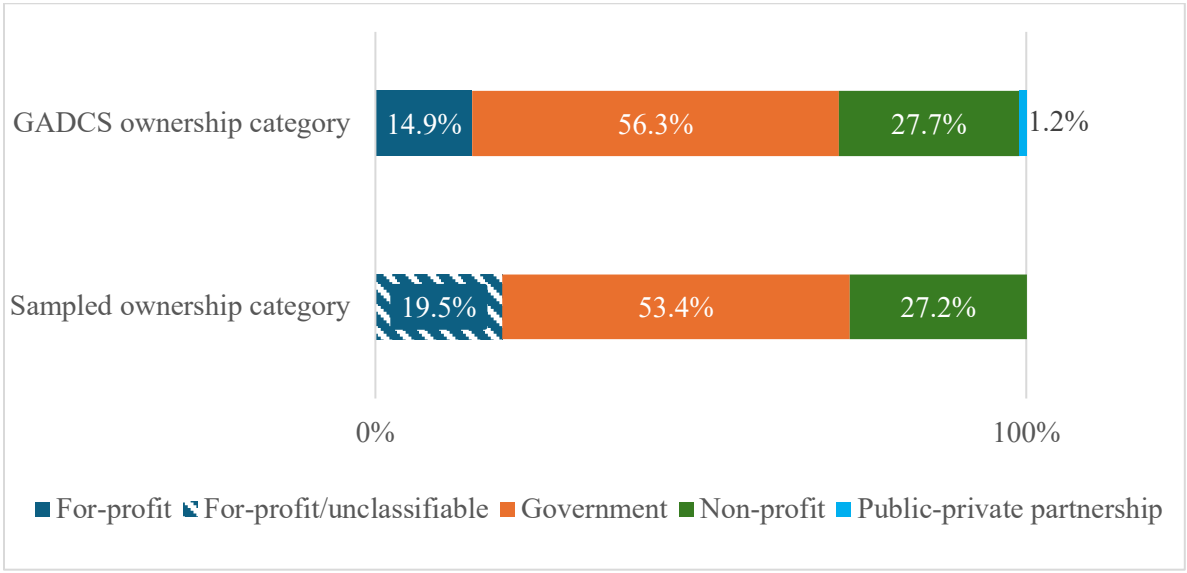
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025, and Responder/Non-Responder Data.
NOTE: NPI = National Provider Identifier.
[a] The total weighted sample size is 9,608. Percentages (and counts of weighted organizations) may not add to 100 (or the sum of weights) due to rounding.
* Statistically significant difference from the proportion from all sampled NPIs at $p < 0.05$.

Chapter 2. Summary Statistics of Instrument Sections

The following sections describe key findings in each GADCS instrument section, starting with Section 2 (Organizational Characteristics). Section 1 (General Instructions) only has instructions for organizations, so it does not have any results to include. Section 12 (Total Cost) only has a single question on organizations' total costs—including those not partly or entirely related to ground ambulance operations. We used responses from the single Section 12 (Total Cost) question in our data validation findings (reported in Appendix B in the Year 1 and Year 2 cohort analysis), but we do not report Section 12 results in this appendix.

Section 2: Organizational Characteristics

Figure 2.1. GADCS-Reported Versus Sampled Ownership Categories



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Unit of analysis is an NPI weighted to address differential non-response (sum of weights = 9,608). For the sampled ownership category bar, the "for-profit" category also includes unclassifiable NPIs. The "public-private partnership" category was not part of the sampling categorization scheme.

Table 2.1. Ground Ambulance Organization Type

Category	n	%
Fire department–based	4,068	42.3
Independent organization primarily providing EMS services	2,388	25.9
Government stand-alone EMS agency	1,844	19.2
Hospital or other Medicare provider of service	644	6.7
Independent organization providing non-emergency services	590	6.1
Police or other public safety department–based	73	0.8

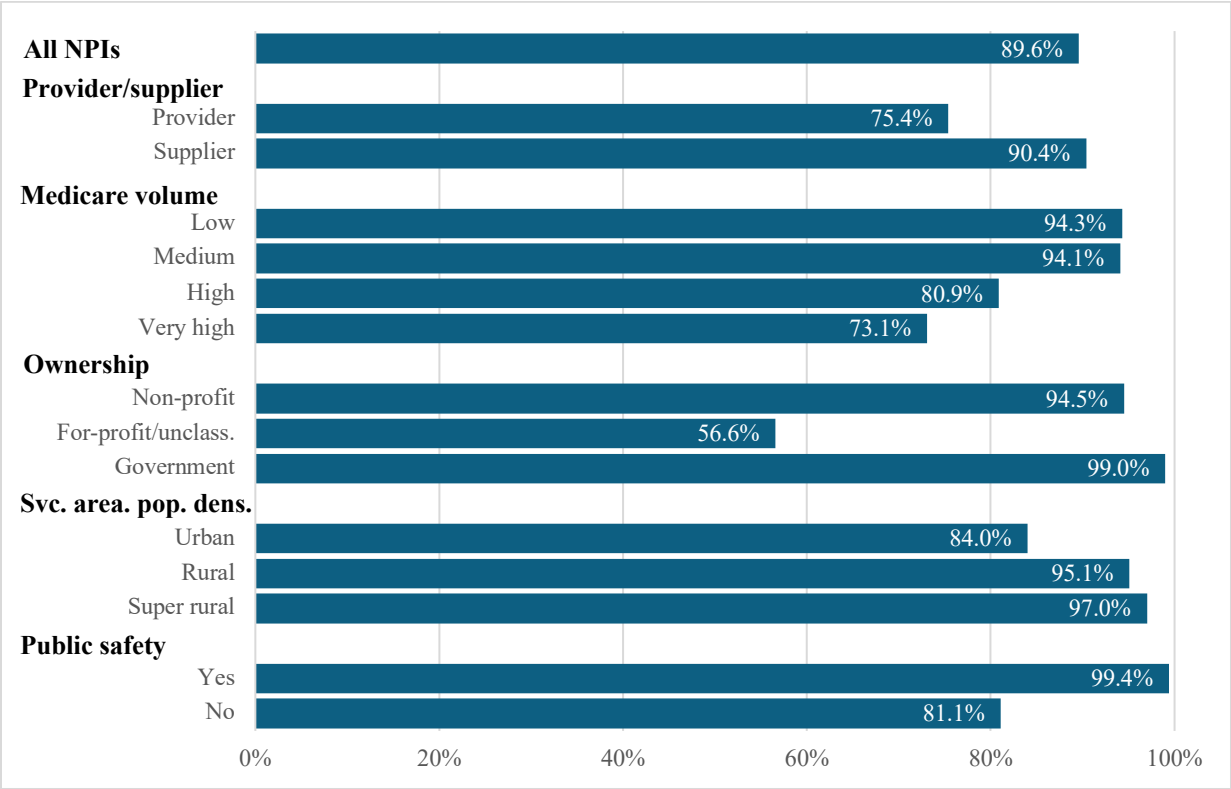
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: EMS = emergency medical services. Unit of analysis is an NPI weighted to address differential non-response. Due to rounding, the count of NPIs across rows adds to 9,607 and not the total sum of the NPI weights, which is 9,608,. Cells represent column percentages. Percentages across rows may not sum to 100 due to rounding. We reclassified the organizations selecting "Other" on this question into one of the above categories using their text write-in information.

Table 2.2. Synthesis of Responses Related to Shared Costs

Question 7–9 response option services/operations	Starting point: Relevant Question 7 response, n (% of total NPIs)	Minus: Relevant Question 8 negative response, n (% of total NPIs)	Plus: Question 9 positive response, n (% of total NPIs)	Total NPIs with shared costs, n (% of total NPIs)
A fire department	4,068 (42.3%)	185 (1.9%)	285 (3.0%)	4,167 (43.4%)
A police or other public safety department	73 (0.8%)	N/R	746 (7.8%)	812* (8.5%)
A hospital or other Medicare provider of services	644 (6.7%)	50 (0.5%)	115 (1.2%)	709 (7.4%)
Other health care delivery operations such as a clinic or urgent care center	N/A	N/A	397 (4.1%)	397 (4.1%)
An air ambulance operation	N/A	N/A	109 (1.1%)	109 (1.1%)

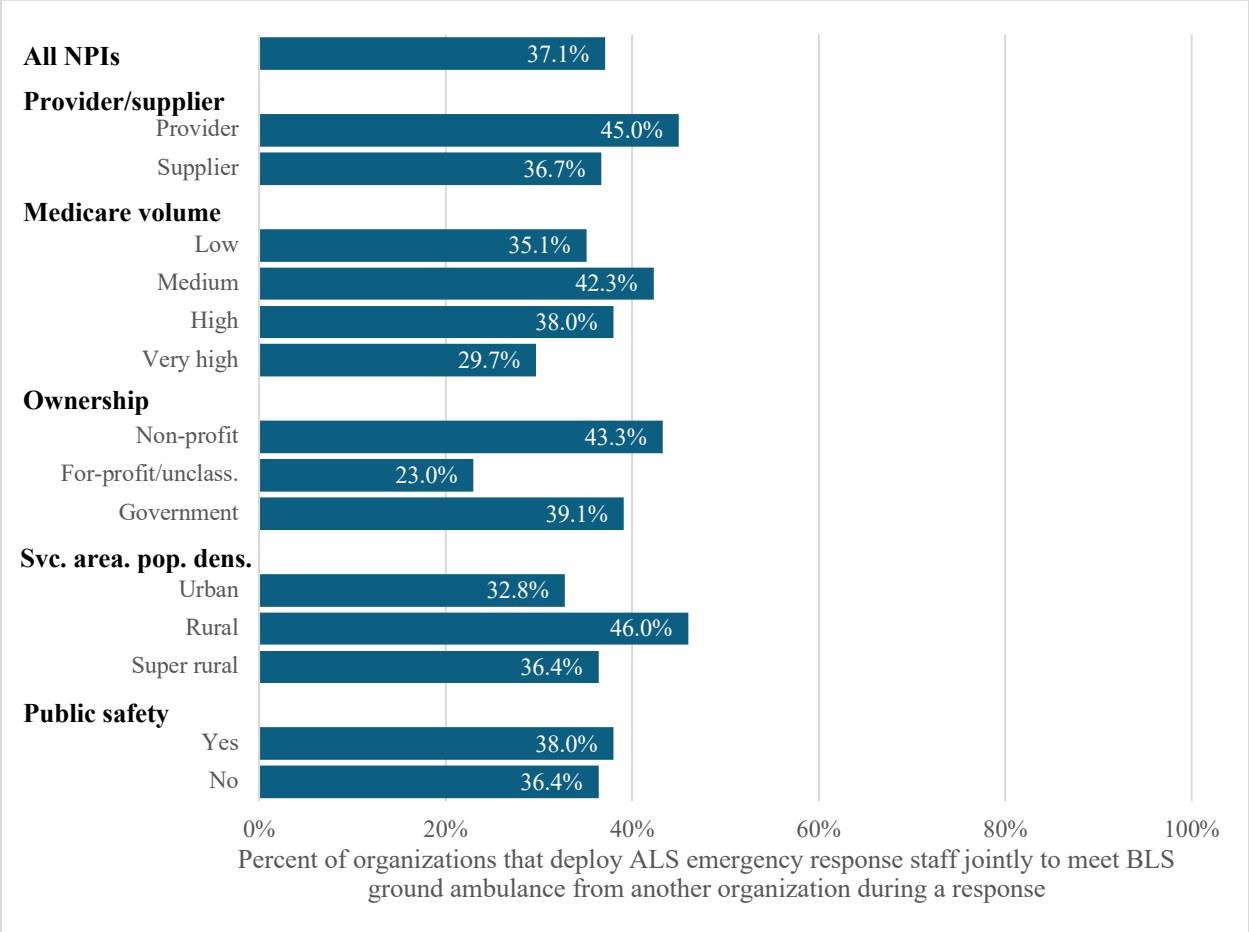
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. The "Total NPIs with shared costs" column equals the sum of Question 7 and Question 9 NPI counts minus relevant Question 8 NPI counts. "N/A" is not applicable: Neither Section 2, Question 7 nor Section 2, Question 8 includes response options related to these services/operations. "N/R" is not reported due to small cell count. Unit of analysis is an NPI weighted to address differential non-response (sum of weights = 9,608).
*Statistic randomly perturbed to prevent the calculation of the cell that was not reported due to small cell count. Counts and percentages within a row may not aggregate to totals when summed due to rounding.

Figure 2.2. Share of Organizations Routinely Responding to Emergency Calls for Service



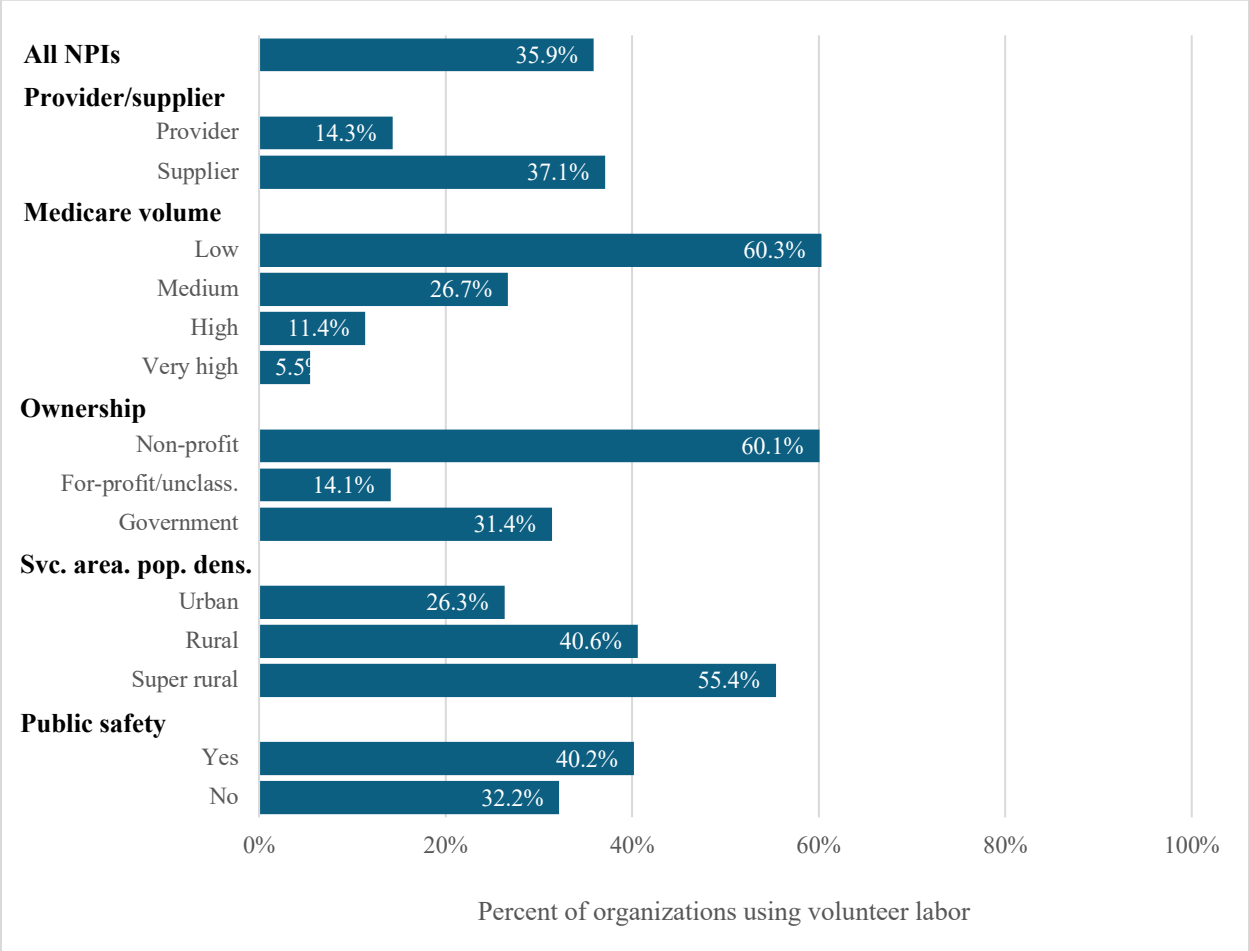
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Svc. area. pop. dens." is service area population density. All percentages use a denominator of 9,608 weighted total NPIs.

Figure 2.3. Provision of ALS Emergency Response Staff as Part of a Joint Response



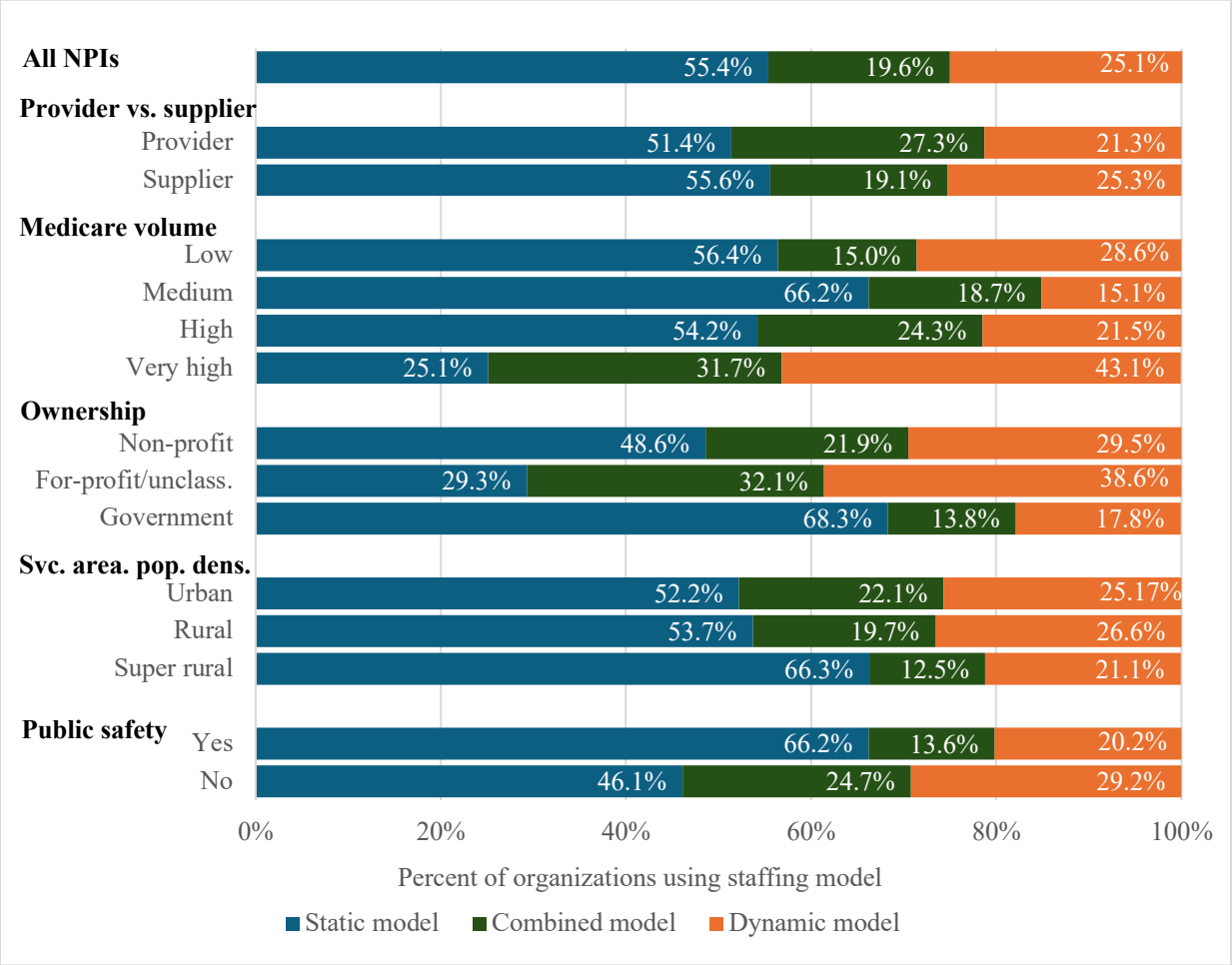
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. ALS = advanced life support. BLS = basic life support. "Svc. area. pop. dens." is service area population density. All percentages use a denominator of 9,608 weighted total NPIs.

Figure 2.4. Use of Volunteer Labor



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Svc. area. pop. dens." is service area population density. All percentages are out of 9,608 weighted total NPIs.

Figure 2.5. Staff Deployment Model



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Svc. area. pop. dens." is service area population density. All percentages are out of 9,608 weighted total NPIs. Static deployment is defined in the GADCS as having the same number of fully staffed ground ambulance units available all of the time. Dynamic deployment is defined as having a variable number of units depending on the time of day or day of the week. Combined deployment uses both of these methods depending on the time of day.

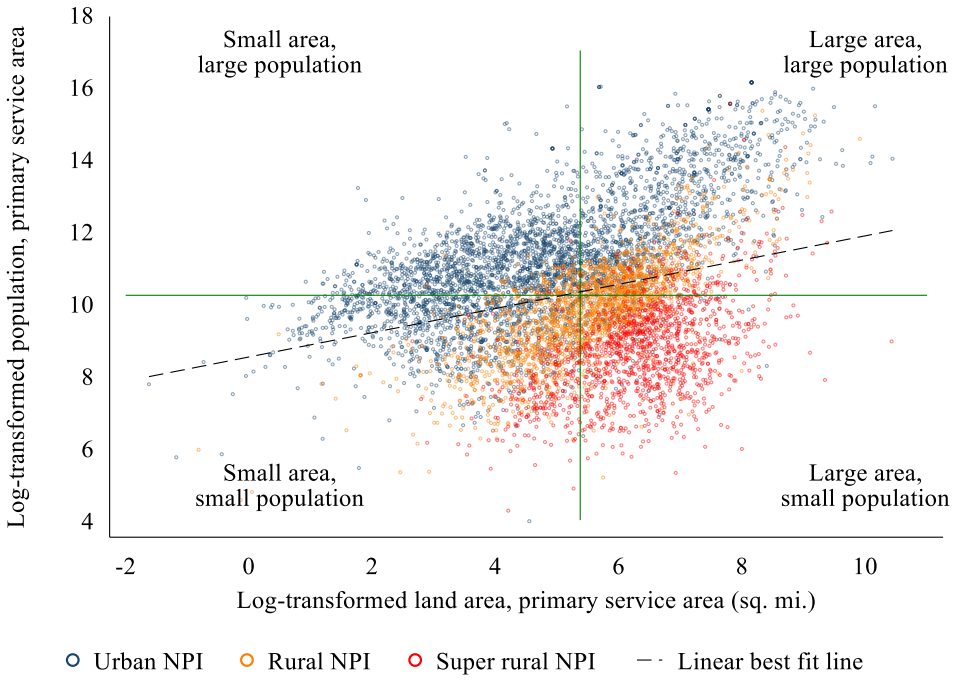
Section 3: Service Area

Table 2.3. Primary Service Area Square Mileage

	Mean	Median	25th Percentile	75th Percentile
All NPIs	581	206	64	586
Provider vs. supplier status				
Supplier	552	190	60	546
Provider	1,116	707	339	1,366
Medicare transport volume				
Low	387	160	64	408
Medium	422	151	39	448
High	727	330	85	815
Very high	1,536	747	325	1,654
Ownership category				
Non-profit	439	173	70	456
For-profit	1,331	547	149	1,649
Government	386	171	49	468
Service area pop. density				
Urban	510	106	32	386
Rural	478	255	114	495
Super rural	922	590	275	1,096
Public safety				
No	876	405	138	968
Yes	244	102	34	269

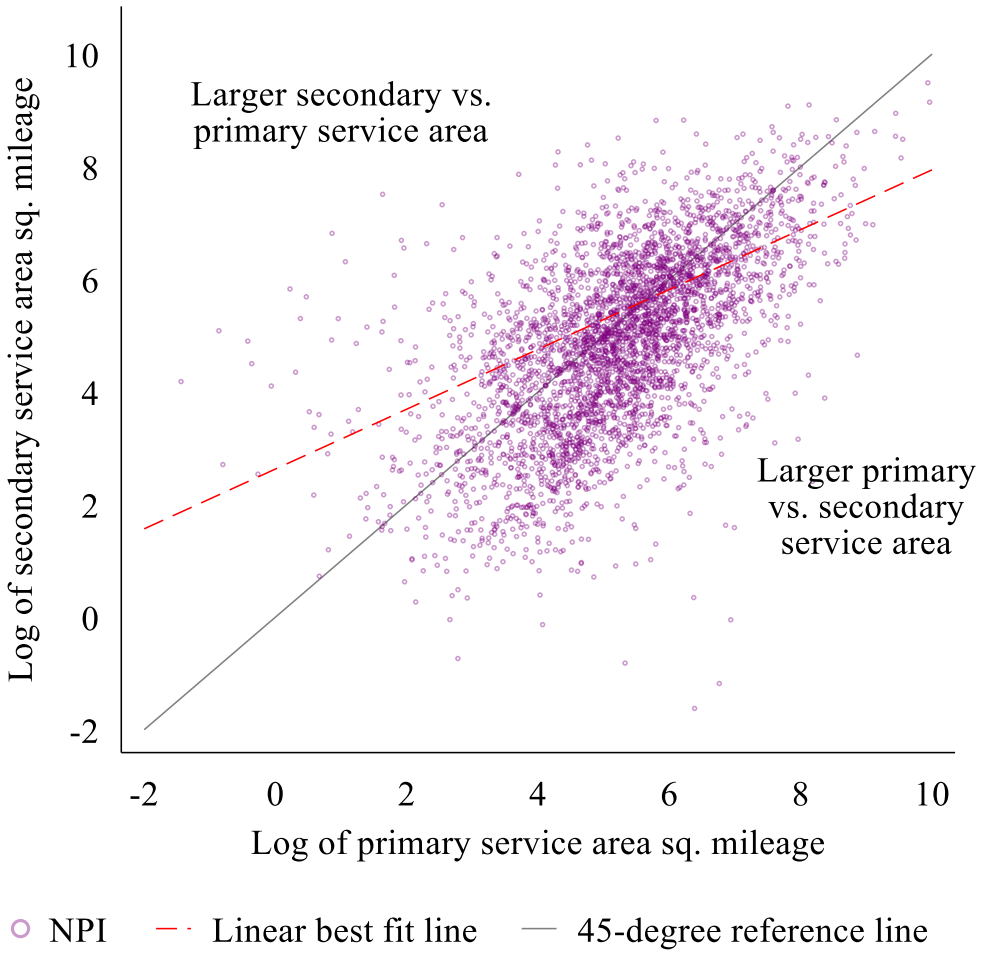
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Statistics calculated over 9,536 weighted NPIs with fewer than 300 reported primary service area ZIP Codes.

Figure 2.6. Primary Service Area Square Mileage Versus Population



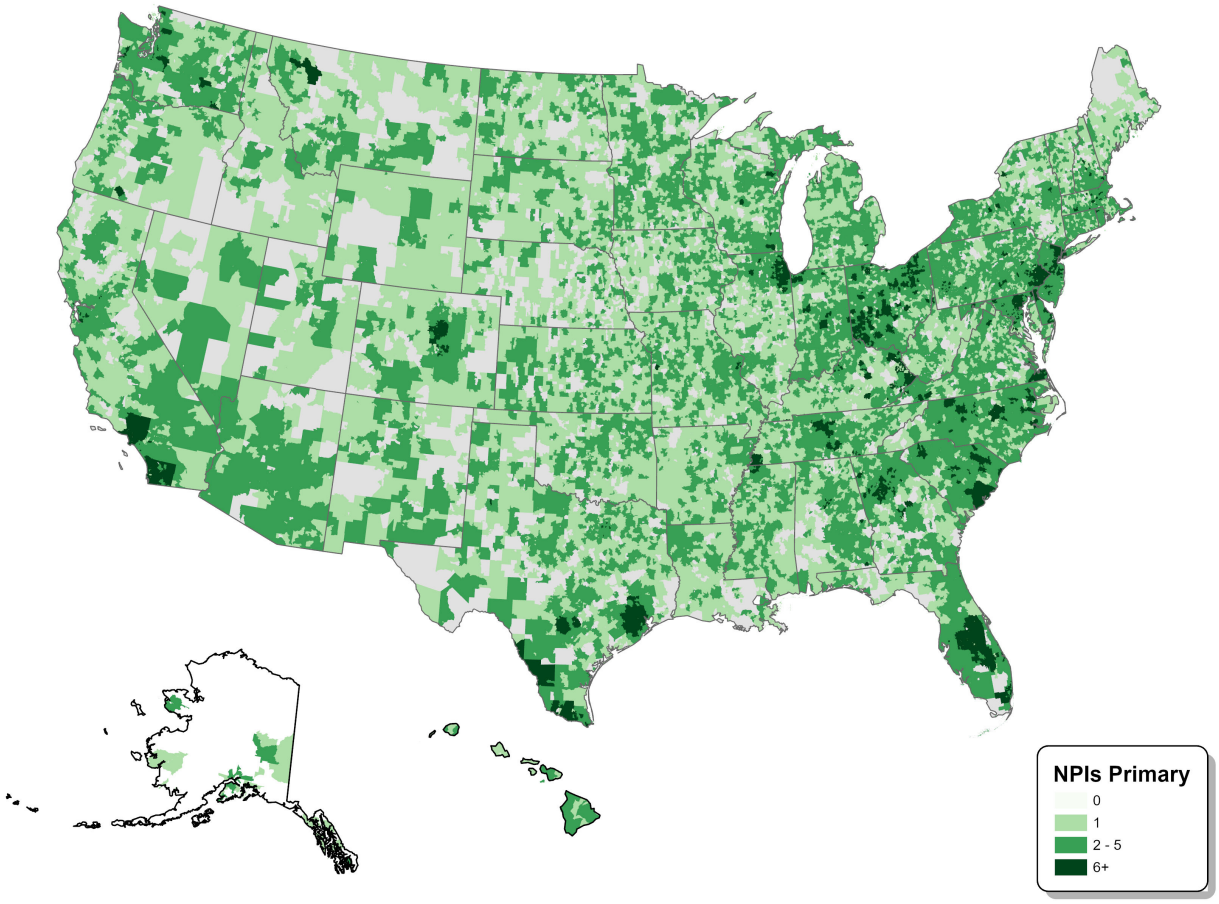
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Sq. mi." is square mile. Statistics calculated over 9,536 weighted NPIs with fewer than 300 reported primary service area ZIP Codes.

Figure 2.7. Ratio of Mean and Median Secondary to Primary Service Area Square Mileage



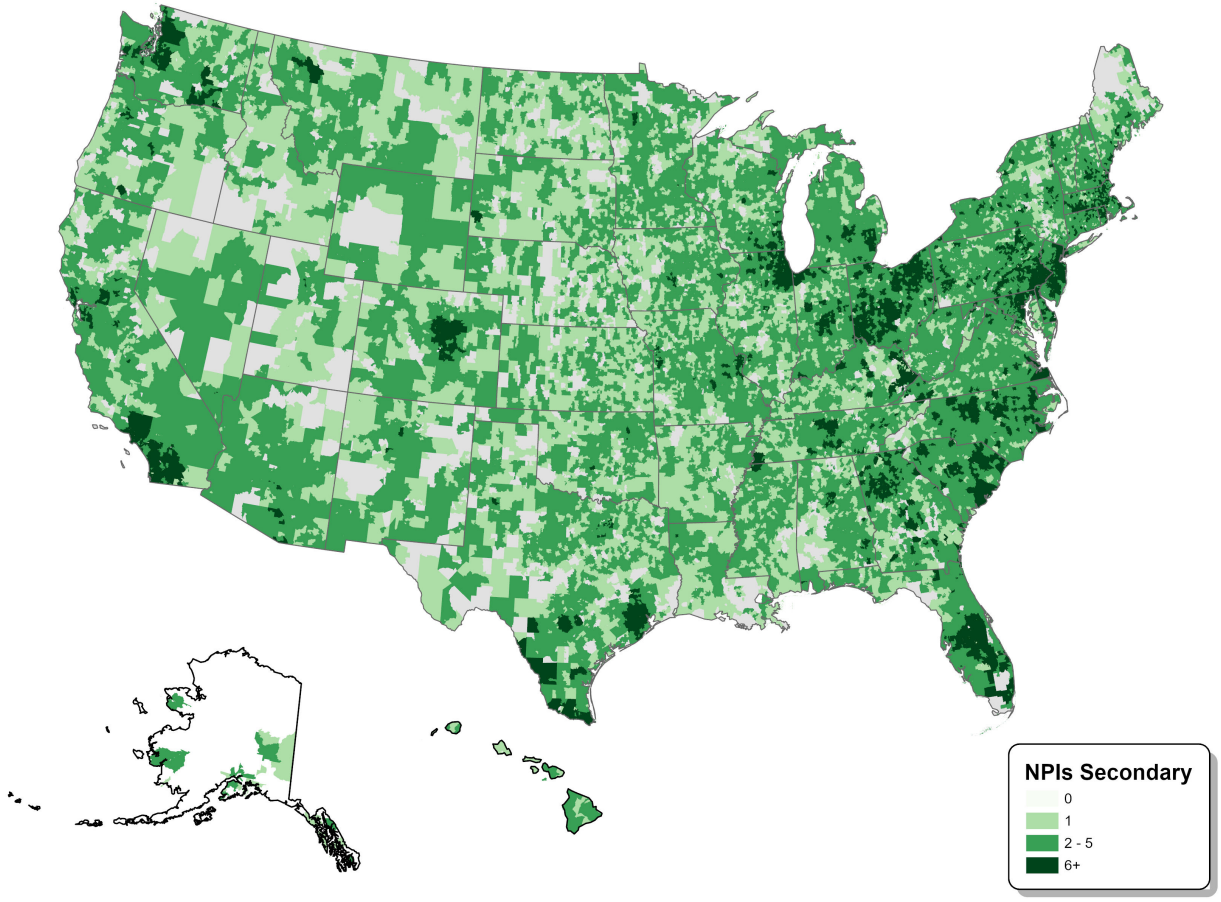
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "sq." is square. These statistics were calculated over 4,704 weighted NPIs (49 percent) that reported having a secondary service area and with fewer than 300 reported secondary service area ZIP Codes.

Figure 2.8. Count of Organizations Reporting Each ZIP Code as Part of Their Primary Service Area



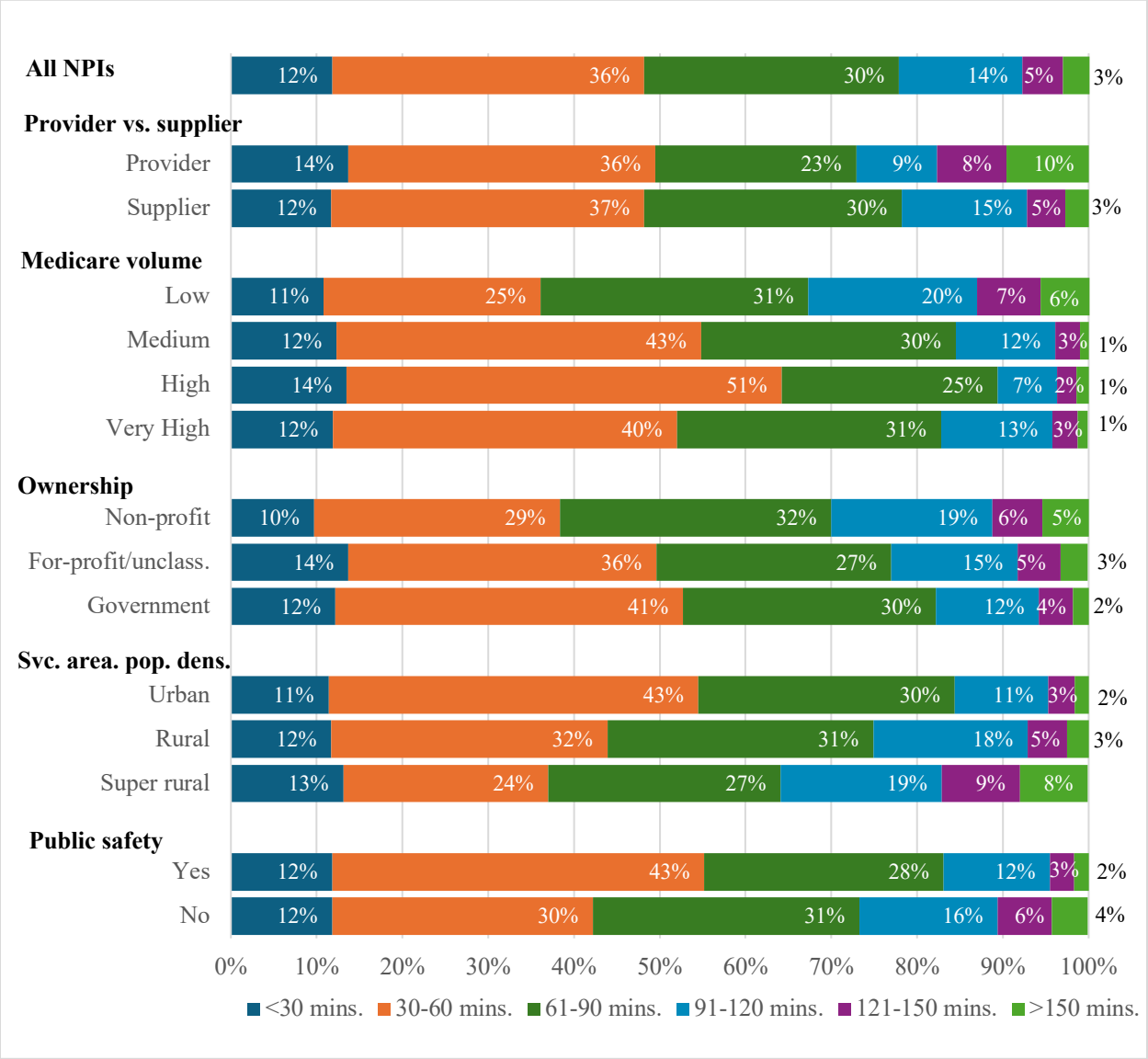
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Map regions are U.S. ZIP Codes. Unit of analysis is an NPI–ZIP Code pair (unweighted).

Figure 2.9. Count of Organizations Reporting Each ZIP Code as Part of Their Primary or Secondary Service Areas



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Map regions are U.S. ZIP Codes. Unit of analysis is an NPI–ZIP Code pair (unweighted).

Figure 2.10. Average Trip Time in Primary Service Area



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Svc. area. pop. dens." is service area population density. "Mins." is minutes. Unit of analysis is an NPI.

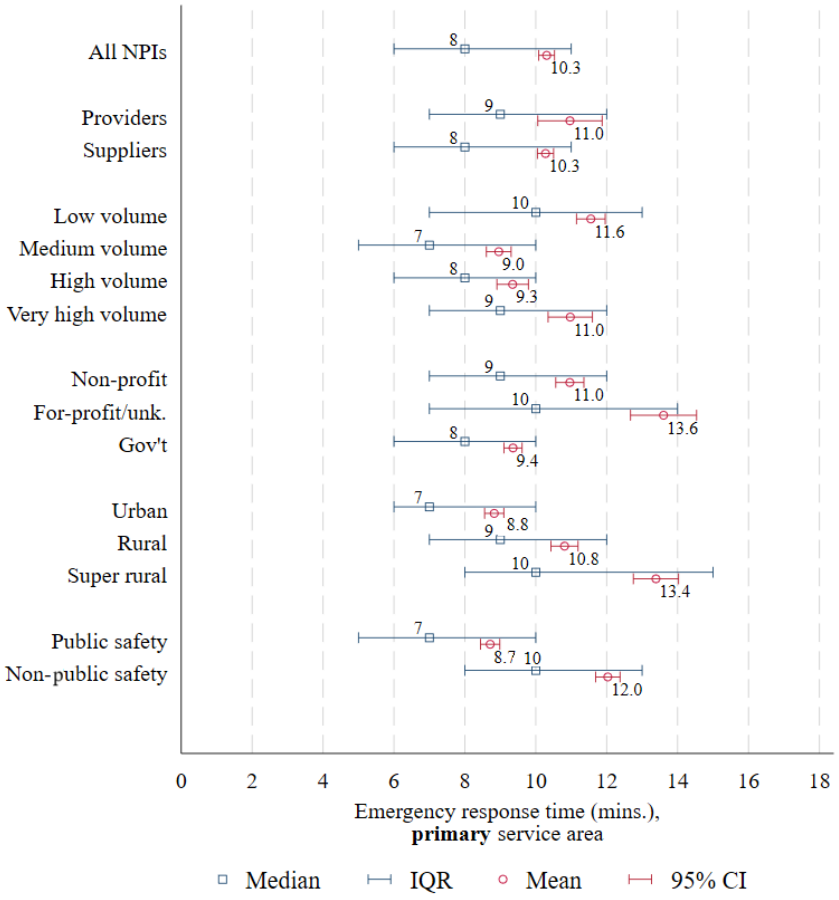
Table 2.4. Primary Versus Secondary Average Trip Time Responses

Primary Service Area	Secondary: <30 Mins.	Secondary: 30–60 Mins.	Secondary: 61–90 Mins.	Secondary: 91–120 Mins.	Secondary: 121–150 Mins.	Secondary: >150 Mins.
<30 mins.	6.3%[a]	3.7%	N/R	N/R	N/R	N/R
30–60 mins.	N/R	22.6%[a]	12.9%	1.6%	N/R	N/R
61–90 mins.	N/R	1.7%	18.9%[a]	9.2%	1.1%	N/R
91–120 mins.	N/R	N/R	N/R	7.4%[a]	3.9%	1.0%
121–150 mins.	N/R	N/R	N/R	N/R	2.3%[a]	1.3%
>150 mins.	N/R	N/R	N/R	N/R	N/R	1.8%[a]

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: These statistics were calculated over 4,704 weighted NPIs that reported having a secondary service area. "Mins." is minutes. "N/R" is not reported due to small cell size.
[a] Shaded cells on the diagonal indicate the same average trip time response for both primary and secondary service areas.

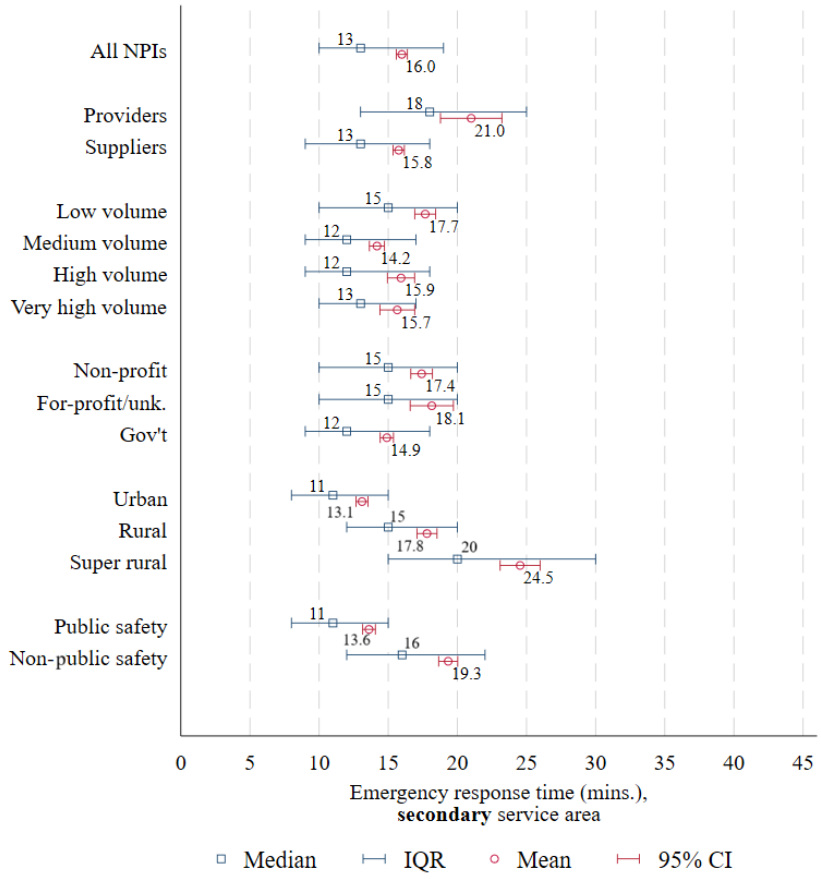
Section 4: Emergency Response Time

Figure 2.11. Emergency Response Time Descriptive Statistics, Primary Service Area



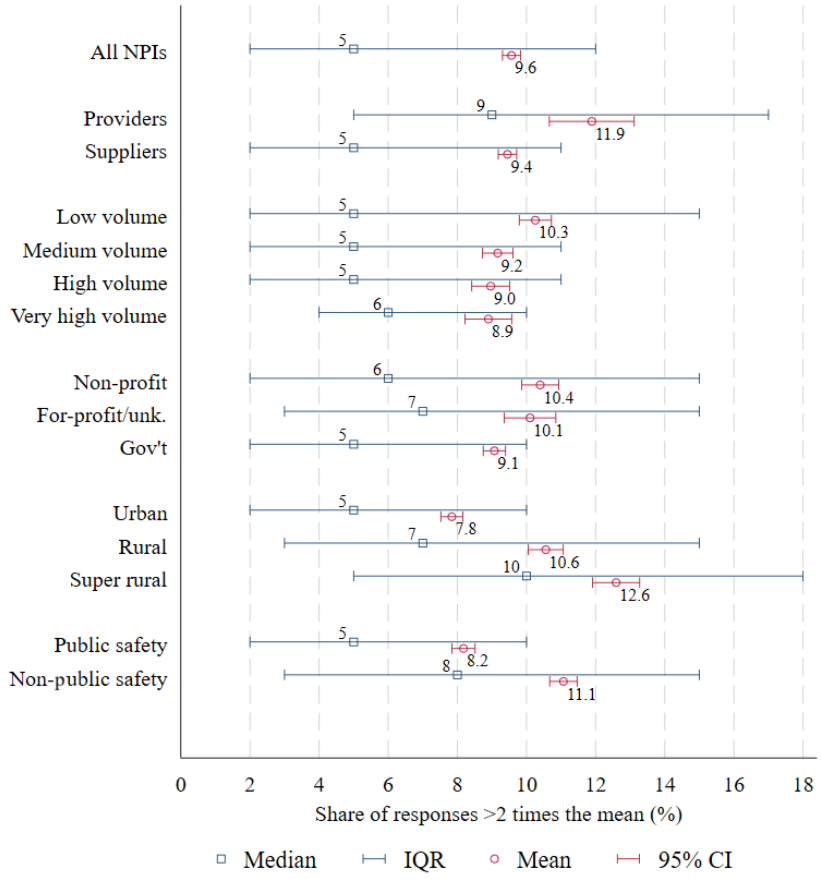
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range (i.e., the span encompassing the half of organizations falling in the second and third quartiles). CI = confidence interval. “Gov’t” is government. “Unk.” is unknown/unclassified. “(mins.)” is minutes.

Figure 2.12. Emergency Response Time Descriptive Statistics, Secondary Service Area



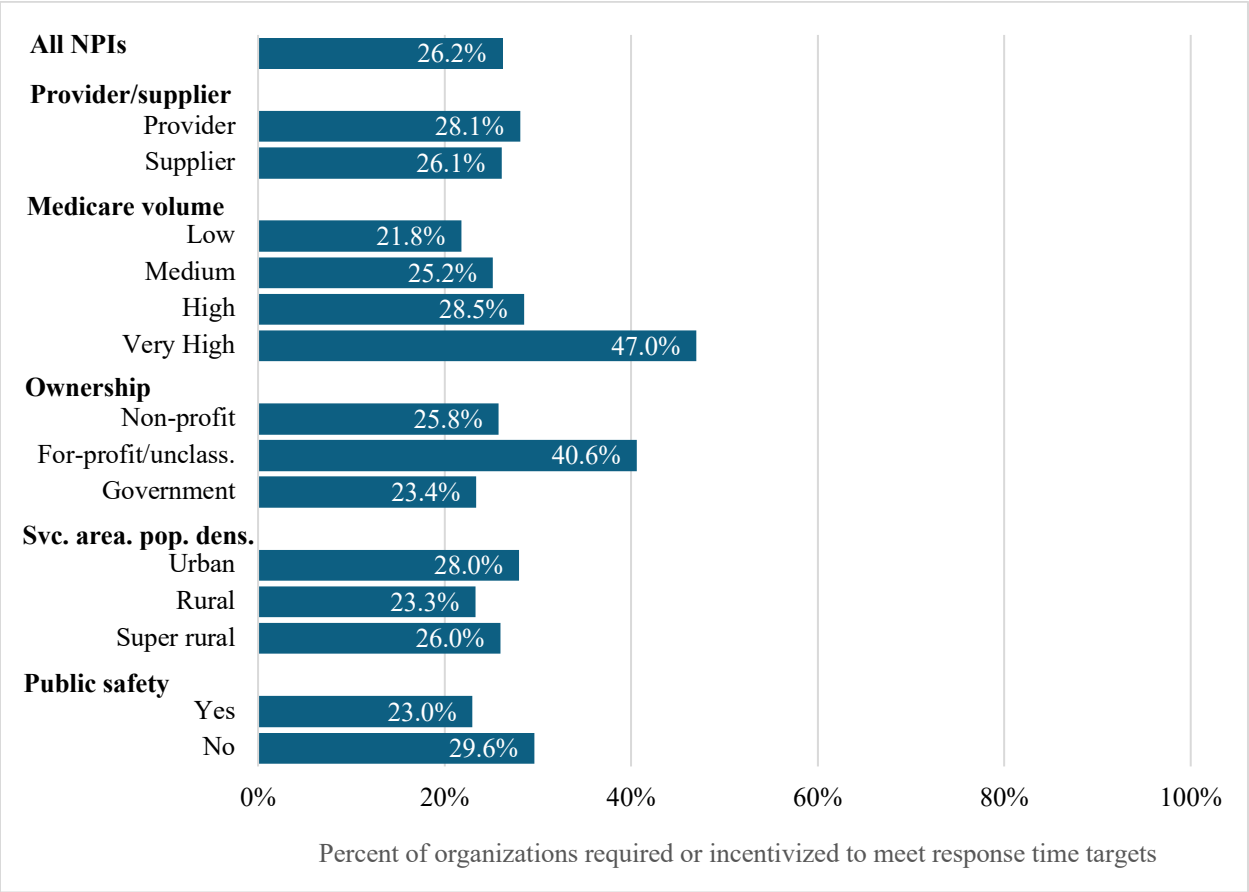
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. “Gov’t” is government. “Unk.” is unknown/unclassified. “(mins.)” is minutes.

Figure 2.13. Share of Primary Service Area Emergency Responses Taking Twice the Mean



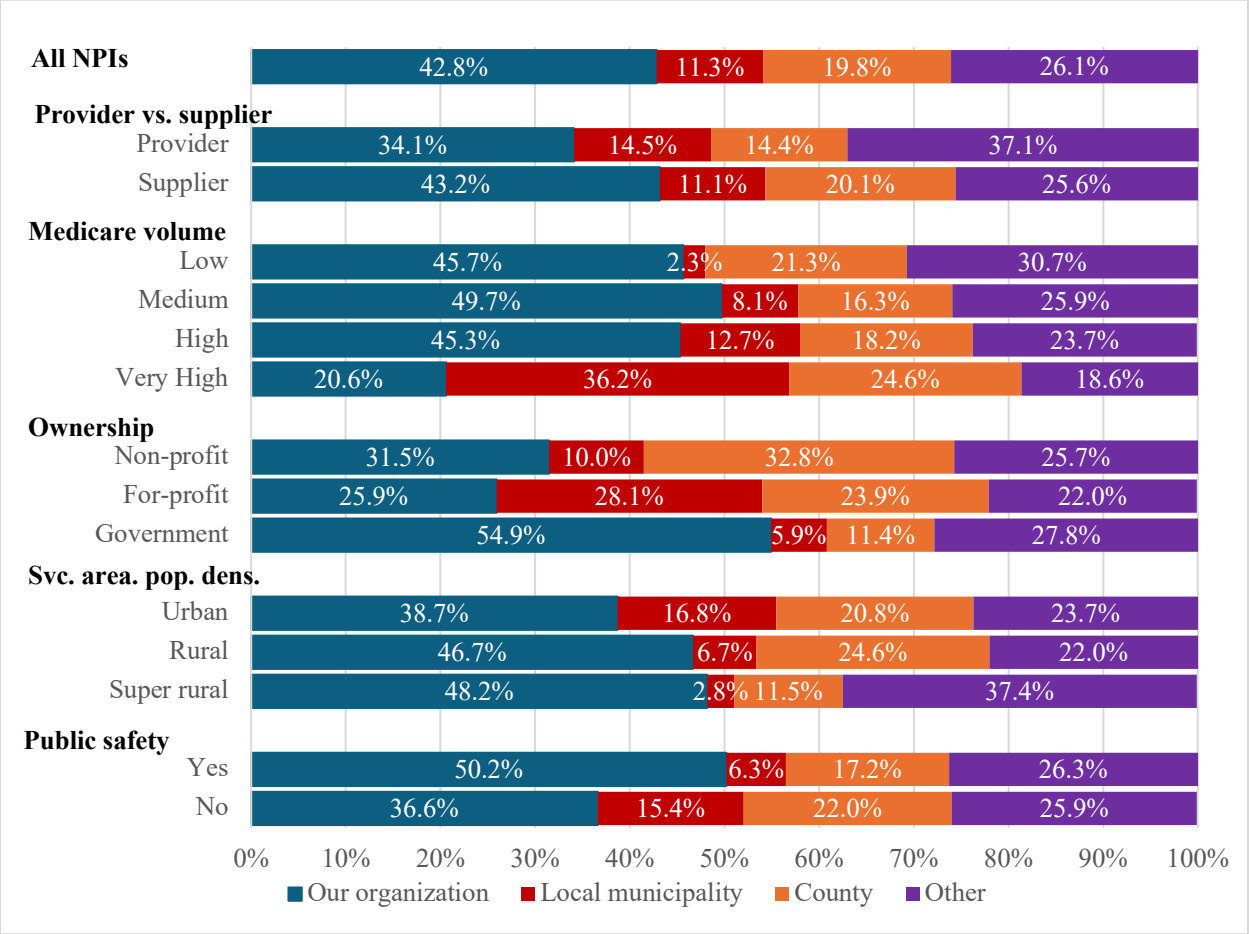
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. “Gov’t” is government. “Unk.” is unknown/unclassified.

Figure 2.14. Share of Organizations Required or Incentivized to Meet Response Time Targets



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "Svc. area. pop. dens." is service area population density.

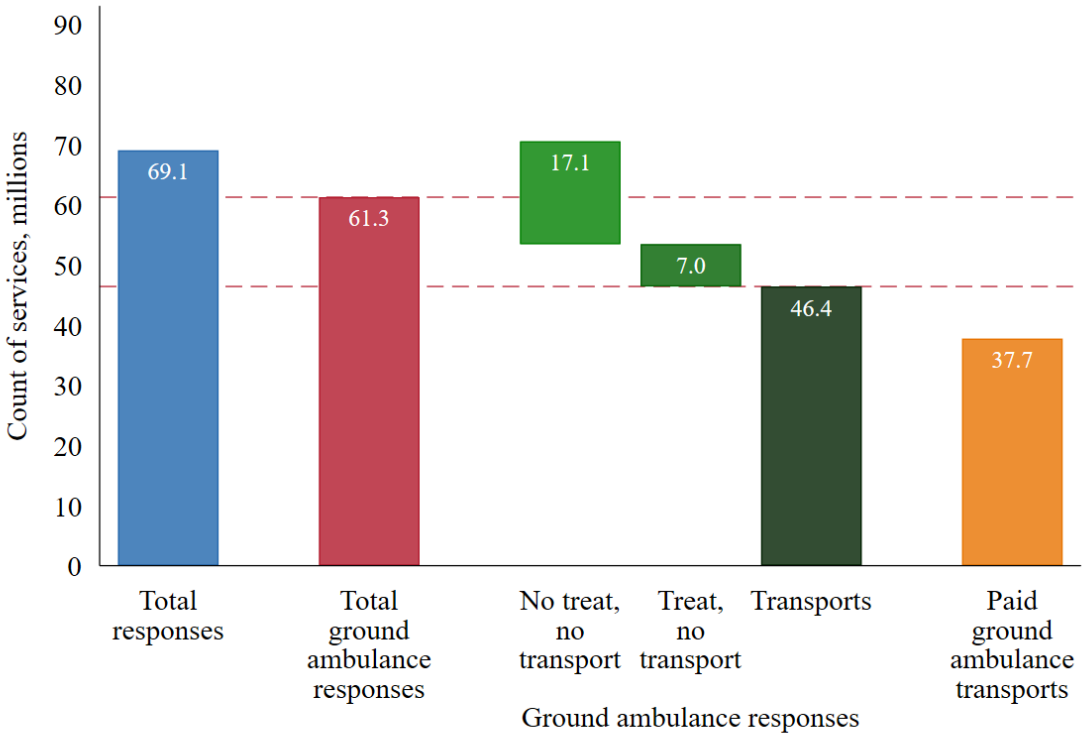
Figure 2.15. Who Determines Response Time Targets?



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "pop." is population. Unit of analysis is an NPI. The "Other" category could include accreditation and standards bodies, states, etc., as well as responses indicating specific municipalities or counties reported via this option rather than the separate "Local Municipality" and "County" options.

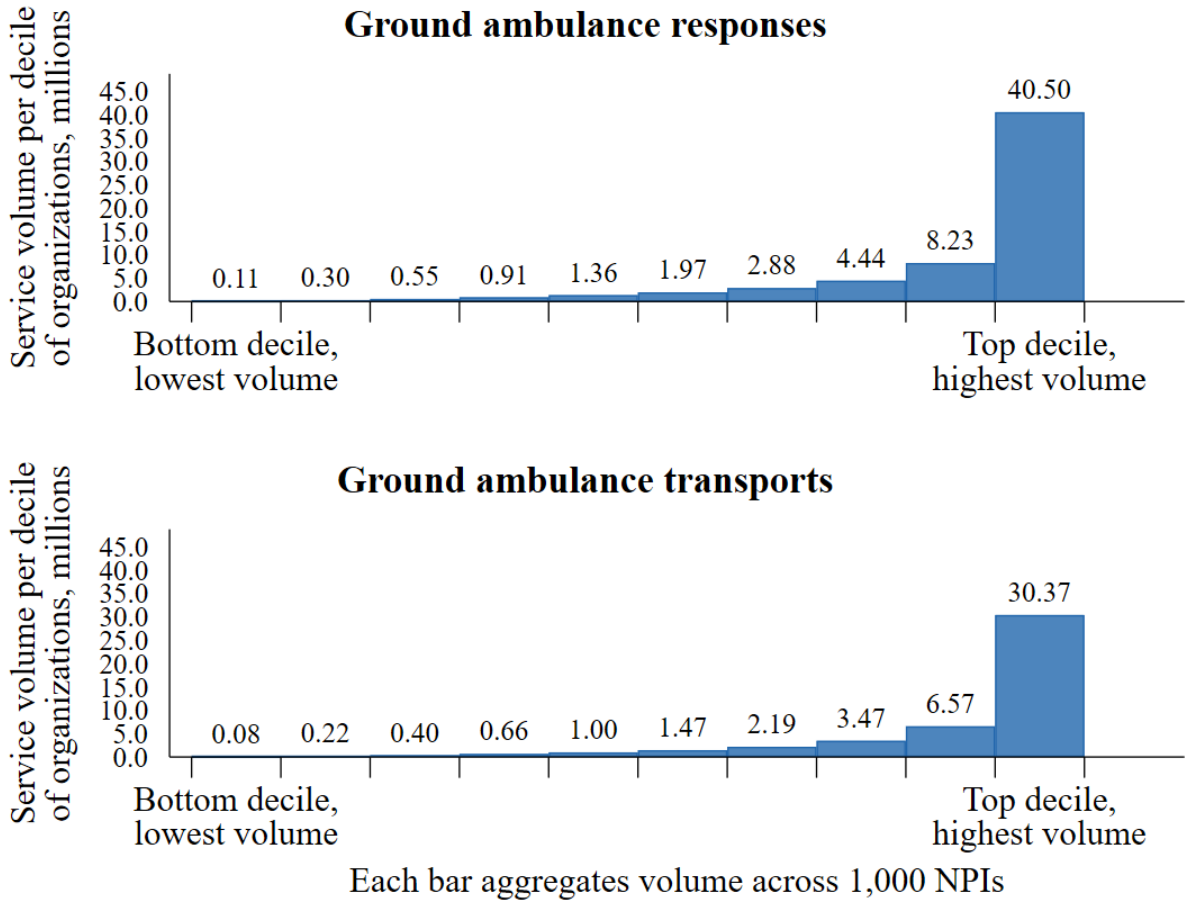
Section 5: Ground Ambulance Service Volume

Figure 2.16. Aggregated Service Volume Count Comparison, All Organizations



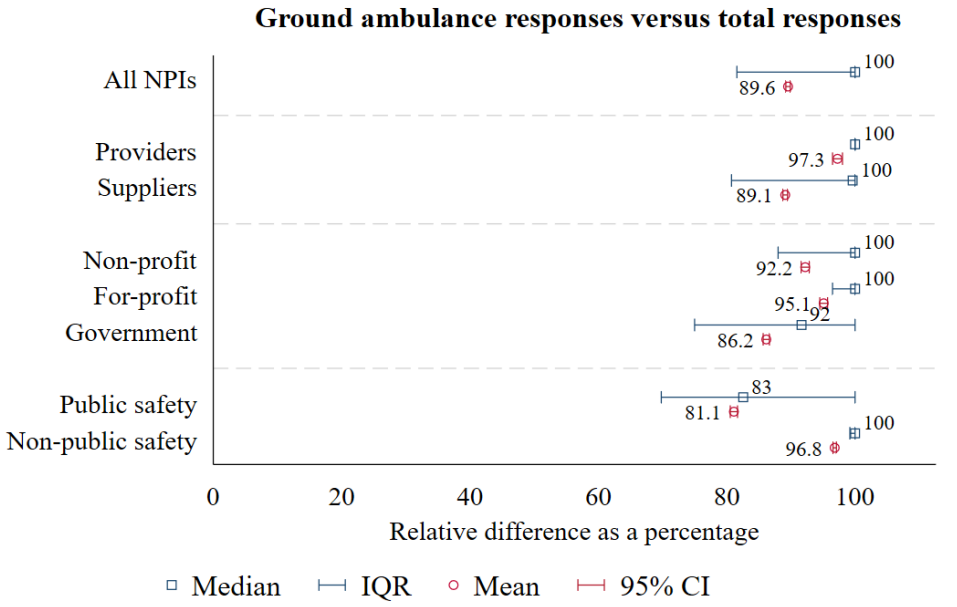
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Sums across graphed values may not exactly equal aggregated results due to rounding. Conceptually, the combined height of the three "Ground ambulance responses" bars should approximately equal the height of the "Total ground ambulance responses" bar. However, the GADCS instructions and definitions address scenarios where an exact match is not expected.

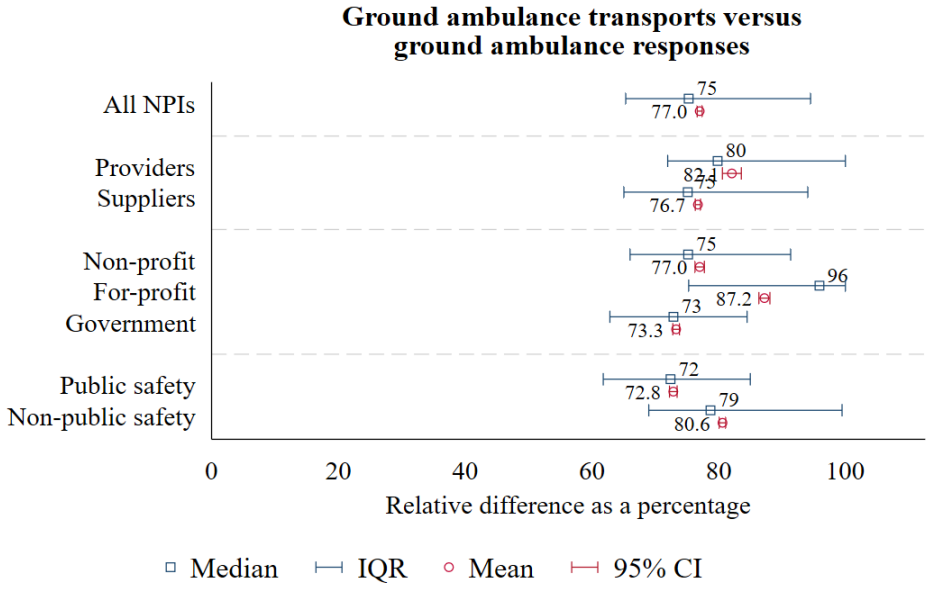
Figure 2.17. Ground Ambulance Response Volume by Decile

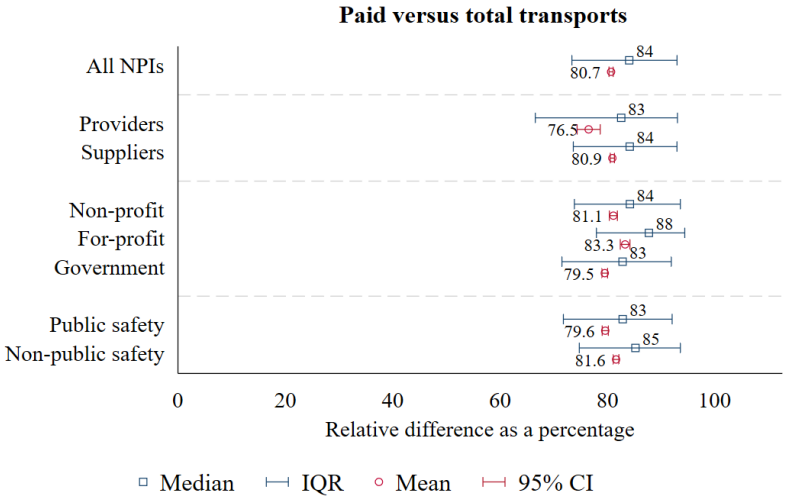


SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier.

Figure 2.18. Mean and Median Organization-Level Ratios Between Volume Measures

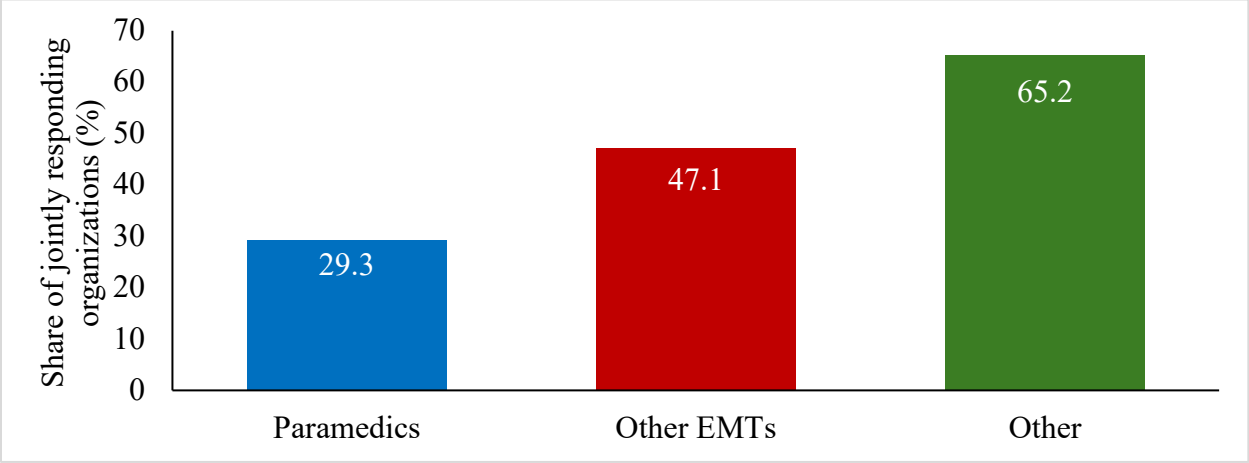






SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. NPI = National Provider Identifier.

Figure 2.19. Percentage of Non-Transporting Organization Staff Involved in Joint Responses



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: EMT = emergency medical technician. Denominator includes all NPIs that reported participating in joint responses.

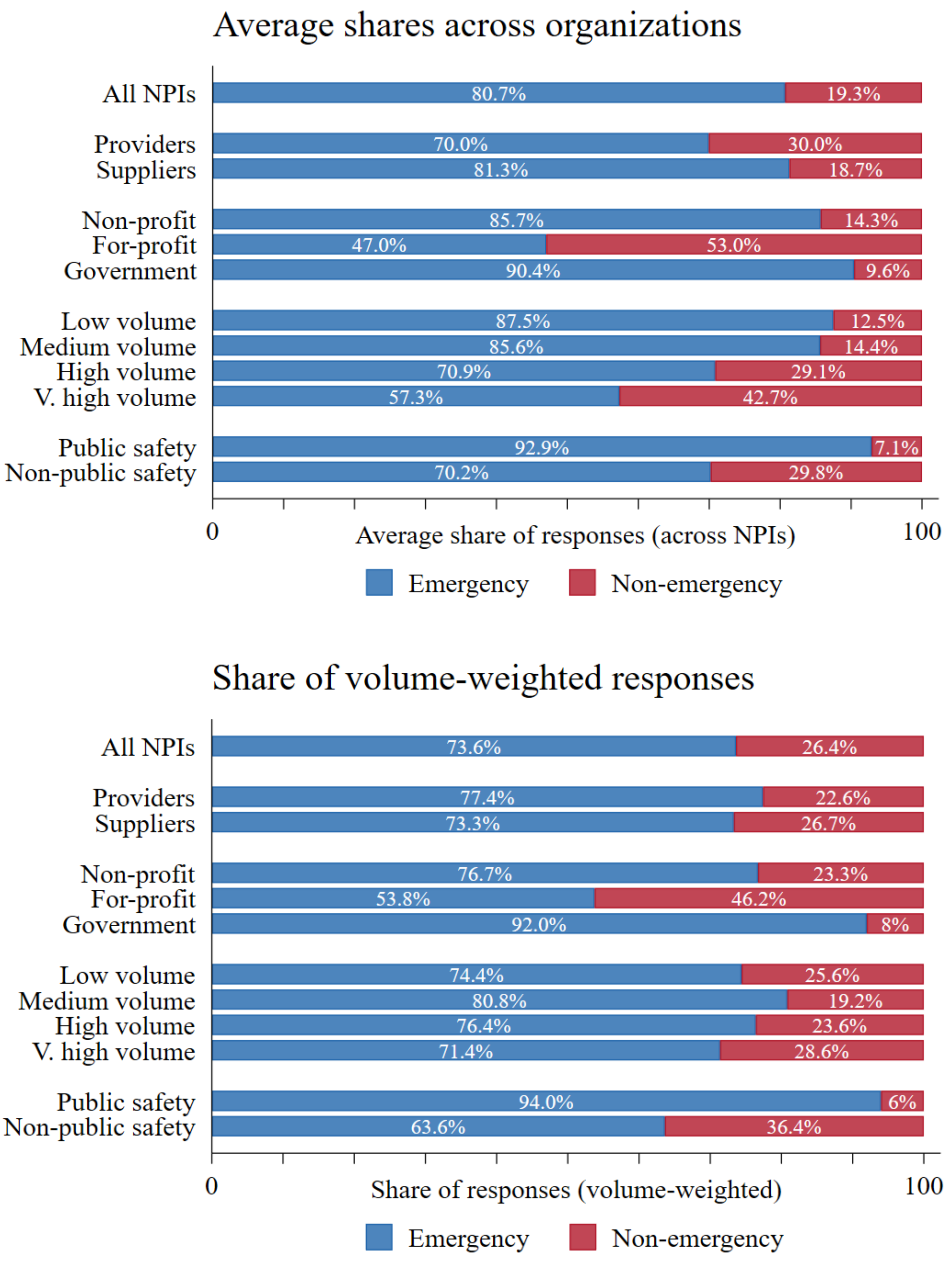
Table 2.5. Miscellaneous Section 5 Responses

Section 5 Question	Denom.	Mean (95% CI)	25th Pctl.	Median	75th Pctl.
Question 4: Share of ground ambulance responses in secondary service area	4,719	13.0 (12.5, 13.4)	3.0	8.0	18.0
Question 8: Share of organizations participating in standby events	9,608	80.6 (79.7, 81.5)	100.0	100.0	100.0
Question 9: Count of paramedic intercept responses using Medicare's definition	225	102.5 (39.1, 165.8)	1.0	9.0	34.0
Question 10: Count of non-paramedic intercept joint ALS responses meeting a BLS ambulance from another organization	3,566	65.1 (55.6, 74.5)	0.0	2.0	18.0

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: ALS = advanced life support. BLS = basic life support. CI = confidence interval. "Denom." is denominator and indicates the weighted NPI denominators for each question. "Pctl." is percentile.

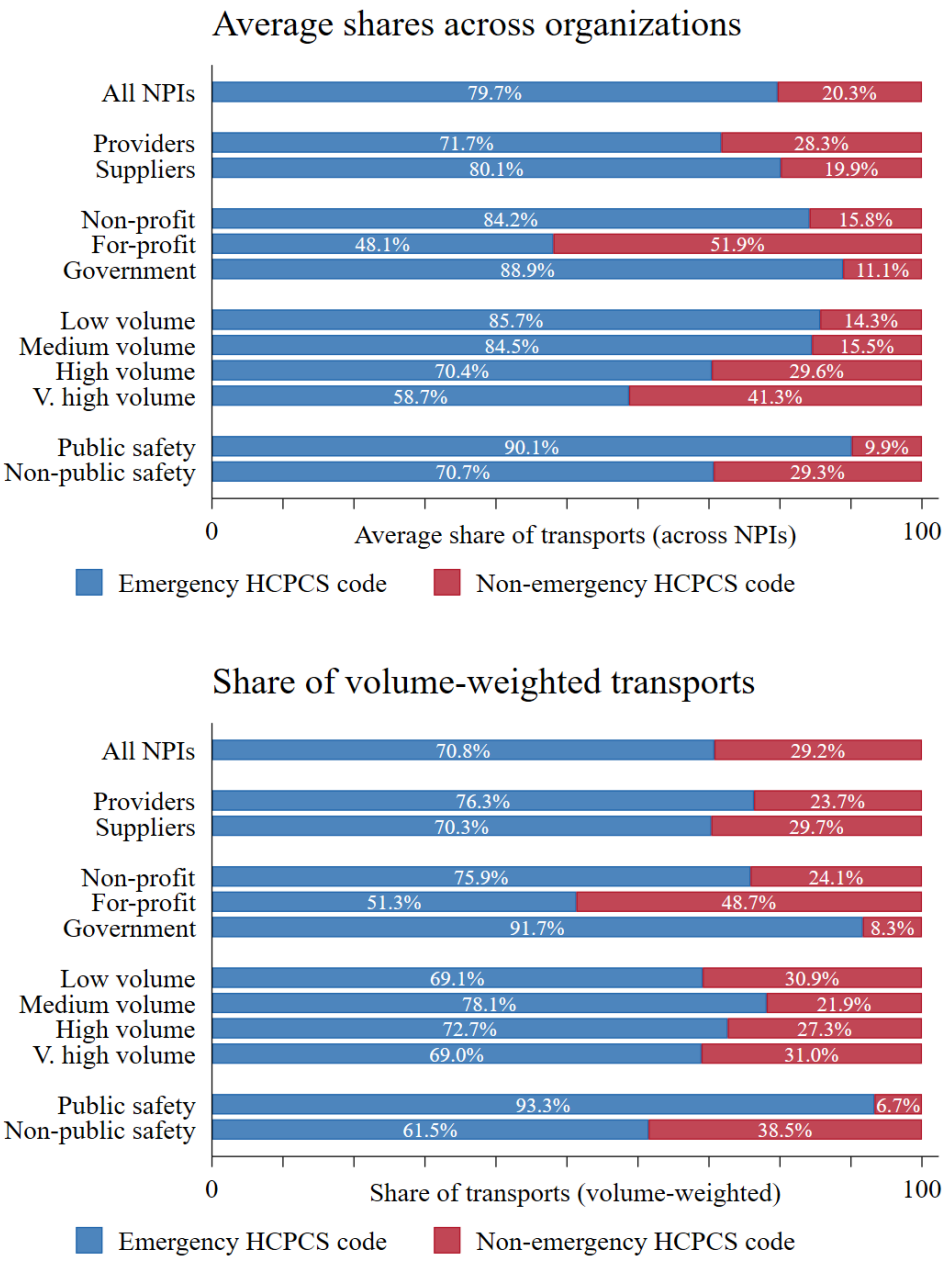
Section 6: Service Mix

Figure 2.20. Shares of Emergency and Non-Emergency Responses by Organization and With Volume Weights



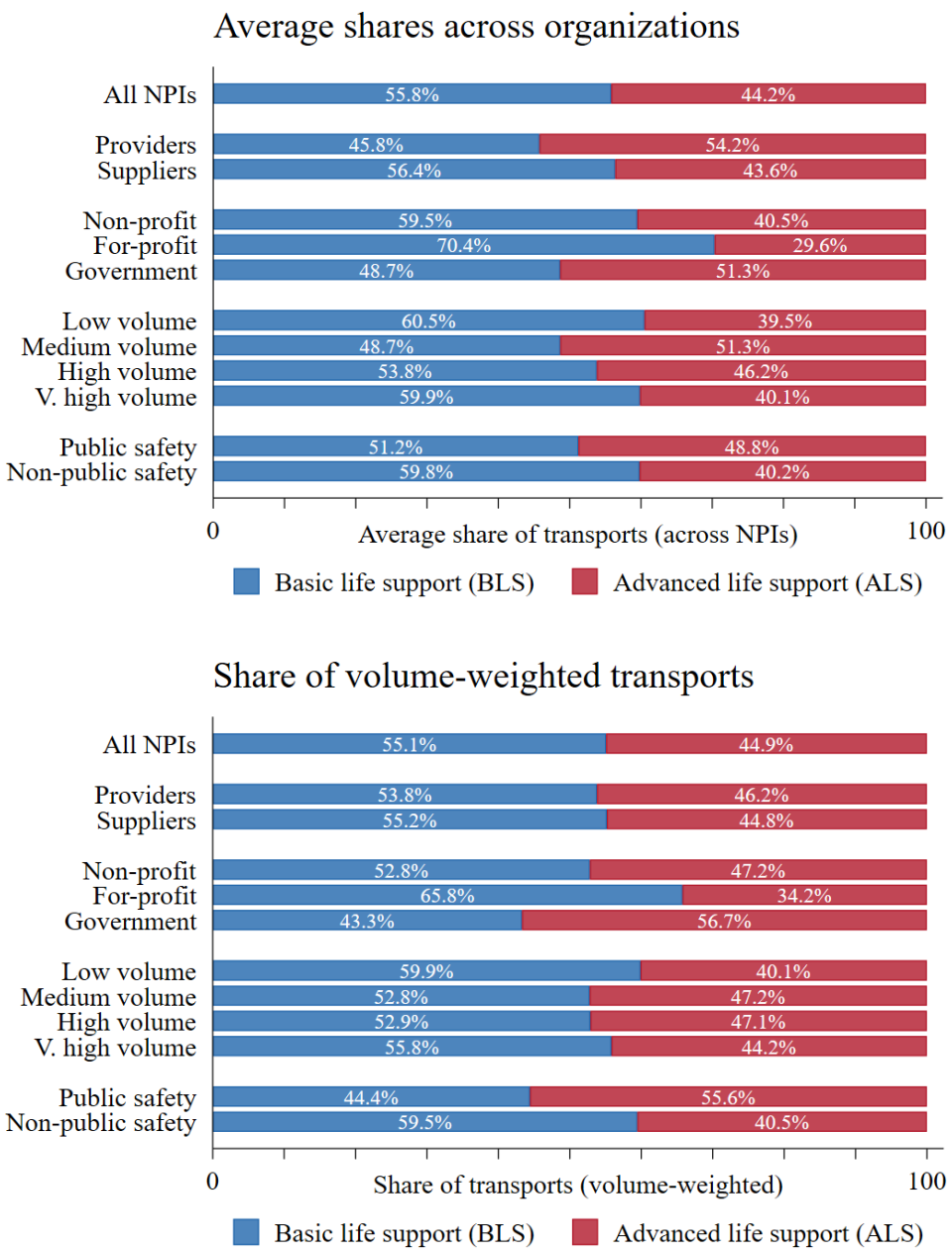
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Averages are calculated counting each organization equally in the top panel and weighting based on volume in the bottom panel.

Figure 2.21. Shares of Emergency and Non-Emergency Transports by Organization and With Volume Weights



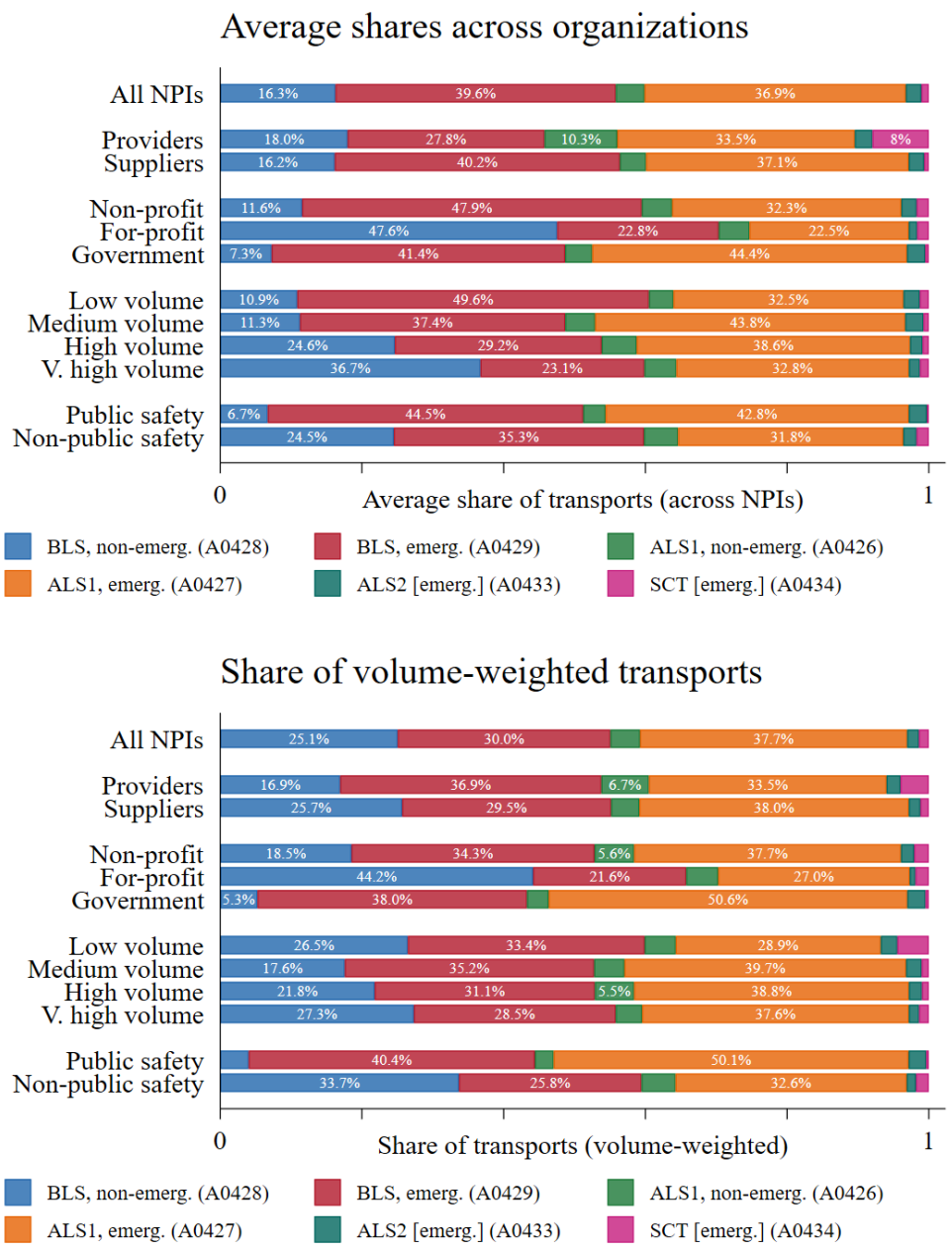
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. HCPCS = Healthcare Common Procedure Coding System. Averages are calculated counting each organization equally in the top panel and weighting based on volume in the bottom panel.

Figure 2.22. Shares of BLS and ALS Transports by Organization and With Volume Weights



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Averages are calculated counting each organization equally in the top panel and weighting based on volume in the bottom panel.

Figure 2.23. Shares of Transports by HCPCS Code, by Organization and Volume-Weighted



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. BLS = basic life support. ALS = advanced life support. SCT = specialty care transport. "non-emerg." is non-emergency. "emerg." is emergency.

Table 2.6. Shares of Transports That Were Interfacility Transports

Share of Transports That Were Interfacility Transports	All Organizations (% of total)	For-Profit Organizations Only (% of total)	All Organizations Excluding For-Profit Organizations (% of total)
0 to 20 percent	73.2%	37.1%	79.5%
21 to 80 percent	19.4%	42.8%	15.4%
81 to 100 percent	7.4%	20.2%	5.1%

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Percentages may not total to 100 percent due to rounding.

Section 7: Labor Costs

Table 2.7. Section 7, Question 1 Response Cases

Case	Section 2 Response: Public Safety?	Section 2 Response: Volunteer?	Column Header Labels
A	No	No	Paid staff
B	No	Yes	Paid staff Volunteer staff
C	Yes	No	Paid staff without public safety role Paid staff with public safety role
D	Yes	Yes	Paid staff without public safety role Volunteer staff without public safety role Paid staff with public safety role Volunteer staff with public safety role

SOURCE: Author adaptation of GADCS instrument instructions.

Table 2.8. Use of EMT/Responder Staff Categories by Organizational Type

	All NPIs (n, % of 9,608)	Volunteer NPIs (n, % of 3,399)	…with volunteer staff in-category (n, % of left)	Public safety NPIs (n, % of 4,447)	…with public safety staff in-category (n, % of left)
EMT-Basic	9,034 (94.0%)	3,357 (98.8%)	2,877 (85.7%)	4,094 (92.1%)	3,429 (83.8%)
EMT-Intermediate	4,166 (43.4%)	1,555 (45.8%)	1,075 (69.1%)	1,710 (38.5%)	1,399 (81.8%)
EMT-Paramedic	7,318 (76.2%)	1,949 (57.4%)	1,189 (61.0%)	3,391 (76.3%)	2,908 (85.8%)
Nurse, doctor, etc.	1,001 (10.4%)	342 (10.1%)	281 (82.2%)	220 (5.0%)	125 (56.7%)
EMR	2,116 (22.0%)	1,192 (35.1%)	1,062 (89.1%)	905 (20.4%)	698 (77.1%)
Driver	3,112 (32.4%)	1,977 (58.2%)	1,801 (91.1%)	1,259 (28.3%)	934 (74.2%)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. EMT = emergency medical technician. EMR = emergency medical responder. Overall denominator of 9,608 reflects sampling weights. Percentages in the table may not add up to 100 because of rounding.

Table 2.9. Use of Administration/Facilities Staff Categories by Organizational Type

	All NPIs (n, % of 9,608)	Volunteer NPIs (n, % of 3,399)	…as volunteers (n, % of left)	Public safety NPIs (n, % of 4,447)	…as public safety (n, % of left)
Administration	7,290 (75.9%)	2,476 (72.9%)	1,133 (45.8%)	3,306 (74.3%)	2,049 (62.0%)
Management	6,131 (63.8%)	1,997 (58.8%)	1,164 (58.3%)	2,654 (59.7%)	2,151 (81.1%)
Dispatch/call center	2,455 (25.6%)	469 (13.8%)	158 (33.6%)	814 (18.3%)	602 (73.9%)
Vehicle maintenance	3,378 (35.2%)	1,298 (38.2%)	887 (68.3%)	1,549 (34.8%)	1,048 (67.6%)
Facility maintenance	2,847 (29.6%)	1,342 (39.5%)	956 (71.3%)	1,311 (29.5%)	840 (64.1%)
Other	411 (4.3%)	145 (4.3%)	89 (61.6%)	160 (3.6%)	123 (76.6%)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Overall denominator of 9,608 reflects sampling weights. Percentages in the table may not add up to 100 because of rounding.

Table 2.10. Selected Reasons Why Administration/Facilities Staff Categories Were Not Reported in Section 7, Question 1

Labor Category (Paid for or Provided at No Cost by Another Entity)	NPIs not using labor category (n, % of 9,608)	Respondents reporting labor category provided at no cost (n)	(...% of 9,608 total NPIs)	…% of NPIs not using labor category
Dispatch/call center	7,152 (74.4%)	508	5.3	7.1
Labor Category (Staff Assigned to Another Role per the GADCS Instructions)	**NPIs not using labor category (n, % of 9,608 total)**	**Respondents reporting staff in another labor category (n)**	**(...% of 9,608 total NPIs)**	**…% of NPIs not using labor category**
Administration	2,317 (24.1%)	491	5.1	21.2
Management	3,476 (36.2%)	1,025	10.7	29.5
Vehicle maintenance	6,229 (64.8%)	713	7.4	11.4
Facility maintenance	6,761 (70.4%)	1,395	14.5	20.6

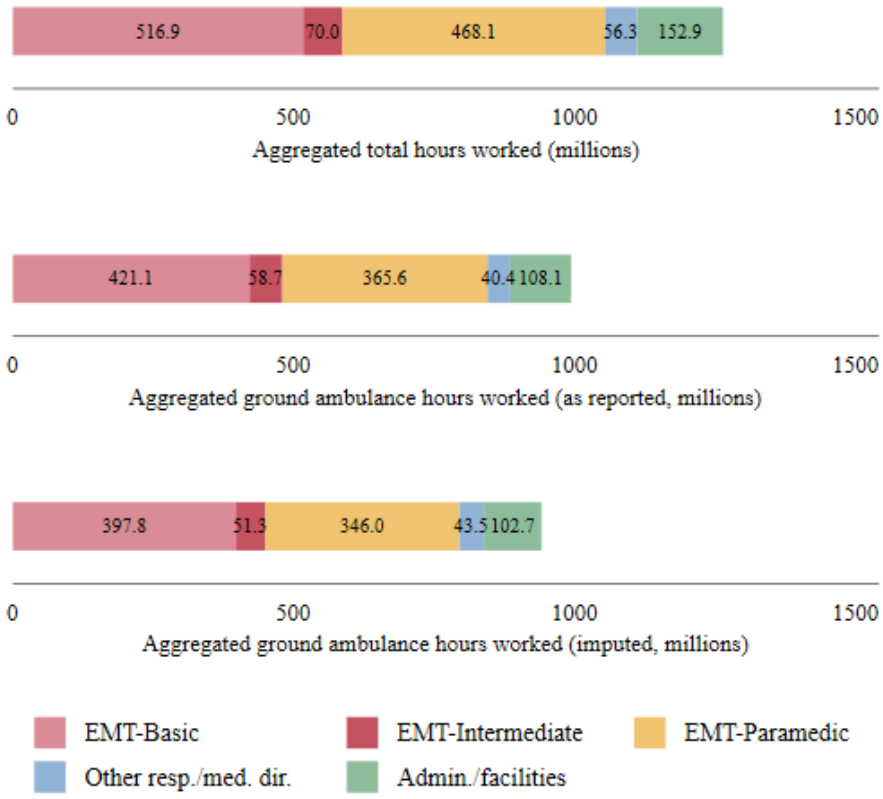
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Overall denominator of 9,608 reflects sampling weights. Percentages in the table may not add up to 100 because of rounding.

Table 2.11. Section 7, Medical Director Response Overview

	All NPIs (n, % of 9,608)	Volunteer NPIs (n, % of 3,399)	…as volunteers (n, % of left)	Public safety NPIs (n, % of 4,447)	…as public safety (n, % of left)
Reported on-staff medical director in Section 7, Question 1	3,262 (34.0%)	1,597 (47.0%)	1,200 (75.1%)	1,171 (26.3%)	651 (55.6%)
Reported contracted medical director in Section 7, Question 2	3,019 (31.4%)	665 (19.6%)	N/R	1,526 (34.3%)	N/R
Neither	3,327 (34.6%)	1,137 (33.4%)	N/R	1,750 (39.3%)	N/R

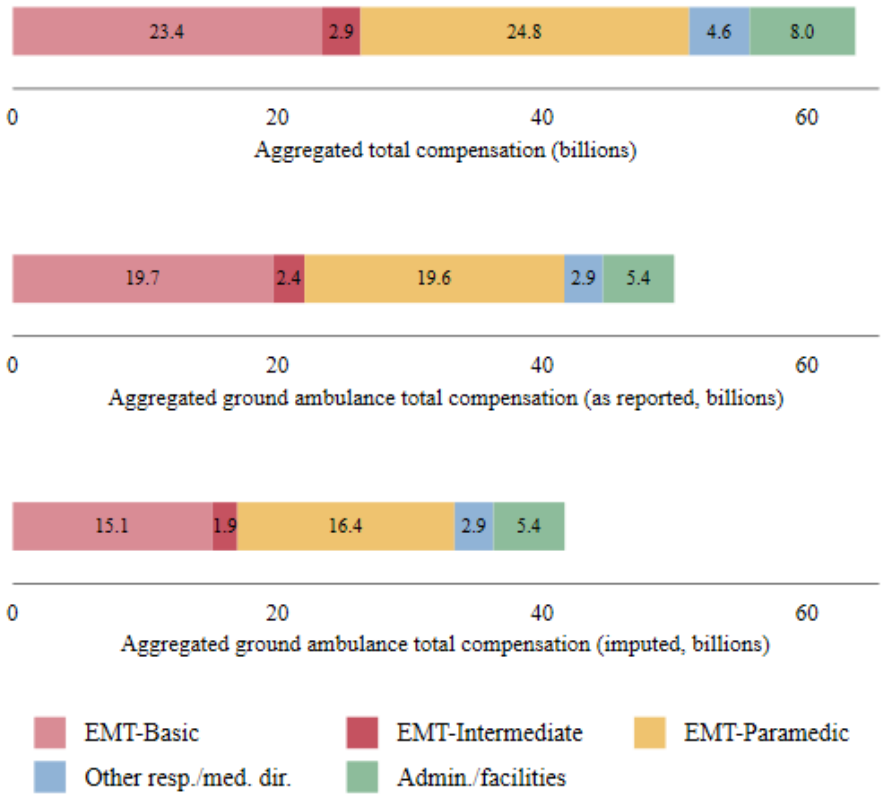
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. Overall denominator of 9,608 reflects sampling and post-stratification weights. Sums of counts and percentages may not exactly equal 9,608 NPIs and 100 percent due to rounding. "N/R" is not reported. Only Section 7, Question 1 differentiates between staff with volunteer and public safety roles (versus not).

Figure 2.24. Aggregated Total Hours Worked by Labor Category



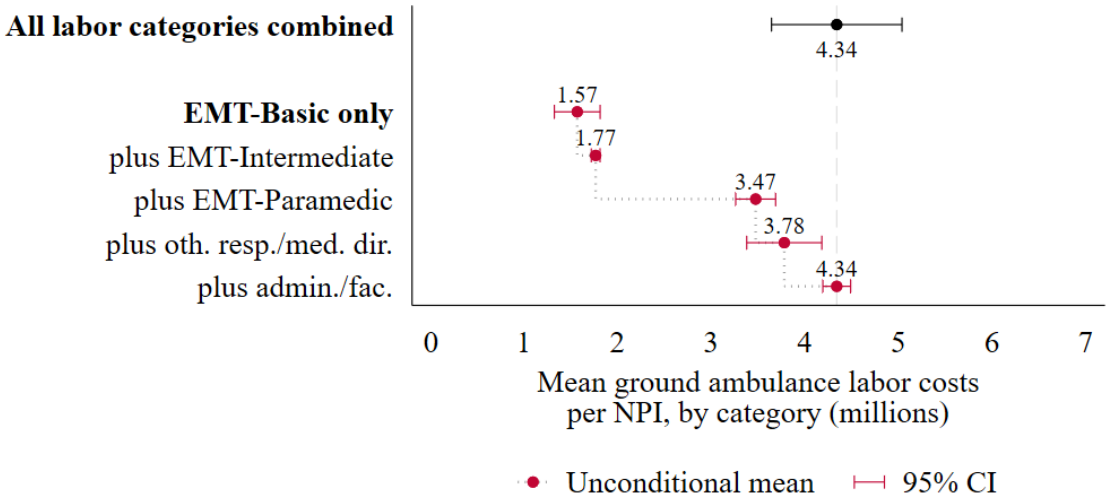
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: EMT = emergency medical technician. "Admin." is administration, "med. dir." is medical director. "Other resp." is other response staff, including emergency medical responders (EMRs) and ground ambulance drivers without EMT certification. The imputation procedures removed outliers and adjusted hours and compensation in some cases that were above or below thresholds of compensation per hour. The data cleaning procedures are explained in the Year 1 and Year 2 cohort analysis in Appendix B.

Figure 2.25. Aggregated Total Compensation by Labor Category



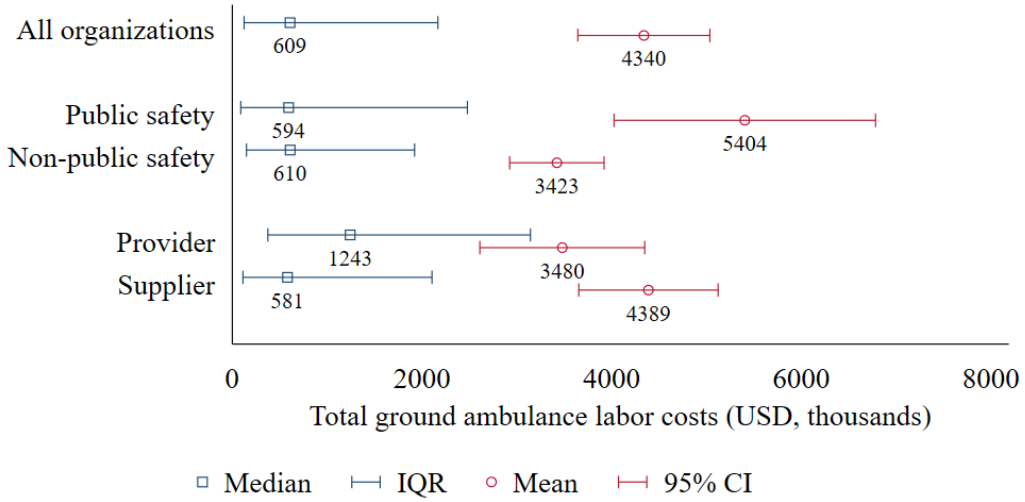
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: EMT = emergency medical technician. "Admin." is administration, and "med. dir." is medical director. "Other resp." is other response staff, including emergency medical responders (EMRs) and ground ambulance drivers without EMT certification. The imputation procedures removed outliers and adjusted hours and compensation in some cases that were above or below thresholds of compensation per hour. The data cleaning procedures are explained in the Year 1 and Year 2 cohort analysis in Appendix B.

Figure 2.26. Decomposition of Average Ground Ambulance Labor Compensation per Organization



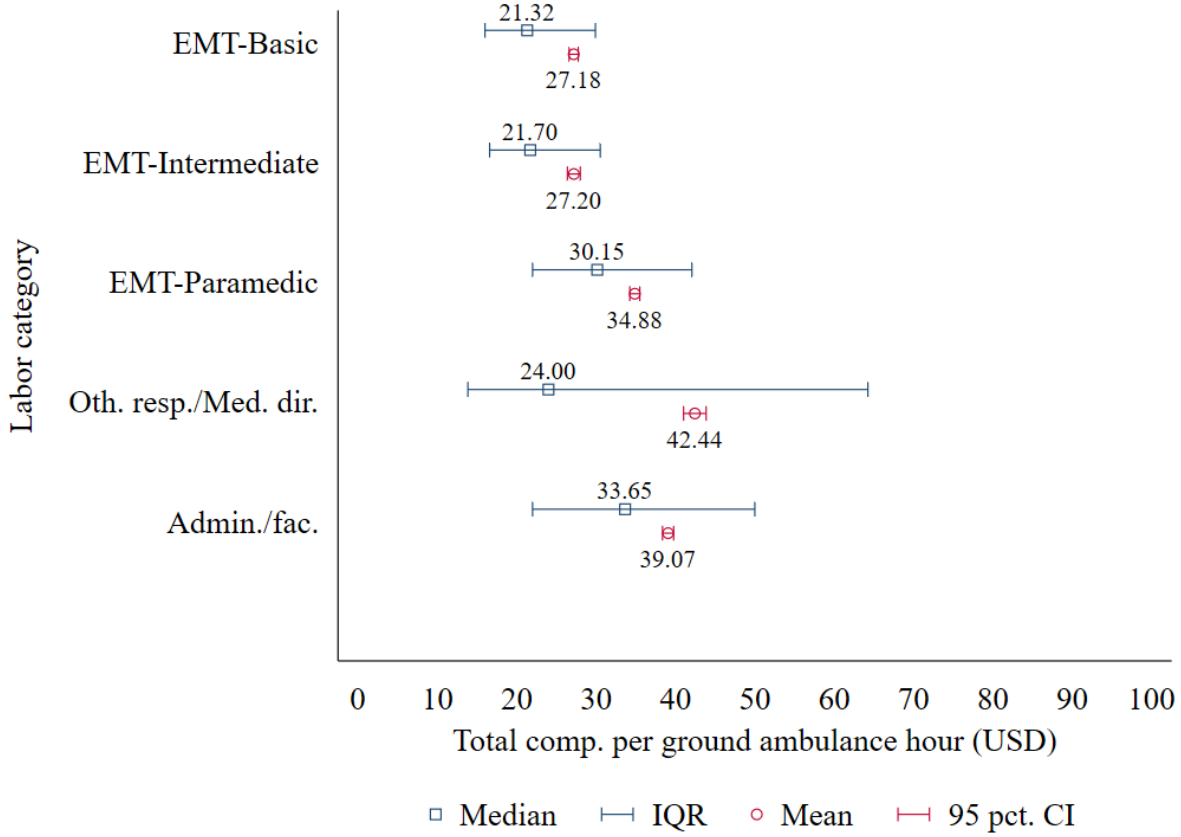
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. EMT = emergency medical technician. CI = confidence interval. Point labels report cumulative totals, while 95 percent CIs are specific to the individual labor category contribution. "plus oth. resp./med. dir." is plus other responder or medical director staff. "plus admin./fac." is plus administrator or facilities staff. Point labels report cumulative totals, while 95 percent CIs are specific to the individual labor category contribution. Unconditional mean is used to indicate that these are the means calculated across all organizations, rather than just those NPIs reporting data for these staff categories.

Figure 2.27. Comparison of Total Labor Compensation Between Organization Categories



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: USD = US dollars. IQR = interquartile range. CI = confidence interval.

Figure 2.28. Distribution of Ground Ambulance Compensation per Hour by Labor Category



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: USD = US dollars. IQR = interquartile range. CI = confidence interval. "pct." is percent. "Oth. resp./Med. dir." is other responder or medical director staff. "Admin./fac." is administrator or facilities staff.

Table 2.12. Volunteer Share of Total Hours

Labor Category	Volunteer Hours (aggregated)	Share of Total Hours: All Organizations	Share of Total Hours: Volunteer Organizations Only
All categories combined	3,880,895	0.4%	3.7%
EMT-Basic	1,159,706	0.3%	2.1%
EMT-Intermediate	126,558	0.2%	2.3%
EMT-Paramedic	171,268	0.0%	0.5%
Other resp./med. dir.	1,642,221	3.8%	56.0%
Administration/facilities	781,143	0.8%	11.8%

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: "resp." is response. "med. dir." is medical director.

Section 8: Facilities Costs

Table 2.13. Number of Facilities by Organizational Characteristics

	n	# Facilities, Mean (95% CI)	# Facilities Leased, Mean (95% CI)	# Facilities Mortgaged, Mean (95% CI)	# Facilities Owned Outright, Mean (95% CI)
All NPIs	9,598	2.80 (2.67, 2.93)	0.72 (0.66, 0.77)	0.09 (0.08, 0.10)	1.96 (1.85, 2.07)
Provider vs. supplier status					
Suppliers	9,085	2.81 (2.67, 2.94)	0.71 (0.65, 0.76)	0.09 (0.08, 0.10)	1.97 (1.85, 2.09)
Providers	513	2.74 (2.41, 3.08)	0.90 (0.69, 1.11)	0.05 (0.02, 0.08)	1.78 (1.59, 1.96)
Medicare transport volume					
Low	4,058	1.41 (1.37, 1.46)	0.19 (0.17, 0.22)	0.08 (0.07, 0.09)	1.12 (1.08, 1.17)
Medium	2,790	2.06 (1.98, 2.13)	0.30 (0.27, 0.34)	0.11 (0.09, 0.12)	1.62 (1.55, 1.69)
High	1,688	3.64 (3.44, 3.84)	0.89 (0.80, 0.98)	0.08 (0.06, 0.10)	2.62 (2.43, 2.81)
Very high	1,062	8.75 (7.82, 9.68)	3.53 (3.14, 3.92)	0.11 (0.08, 0.15)	5.00 (4.16, 5.84)
Ownership category					
Non-profit	2,608	1.97 (1.86, 2.09)	0.49 (0.42, 0.56)	0.12 (0.11, 0.14)	1.34 (1.26, 1.42)
For-profit	1,866	3.20 (2.89, 3.51)	2.29 (2.05, 2.54)	0.06 (0.05, 0.08)	0.83 (0.67, 0.98)
Government	5,124	3.08 (2.87, 3.28)	0.26 (0.22, 0.30)	0.09 (0.07, 0.10)	2.69 (2.50, 2.88)
Service area pop. density					
Urban	5,108	3.53 (3.30, 3.76)	0.95 (0.86, 1.05)	0.10 (0.08, 0.11)	2.43 (2.23, 2.63)
Rural	2,640	2.12 (2.00, 2.25)	0.55 (0.48, 0.63)	0.09 (0.08, 0.10)	1.46 (1.37, 1.55)
Super rural	1,849	1.76 (1.68, 1.85)	0.30 (0.25, 0.35)	0.08 (0.06, 0.10)	1.37 (1.30, 1.44)
Public safety					
No	5,151	2.56 (2.43, 2.69)	1.19 (1.09, 1.29)	0.09 (0.08, 0.10)	1.27 (1.20, 1.34)
Yes	4,447	3.09 (2.85, 3.32)	0.17 (0.14, 0.20)	0.09 (0.08, 0.11)	2.76 (2.53, 2.98)

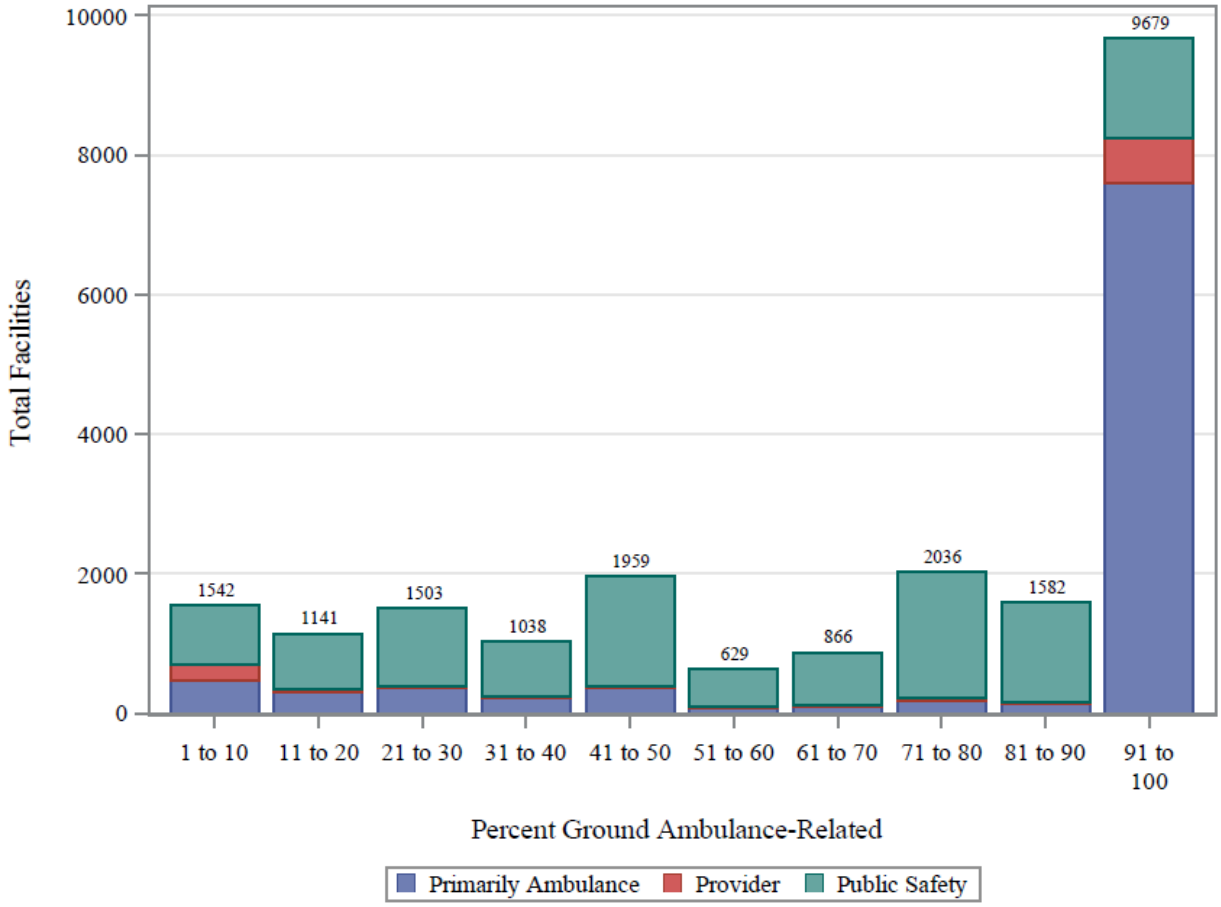
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. CI = confidence interval. Overall denominator of 9,598 reflects sampling weights and excludes organizations that reported zero percent of all facilities as ground ambulance–related. Facilities owned outright include donated facilities.

Table 2.14. Facility Square Footage

	n	Total Square Footage, Mean (95% CI)	Total Square Footage, Median	Total Ground Ambulance Sq. Footage, Mean (95% CI)	Total Ground Ambulance Sq. Footage, Median
All NPIs	9,598	23,643 (22,229; 25,057)	9,750	13,511 (12,626; 14,396)	5,000
Provider vs. supplier status					
Suppliers	9,085	22,675 (21,225; 24,125)	9,600	13,814 (12,883; 14,744)	5,100
Providers	513	40,794 (34,631; 46,957)	11,548	8,150 (6,602; 9,698)	3,447
Medicare transport volume					
Low	4,058	11,197 (10,475; 11,920)	6,560	4,686 (4,344; 5,029)	2,500
Medium	2,790	19,412 (18,410; 20,414)	11,614	10,007 (9,501; 10,513)	6,200
High	1,688	31,607 (29,262; 33,952)	16,050	17,644 (16,323; 18,965)	10,000
Very high	1,062	69,666 (59,455; 79,878)	25,718	49,875 (43,446; 56,303)	20,644
Ownership category					
Non-profit	2,608	15,922 (14,541; 17,303)	7,400	8,022 (7,353; 8,690)	3,666
For-profit	1,866	19,012 (16,627; 21,397)	7,265	15,296 (13,420; 17,172)	5,257
Government	5,124	29,259 (26,918; 31,600)	12,307	15,654 (14,213; 17,096)	5,898
Service area pop. density					
Urban	5,108	32,571 (30,013; 35,130)	13,016	19,250 (17,636; 20,864)	6,796
Rural	2,640	14,648 (13,710; 15,586)	8,328	8,218 (7,677; 8,758)	4,500
Super rural	1,849	11,825 (10,792; 12,858)	6,200	5,218 (4,827; 5,610)	3,000
Public safety					
No	5,151	17,280 (16,214; 18,346)	6,780	10,679 (10,039; 11,319)	4,568
Yes	4,447	31,015 (28,262; 33,767)	13,750	16,792 (15,051; 18,533)	5,625

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. CI = confidence interval. Overall denominator of 9,598 reflects sampling weights and excludes organizations that reported zero percent of all facilities as ground ambulance–related.

Figure 2.29. Number of Facilities Grouped by Percentage of Facility Allocated as Ground Ambulance–Related



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Unit of analysis is unweighted facilities. Only facilities with ground ambulance–related square footage are included.

Table 2.15. Facility Lease and Ownership Costs

	Costs for Leased Facilities	Costs for Facilities Owned Outright (No Depreciated Facilities)*	Costs for Facilities Owned Outright (With Depreciated Facilities)**
Organizations contributing to category, n	2,478	4,444	2,701
Total costs, median (IQR)	24,900 (7,200; 81,160)	0 (0; 0)	49,991 (10,142; 194,608)
Total costs, mean (95% CI)	97,100 (85,470; 108,730)	163,247 (123,845; 202,649)	441,068 (329,382; 552,754)
Total costs per facility, mean (95% CI)	35,237 (32,609; 37,865)	89,488 (67,763; 111,212)	154,623 (129,966; 179,281)
Total costs per square foot, mean (95% CI)	6.67 (6.31; 7.03)	10.20 (8.71; 11.69)	8.16 (6.73; 9.59)
Total ground ambulance–related costs, mean (95% CI)	82,206 (72,519; 91,893)	83,635 (63,524; 103,745)	224,961 (152,130; 297,792)
Total ground ambulance–related costs per facility, mean (95% CI)	28,171 (26,097; 30,244)	47,823 (35,675; 59,970)	66,889 (52,671; 81,107)
Total ground ambulance–related costs per square foot, mean (95% CI)	6.00 (5.66; 6.34)	6.17 (5.26; 7.09)	5.05 (4.01; 6.08)
Facilities in category with zero costs, %	N/A	83.0	11.0

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. Overall denominator of 8,750 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor or that only reported facilities as zero percent ground ambulance–related are not included in this table.
* Includes mortgage principal and interest payments for mortgaged facilities, acquisition costs for facilities purchased outright during the data collection period, other facility costs, and facilities with no costs of ownership. Only organizations that do not depreciate facility costs are included.
** Includes depreciation costs (including $0 costs for fully depreciated facilities), mortgage interest payments, and acquisition costs for facilities purchased outright during the data collection period. Only organizations that depreciate some or all of their facility costs are included.

Table 2.16. Section 8, Other Facilities Costs, Dollars

	Insurance	Maintenance	Taxes	Utilities
Total costs, median (IQR)	6,400 (1,017; 22,304)	10,000 (1,494; 35,000)	0 (0; 0)	15,926 (6,000; 39,220)
Total costs, mean (95% CI)	35,107 (32,494; 37,720)	65,249 (59,819; 70,679)	2,617 (2,289; 2,946)	57,043 (52,978; 61,107)
Total costs per facility, mean (95% CI)	18,483 (16,889; 20,077)	27,524 (24,457; 30,590)	1,073 (915; 1,232)	25,636 (23,161; 28,111)
Total costs per square foot, mean (95% CI)	2.50 (2.36; 2.64)	2.57 (2.45; 2.68)	0.17 (0.15; 0.18)	2.90 (2.78; 3.03)
Total ground ambulance–related costs, mean (95% CI)	18,508 (17,092; 19,924)	36,357 (33,241; 39,472)	2,180 (1,889; 2,471)	31,449 (29,339; 33,559)
Total ground ambulance–related costs per facility, mean (95% CI)	8,691 (8,072; 9,311)	11,534 (10,859; 12,209)	804 (686; 921)	11,309 (10,603; 12,015)
Total ground ambulance–related costs per square foot, mean (95% CI)	1.70 (1.59; 1.81)	1.73 (1.64; 1.82)	0.14 (0.12; 0.15)	2.01 (1.92; 2.11)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. Overall denominator of 8,750 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor or that only reported facilities as zero percent ground ambulance–related are not included in this table. Costs represent costs in dollars to organizations.

Table 2.17. Section 8, Taxes by Ownership Category

Ownership Category	n	Median (IQR)	Mean (SD)
Non-profit	2,322	0 (0; 0)	1,845 (14,169)
For-profit	1,681	0 (0; 5,000)	8,752 (28,473)
Government	4,746	0 (0; 0)	822 (8,826)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. SD = standard deviation. Overall denominator of 8,750 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor or that only reported facilities as zero percent ground ambulance–related are not included in this table.

Table 2.18. Section 8, Overall Facility Costs by Organization Characteristics

	n	Total Facility Costs, Mean (95% CI)	Total Ground Ambulance–Related Facility Costs	Total Ground Ambulance–Related Facility Costs per Square Foot
All NPIs	8,750	405,740 (361,151; 450,330)	225,320 (197,963; 252,677)	82,211 (74,251; 90,170)
Provider vs. supplier status				
Suppliers	8,279	364,391 (319,122; 409,661)	229,449 (200,881; 258,018)	82,462 (74,360; 90,564)
Providers	471	1,132,509 (914,600; 1,350,417)	152,738 (74,130; 231,345)	77,788 (37,845; 117,731)
Medicare transport volume				
Low	3,596	218,009 (179,404; 256,615)	75,014 (59,016; 91,011)	55,040 (43,653; 66,427)
Medium	2,582	378,545 (322,581; 434,509)	205,754 (173,354; 238,153)	110,492 (91,795; 129,189)
High	1,597	474,808 (398,755; 550,861)	276,028 (233,273; 318,783)	83,130 (67,658; 98,602)
Very high	974	1057578 (762,855; 1,352,300)	748,886 (556,731; 941,040)	106,039 (92,049; 120,028)
Ownership category				
Non-profit	2,322	301,046 (236,126; 365,966)	151,389 (111,122; 191,657)	81,031 (62,254; 99,807)
For-profit	1,681	259,107 (223,854; 294,360)	219,166 (192,489; 245,842)	70,352 (64,218; 76,486)
Government	4,746	508,898 (435,976; 581,820)	263,671 (219,251; 308,092)	86,988 (75,918; 98,058)
Service area pop. density				
Urban	4,684	599,207 (518,790; 679,625)	337,927 (288,036; 387,817)	111,582 (97,502; 125,662)
Rural	2,417	198,605 (167,147; 230,063)	111,572 (95,367; 127,776)	52,706 (46,791; 58,621)
Super rural	1,649	159,868 (128,644; 191,092)	72,220 (58,681; 85,759)	42,037 (32,279; 51,796)
Public safety				
No	4,582	290,572 (256,283; 324,861)	161,428 (142,493; 180,364)	65,287 (58,857; 71,717)
Yes	4,167	532,381 (447,464; 617,298)	295,576 (242,518; 348,634)	100,821 (85,800; 115,841)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. CI = confidence interval. Overall denominator of 8,750 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor or that only reported facilities as zero percent ground ambulance–related are not included in this table.

Section 9: Vehicle Costs

Table 2.19. Number of Vehicles of Each Type by Public Safety or Not

	Non–Public Safety		Public Safety	
n	5,161		4,447	
	% Organizations With Vehicle Type	Mean (SD)*	% Organizations With Vehicle Type	Mean (SD)*
# ground ambulances	100.0	9.6 (22.0)	100.0	4.8 (18.8)
# land rescue	5.2	2.1 (2.3)	12.5	2.4 (11.7)
# water rescue	0.5	1.8 (0.9)	5.7	2.3 (9.9)
# fire trucks	0.2	4.8 (6.0)	52.4	6.3 (16.6)
# non-transport response vehicles	36.2	3.6 (8.8)	52.5	4.9 (14.9)
# other vehicles	14.2	3.4 (5.8)	11.5	5.5 (27.8)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: SD = standard deviation. Overall denominator of 9,608 organizations reflects sampling weights. Means, SDs, and # represent organizations that had specific vehicle cost.

Table 2.20. Ground Ambulance Vehicles Leased or Owned, by Organization Type

	Non-Profit	For-Profit	Government	All Organizations
n	2,612	1,869	5,126	9,608
Ground ambulances				
# owned	3.7 (7.5)	9.2 (18.3)	4.2 (9.6)	5.0 (11.4)
# leased	9.4 (21.7)	19.1 (56.7)	5.7 (13.6)	11.7 (36.8)
# donated	2.2 (6.8)	2.1 (1.8)	2.2 (7.7)	2.2 (6.9)
# remounted	2.3 (3.8)	3.0 (5.4)	2.3 (4.6)	2.4 (4.5)
Non-ambulance vehicles				
# owned	3.7 (5.7)	6.1 (14.0)	9.5 (31.4)	7.5 (25.6)
# leased	0.2 (1.6)	0.4 (4.1)	0.2 (1.1)	0.2 (2.0)
# donated	0.2 (0.7)	0.0 (0.3)	0.1 (0.8)	0.1 (0.7)

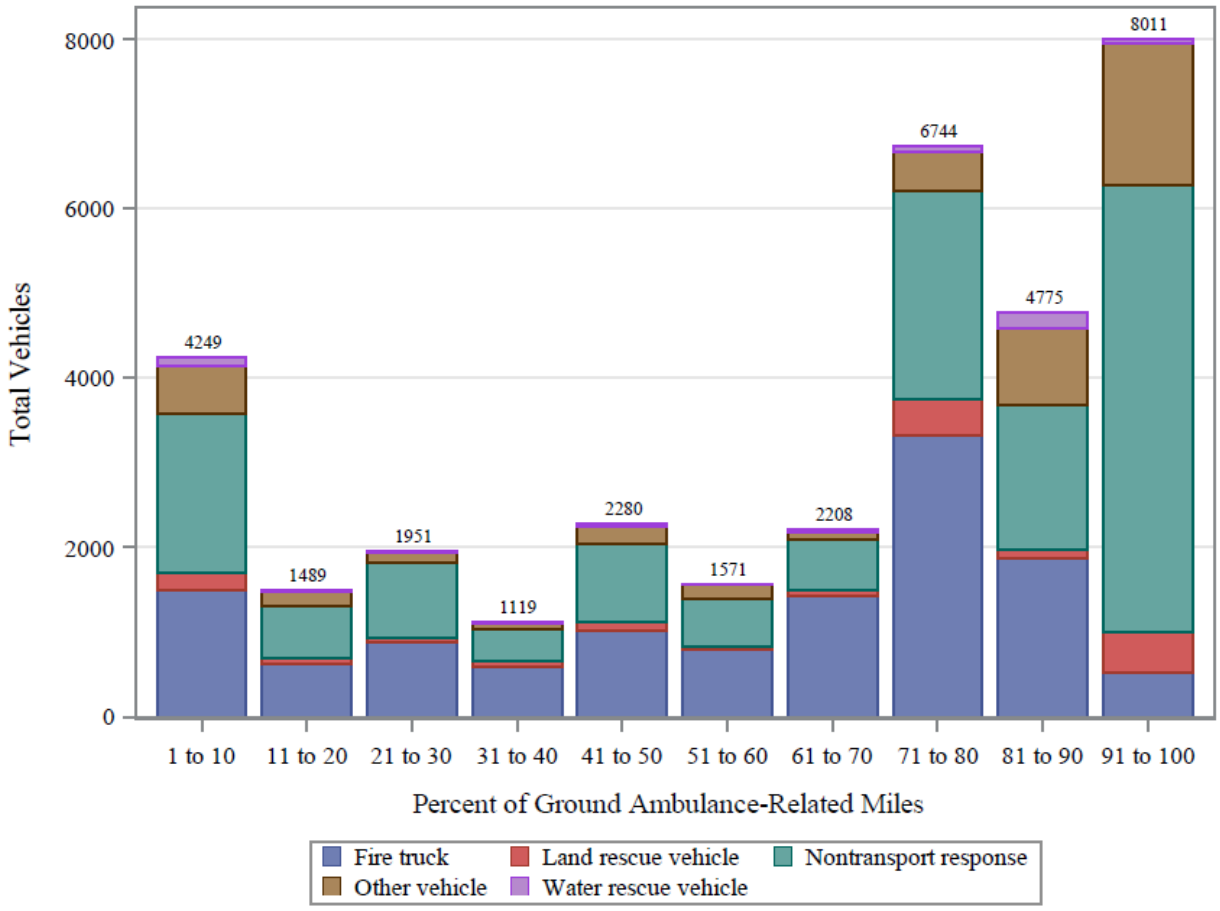
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Overall denominator of 9,608 organizations reflects sampling weights. Values represent mean (standard deviation [SD]). Donated vehicles are also considered to be owned vehicles.

Table 2.21. Section 9, Ground Ambulance and Non-Ambulance Vehicle Mileage

	n	Total Ground Ambulance Miles, Mean (95% CI)	Total Ground Ambulance Miles, Median (IQR)	Total Non-Ambulance Vehicle Miles, Mean (95% CI)	Total Non-Ambulance Vehicle Miles, Median (IQR)
All NPIs	9,608	173,597 (152,465; 194,728)	67,175 (57,841; 76,510)	35,000 (10,147; 108,958)	17,367 (5,000; 45,944)
Provider vs. supplier status					
Suppliers	9,094	172,745 (150,484; 195,006)	67,053 (57,400; 76,705)	32,538 (9,953; 103,159)	17,367 (5,000; 45,880)
Providers	514	188,666 (155,350; 221,983)	70,517 (51,973; 89,062)	91,756 (30,793; 225,343)	16,758 (5,000; 60,031)
Medicare transport volume					
Low	4,064	45,938 (1,963; 89,912)	24,567 (7,569; 41,564)	9,820 (3,932; 22,000)	5,500 (1,510; 15,000)
Medium	2,791	72,937 (67,395; 78,480)	29,991 (27,348; 32,634)	44,032 (23,309; 79,860)	16,138 (5,872; 34,055)
High	1,689	196,844 (177,802; 215,886)	75,008 (63,227; 86,789)	115,546 (62,562; 217,172)	35,500 (13,684; 70,000)
Very high	1,063	888,683 (805,819; 971,547)	234,009 (186,613; 281,405)	500,000 (231,413; 1,006,412)	71,491 (27,500; 183,215)
Ownership category					
Non-profit	2,612	120,798 (102,204; 139,393)	38,027 (18,830; 57,224)	28,933 (9,380; 86,709)	9,000 (2,000; 25,000)
For-profit	1,869	461,677 (354,216; 569,139)	84,192 (66,227; 102,158)	125,092 (32,100; 431,448)	26,871 (9,951; 70,330)
Government	5,126	95,441 (86,385; 104,498)	75,140 (62,585; 87,696)	26,824 (9,247; 72,854)	20,000 (6,000; 50,000)
Service area pop. density					
Urban	5,112	247,745 (208,971; 286,519)	87,781 (75,017; 100,546)	46,741 (15,222; 150,000)	23,589 (7,578; 60,085)
Rural	2,641	113,286 (98,596; 127,977)	36,887 (18,572; 55,201)	31,702 (9,000; 105,540)	10,555 (3,165; 29,185)
Super rural	1,854	55,154 (46,404; 63,905)	21,070 (17,071; 25,068)	16,789 (4,746; 50,061)	7,482 (1,756; 23,217)
Public safety					
No	5,161	257,449 (218,909; 295,988)	55,631 (43,662; 67,600)	60,911 (16,256; 194,607)	16,500 (5,000; 43,490)
Yes	4,447	76,239 (66,621; 85,856)	76,149 (62,411; 89,886)	20,400 (7,200; 53,290)	17,765 (5,000; 48,308)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. CI = confidence interval. Overall denominator of 9,608 organizations reflects sampling weights.

Figure 2.30. Section 9 Distribution of Percent of Miles That Are Ground Ambulance–Related by Vehicle Type



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Unit of analysis is unweighted vehicles.

Table 2.22. Ground Ambulance Vehicle Costs

	Total Ground Ambulance Lease Costs*	Total Costs for Owned Ground Ambulances (no depreciated ground ambulances)**	Total Costs for Owned Ground Ambulances (with depreciated ground ambulances)***	Total Costs for Remounting****
Organizations contributing to category, N	601	5,783	3,125	1,136
Total costs to organization, median (IQR)	50,830 (15,800; 117,679)	149,229 (0; 382,587)	80,011 (34,322; 226,294)	158,412 (104,343; 295,609)
Total costs to organization, mean (95% CI)	143,649 (108,806; 178,492)	278,177 (259,979; 296,374)	221,007 (197,424; 244,591)	248,011 (225,896; 270,127)
Total costs per ground ambulance, mean (95% CI)	15,788 (14,277; 17,299)	77,567 (74,954; 80,180)	23,041 (22,097; 23,985)	119,294 (115,515; 123,072)
Ground ambulances in category with zero costs, %	N/A	18.4	1.0	N/A

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: IQR = interquartile range. CI = confidence interval. Overall denominator of 9,160 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor are not included in this table. Organizations may contribute to multiple categories.
* Only organizations that lease ground ambulances and leased ground ambulances are included in this column.
** Includes vehicle purchase costs, payments on vehicles, and other costs of ownership to organizations during the data collection period. Includes vehicles that are fully paid off and have zero costs of ownership. Only organizations that do not depreciate ground ambulance costs are included in this column.
*** Includes depreciation costs (including $0 costs for fully depreciated vehicles), interest payments, and purchase costs or payments made during the data collection period. Only organizations that depreciate some or all of their ground ambulance vehicle costs are included in this column.
**** Includes remount costs incurred during the data collection period. A ground ambulance may contribute costs to both this column and one of the other ownership columns.

Table 2.23. Non-Ambulance Vehicle Costs

	Number of Organizations With Type of Vehicle	Total Costs to Organization, Mean (95% CI)*	Total Costs per Vehicle, Mean (95% CI)	Total Ground Ambulance–Related Costs to Organization, Mean (95% CI)
Land rescue vehicles	812	42,102 (33,058; 51,147)	27,004 (20,299; 33,709)	24,119 (18,087; 30,152)
Water rescue vehicles	231	14,882 (9,660; 20,105)	10,067 (6,022; 14,112)	6,451 (3,433; 9,469)
Fire trucks	2,307	305,125 (273,590; 336,660)	85,584 (75,808; 95,360)	154,321 (136,221; 172,421)
Non-transport Vehicles	4,180	46,741 (41,657; 51,824)	14,675 (13,059; 16,291)	29,833 (25,949; 33,716)
Other vehicles	1,215	36,203 (21,676; 50,731)	11,244 (9,375; 13,112)	24,610 (12,944; 36,276)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: CI = confidence interval. Overall denominator of 9,608 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor are not included in this table. Costs reported in the table include both lease and ownership costs.
* For organizations that indicated having at least one vehicle in category, includes lease, depreciation, and ownership costs incurred during data collection period. Values represent mean and SD costs for organization. Includes $0 costs for vehicles owned outright and purchased prior to the data collection period and fully depreciated vehicles.

Table 2.24. Other General Vehicle Costs

	Insurance	License and Registration	Maintenance	Fuel
Total costs to organization, median (Q1, Q3)	9,433 (2,957; 28,295)	32 (0; 850)	22,252 (5,667; 68,368)	24,000 (7,011; 65,965)
Total costs to organization, mean (95% CI)	42,494 (39,102; 45,887)	2,590 (2,201; 2,980)	93,037 (82,859; 103,215)	86,465 (79,897; 93,033)
Total costs per vehicle, mean (95% CI)	3,523 (3,416; 3,631)	172 (163; 182)	6,411 (6,228; 6,594)	6,228 (6,083; 6,374)
Total ground ambulance–related costs to organization, mean (95% CI)	39,232 (35,954; 42,510)	2,482 (2,101; 2,862)	81,519 (73,353; 89,685)	80,215 (74,298; 86,132)
Total ground ambulance–related costs per vehicle, mean (95% CI)	3,209 (3,106; 3,311)	163 (154; 172)	5,735 (5,568; 5,902)	5,845 (5,706; 5,985)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Q1 = question 1. Q3 = question 3. CI = confidence interval. Overall denominator of 9,160 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor are not included in this table. Costs reported in the table are at the organization level and include costs for ground ambulance and non-ambulance vehicles. $0 costs are included.

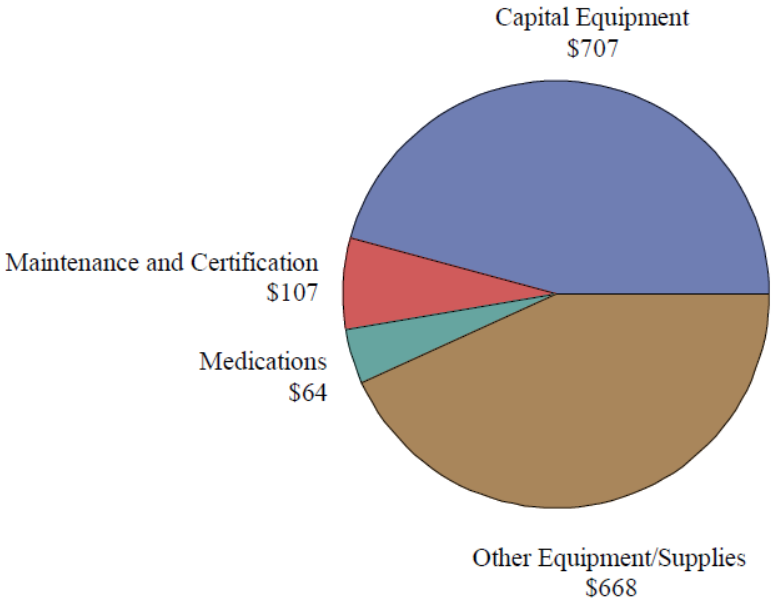
Section 10: Equipment, Consumable, and Supply Costs

Table 2.25. Medical and Non-Medical Equipment and Supply Costs

	Percentage of Organizations Reporting Cost	Total Cost, Mean (95% CI)	Ground Ambulance–Related Cost, Mean (95% CI)
Capital medical equipment (depreciation)	31.7	101,405 (92,174; 110,637)	84,512 (76,980; 92,045)
Capital medical equipment (purchase)	58.5	84,449 (78,371; 90,526)	81,219 (75,271; 87,166)
Capital medical equipment (rental and interest costs)	9.0	43,195 (34,146; 52,244)	42,860 (33,741; 51,980)
Capital medical equipment maintenance and certification costs	62.2	20,498 (19,169; 21,827)	19,206 (17,950; 20,463)
Medications	36.7	19,578 (17,688; 21,468)	19,133 (17,269; 20,998)
Other medical equipment and supplies	96.6	81,491 (76,436; 86,547)	75,554 (70,929; 80,180)
Capital non-medical equipment (depreciation)	17.4	86,536 (75,536; 97,537)	70,745 (61,045; 80,445)
Capital non-medical equipment (purchase)	48.7	67,348 (60,203; 74,492)	51,388 (45,673; 57,103)
Capital non-medical equipment (rental and interest costs)	7.6	21,639 (15,626; 27,653)	17,622 (12,914; 22,331)
Capital non-medical equipment maintenance and certification costs	27.2	31,933 (27,493; 36,373)	26,677 (22,898; 30,455)
Uniforms	80.6	25,945 (24,289; 27,602)	20,773 (19,459; 22,087)
Other non-medical equipment and supplies	90.8	31,861 (29,047; 34,675)	23,702 (21,597; 25,808)

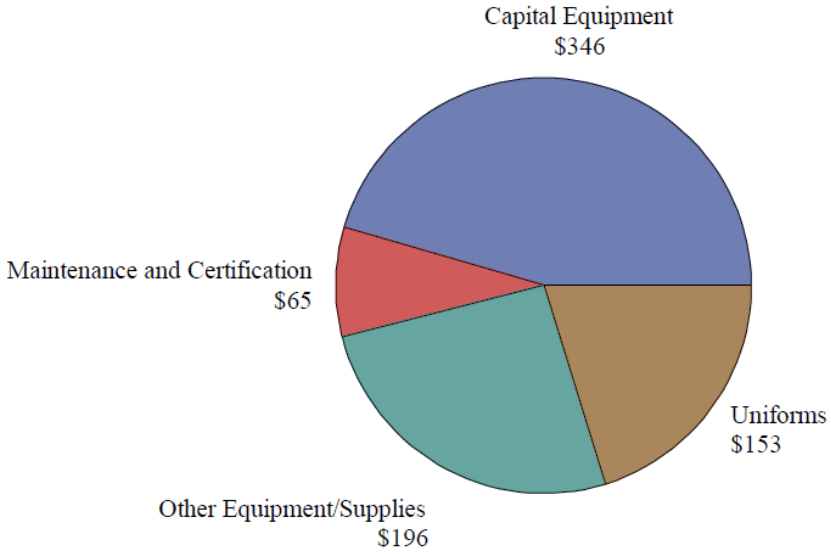
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: CI = confidence interval. Overall denominator of 9,160 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor are not included in this table.

Figure 2.31. Total Weighted Ground Ambulance–Related Medical Equipment and Supplies Costs (in Millions) Across Organizations



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.

Figure 2.32. Total Weighted Ground Ambulance–Related Non-Medical Equipment and Supplies Costs (in Millions) Across Organizations



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.

Table 2.26. Total Equipment and Supply Costs by Organization Type

	n	Ground Ambulance–Related Medical Equipment and Supply Costs, Mean (95% CI)	Ground Ambulance–Related Non-Medical Equipment and Supply Costs, Mean (95% CI)
All NPIs	9,608	175,671 (166,326; 185,016)	88,359 (82,093; 94,626)
Provider vs. supplier status			
Suppliers	9,094	173,644 (164,000; 183,288)	86,308 (79,950; 92,665)
Providers	514	211,473 (173,956; 248,990)	125,400 (92,621; 158,179)
Medicare transport volume			
Low	4,064	55,226 (49,579; 60,874)	26,262 (22,099; 30,425)
Medium	2,791	112,606 (105,057; 120,155)	58,917 (52,470; 65,364)
High	1,689	224,035 (207,923; 240,146)	113,222 (101,598; 124,845)
Very high	1,063	721,407 (663,923; 778,891)	349,073 (310,031; 388,114)
Ownership category			
Non-profit	2,612	139,191 (123,169; 155,214)	63,376 (53,990; 72,762)
For-profit	1,869	235,308 (206,440; 264,176)	99,390 (82,762; 116,017)
Government	5,126	172,491 (160,891; 184,090)	97,158 (88,305; 106,011)
Service area pop. density			
Urban	5,112	240,556 (224,740; 256,372)	133,368 (122,377; 144,360)
Rural	2,641	118,578 (106,660; 130,495)	43,315 (37,715; 48,914)
Super rural	1,854	77,682 (68,447; 86,917)	23,678 (20,038; 27,317)
Public safety			
No	5,161	195,500 (181,430; 209,569)	75,505 (67,980; 83,030)
Yes	4,447	152,788 (140,869; 164,708)	103,372 (93,063; 113,682)

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. IQR = interquartile range. CI = confidence interval. Overall denominator of 9,608 organizations reflects sampling weights. Organizations that contract out broader ground ambulance functions other than labor and with non-zero costs are not included in this table.

Section 11: Other Costs

Table 2.27. Annual Contracted Services Costs

	Percentage With Contracted Cost (% of panel n)	Conditional Mean, ($)	25th Percentile, ($)	Median, ($)	75th Percentile, ($)
All NPIs (n = 9,608)					
Total	92.0	251,174	14,969	51,223	158,693
Billing	78.8	95,008	7,620	24,033	68,541
Accounting	37.5	11,979	1,900	5,000	12,085
Vehicle maintenance/repair	27.5	38,891	4,627	14,000	38,700
Dispatch/call center	25.5	99,718	7,252	30,000	103,680
Facilities maintenance	17.2	17,404	1,550	5,403	17,900
IT support	28.9	28,415	1,889	7,188	21,233
EMT/response labor	9.9	275,440	10,000	86,500	373,500
Other	17.4	73,983	3,289	11,990	54,878
Did not contract out broader ground ambulance services (n = 8,779)					
Total	92.1	228,037	14,500	48,058	147,516
Billing	79.2	91,397	7,500	24,000	67,344
Accounting	37.7	12,057	1,894	5,011	12,240
Vehicle maintenance/repair	27.5	37,180	4,407	13,620	37,581
Dispatch/call center	25.5	98,018	7,300	29,877	102,614
Facilities maintenance	17.2	17,258	1,528	5,375	17,783
IT support	29.0	28,036	1,954	7,255	21,167
EMT/response labor	7.5	251,367	8,000	65,831	298,162
Other	17.0	68,021	3,091	11,638	48,500
Contracted out EMT labor or broader ground ambulance services (n = 829)					
Total	90.2	501,489	27,708	93,000	401,638
Billing	73.6	136,168	8,550	27,408	83,322
Accounting	36.1	11,119	1,971	4,250	10,465
Vehicle maintenance/repair	26.7	57,568	6,387	15,619	51,128
Dispatch/call center	24.5	118,504	7,216	35,700	128,456
Facilities maintenance	17.3	18,937	1,842	7,145	18,684
IT support	27.8	32,616	1,400	4,827	25,569
EMT/response labor	35.1	330,107	27,885	159,555	469,839
Other	21.5	123,804	5,804	21,945	203,227

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.

NOTE: NPI = National Provider Identifier. IT = information technology. EMT = emergency medical technician. Table is stratified by responses to Section 2, Question 18. Conditional mean, median, 25th percentile, and 75th percentile are limited to organizations with a cost greater than zero. “Other” is a write-in category that included other contracted services, such as human resources, legal, payroll, and tax preparation.

Table 2.28. Other Expenses Incurred During the Data Collection Period

	Share Reporting Expense, % organizations	Mean, ($)	Median, ($)	25th Percentile, ($)	75th Percentile, ($)
Medical or Ground Ambulance–Related Expenses					
Biohazard waste and medication removal fees	23.6	2,464	1,000	396	2,764
Fees to physician(s) to oversee the paramedics and provide quality assurance	6.2	9,695	7,500	2,700	15,065
Laundry	11.5	4,386	1,635	380	5,561
Administrative and General Expenses					
Travel other than for training	19.1	12,606	2,801	751	11,872
Subsidies paid to other organizations	3.3	26,014	9,900	1,500	67,493
Funds paid to other ground ambulance organizations for services	11.2	21,444	4,500	1,250	18,000
Funds paid to other non-transporting organizations for services	2.0	3,822	4,875	808	6,400
Board of directors/trustees expenses	7.5	5,951	3,250	1,260	8,906
Advertising, including any type of advertising in any medium	30.6	8,633	1,560	364	6,382
Event/meeting costs	27.0	7,297	2,432	728	7,133
IT software, licensing fees	36.0	33,873	8,280	2,319	26,972
Training and continuing education costs	60.1	18,846	5,500	1,839	16,956
Interest paid	9.9	32,613	9,000	2,000	32,090
Physicals and medical assessments	26.1	11,746	3,412	852	12,916
Recruiting expenses	11.4	11,273	3,935	1,000	15,000
Audit fees, legal fees, and other professional fees	31.5	34,510	7,257	1,982	26,198
Miscellaneous administrative fees/costs not reported in Section 10.2 or Section 3	34.9	47,613	8,016	2,432	29,812
Fees, Fines, and Taxes					
911 service fees	3.1	14,535	4,150	750	38,895
Fees for toll roads	10.3	3,144	600	101	3,274

	Share Reporting Expense, % organizations	Mean, ($)	Median, ($)	25th Percentile, ($)	75th Percentile, ($)
Fees paid to local jurisdictions required as condition of providing ground ambulance service	2.2	3,219	2,611	400	6,658
Fees for regulatory compliance or accreditation	16.6	5,545	903	200	3,000
Business regulation and related fees	9.6	3,012	500	100	2,545
Licenses	19.5	2,689	769	250	2,265
Fines, forfeitures, and citations	2.4	1,455	957	311	2,843
Taxes	14.5	95,636	22,080	4,432	97,887
Insurance					
Liability/malpractice insurance	37.1	40,610	9,599	3,000	35,927
Workers' compensation insurance	45.8	61,990	20,000	5,616	57,732
General insurance	26.5	59,718	11,112	2,838	48,000

SOURCE: RAND analysis of the GADCS analytic file.
NOTE: IT = information technology. Mean, median, 25th percentile, and 75th percentile are limited to organizations with a cost greater than zero.

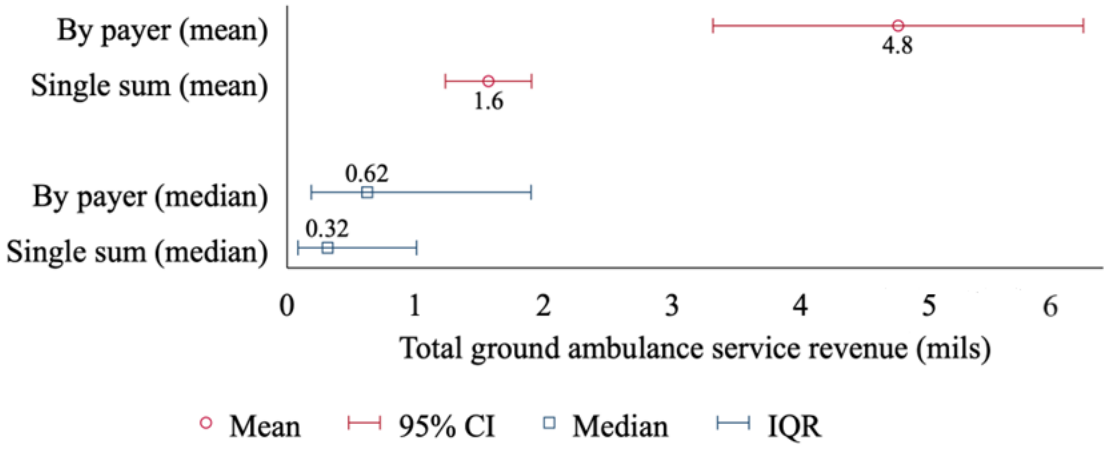
Table 2.29. Percentage of Organizations That Incurred an Expense During the Data Collection Period by Category of Expense and Organization Characteristic

	Any, % of organizations	Medical or Ground Ambulance–Related Expenses, %	Administrative and General Expenses, %	Fees, Fines, and Taxes, %	Insurance, %
All NPIs	89.2	32.4	83.7	41.9	59.6
Provider vs. supplier status					
Providers	80.4	26.6	76.2	31.8	28.1
Suppliers	89.7	32.7	84.1	42.5	61.4
Medicare transport volume					
Low	84.7	18.4	77.8	32.0	55.3
Medium	90.7	34.3	85.5	40.0	59.1
High	92.8	44.9	88.9	51.5	60.4
Very high	96.5	60.9	93.3	70.0	75.9
Ownership category					
Non-profit	89.5	25.6	83.6	39.0	60.8
For-profit	92.2	49.1	87.5	67.4	73.0
Government	87.9	29.8	82.4	34.2	54.1
Service area pop. density					
Urban	89.9	37.8	84.5	45.5	59.2
Rural	91.0	29.1	84.9	39.8	63.6
Super rural	84.6	22.1	80.0	35.1	55.0
Public safety					
No	90.5	37.1	85.8	51.0	66.4
Yes	87.6	26.9	81.3	31.4	51.7

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier.

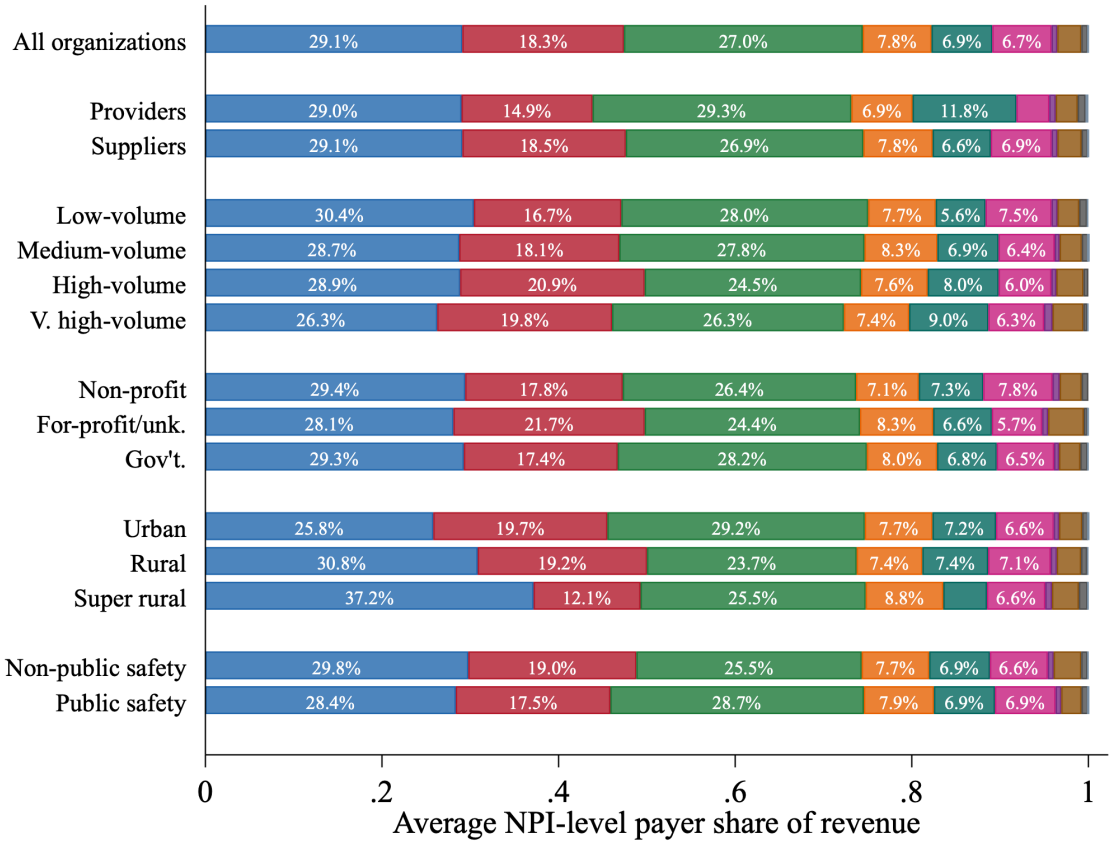
Section 13: Revenues

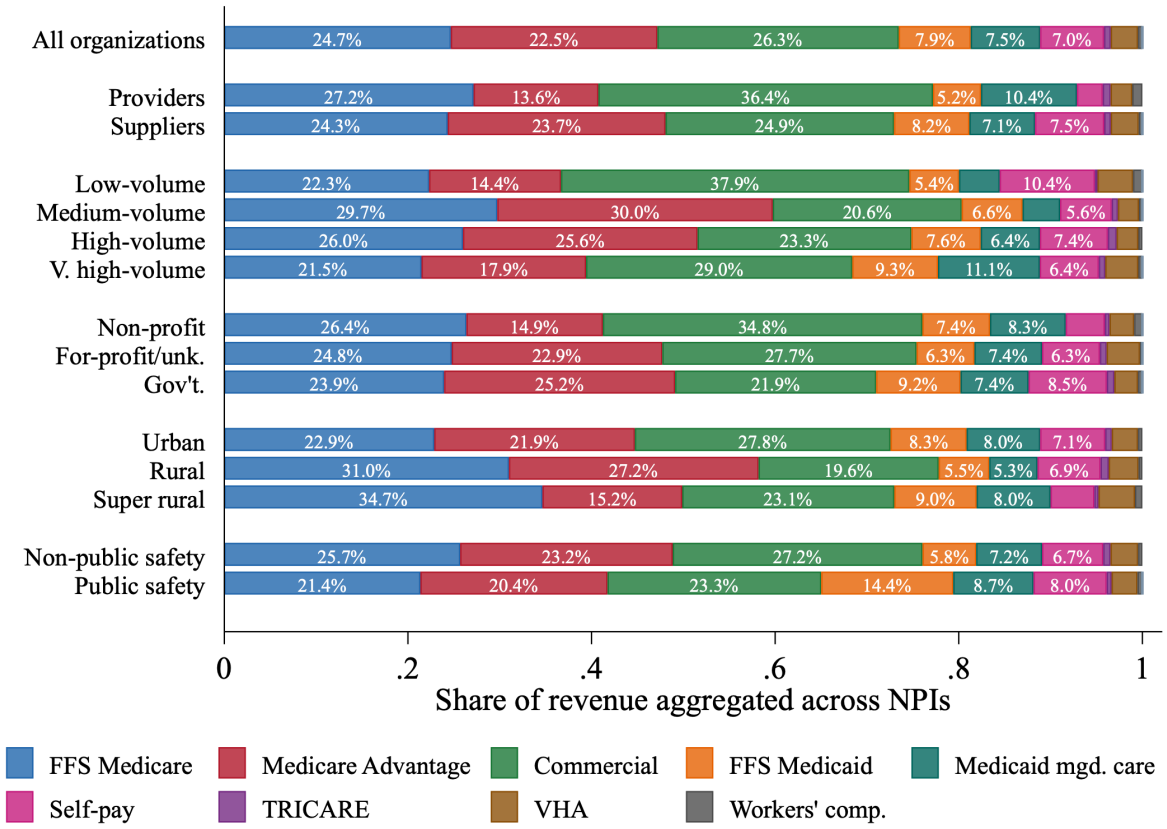
Figure 2.33. Total Annual Revenue From Ground Ambulance Services, by Reporting Approach



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: CI = confidence interval. IQR = interquartile range. “mils” is millions ($).

Figure 2.34. Organization-Level Revenue Shares, by Payer





SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. FFS = fee-for-service. VHA = Veterans Health Administration. “Gov’t.” is government. “mgd.” is managed. “comp.” is compensation. Value labels suppressed <5 percent.

Table 2.30. Average Payer Revenue by Organization Type

	n	Total Payer Revenue	n	Traditional FFS Medicare	n	Medicare Advantage
All NPIs	9,608	3,914,787	6,957	1,193,046	6,112	1,238,482
Provider vs. supplier status						
Suppliers	9,094	3,661,038	6,561	1,096,545	5,775	1,214,893
Providers	514	8,404,001	396	2,793,852	337	1,642,902
Medicare transport volume						
Low	4,064	857,539	2,686	260,296	2,213	203,536
Medium	2,791	2,842,869	2,106	937,824	1,922	1,036,829
High	1,689	7,158,410	1,290	2,239,114	1,186	2,393,579
Very high	1,063	13,262,625	875	3,129,109	791	2,892,195
Ownership category						
Non-profit	2,612	2,680,469	1,857	872,538	1,639	557,051
For-profit/ unknown	1,869	7,291,479	1,239	2,352,190	1,060	2,548,772
Governme nt	5,126	3,312,528	3,860	975,045	3,412	1,158,831
Service area pop. density						
Urban	5,112	5,782,330	3,865	1,581,403	3,487	1,675,339
Rural	2,641	2,433,460	1,943	900,215	1,703	900,773
Super rural	1,854	876,551	1,149	381,594	921	209,096
Public safety						
Yes	4,447	1,931,705	3,317	508,365	2,967	542,592
No	5,161	5,623,287	3,640	1,817,054	3,144	1,895,215

	n	Medicaid	n	Commercial Insurance	n	Patient Self-Pay	n	All Other Payers
All NPIs	6,318	732,436	6,687	1,322,170	6,338	369,748	7,072	198,529
Provider vs. supplier status								
Suppliers	5,960	680,749	6,295	1,168,933	5,972	373,177	6,671	184,160
Providers	358	1,593,313	392	3,781,711	366	313,789	401	437,852
Medicare transport volume								
Low	2,245	112,911	2,511	473,627	2,282	142,448	2,735	59,229
Medium	2,006	332,351	2,071	659,883	2,023	185,038	2,140	103,301
High	1,235	1,177,222	1,245	2,078,336	1,197	688,304	1,320	315,330
Very high	833	2,973,752	860	4,301,052	836	981,061	876	690,059

	n	Medicaid	n	Commercial Insurance	n	Patient Self-Pay	n	All Other Payers
Ownership category								
Non-profit	1,699	504,306	1,820	1,175,083	1,734	150,812	1,903	132,025
For-profit/ unknown	1,097	1,270,210	1,109	2,939,902	1,045	709,752	1,267	430,050
Government	3,522	669,088	3,758	916,013	3,559	376,611	3,901	155,785
Service area pop. density								
Urban	3,573	1,110,653	3,706	2,007,937	3,548	534,169	3,923	275,587
Rural	1,778	307,347	1,865	593,398	1,773	218,679	1,976	129,933
Super rural	967	183,501	1,115	261,983	1,017	59,440	1,173	56,358
Public safety								
Yes	2,990	540,759	3,241	567,014	3,041	207,090	3,377	90,704
No	3,328	907,654	3,446	2,032,224	3,297	519,818	3,694	297,097

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. FFS = fee for service. NPIs that did not report total revenue by payer are only included in the Total Revenue column. Otherwise, statistics reflect only those NPIs that reported revenue by payer.

Table 2.31. Median Payer Revenue by Organization Type

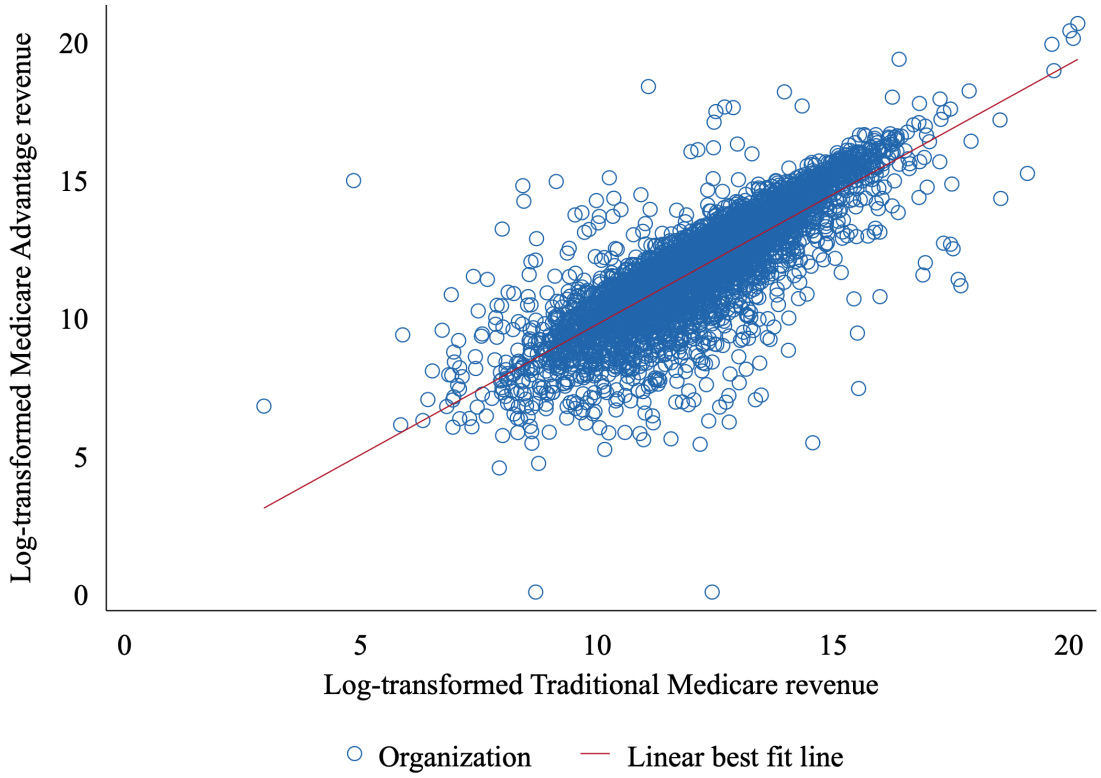
	n	Total Payer Revenue	n	Traditional FFS Medicare	n	Medicare Advantage
All NPIs	9,608	520,000	6,957	159,097	6,112	117,328
Provider vs. supplier status						
Suppliers	9,094	489,102	6,561	149,559	5,775	113,184
Providers	514	1,829,964	396	382,498	337	263,328
Medicare transport volume						
Low	4,064	124,467	2,686	34,944	2,213	23,537
Medium	2,791	680,509	2,106	186,323	1,922	129,310
High	1,689	1,770,175	1,290	495,683	1,186	377,779
Very high	1,063	6,248,728	875	1,618,801	791	1,497,076
Ownership category						
Non-profit	2,612	369,411	1,857	125,000	1,639	97,933
For-profit/ unknown	1,869	1,336,537	1,239	391,460	1,060	390,409
Government	5,126	459,936	3,860	145,495	3,412	96,513
Service area pop. density						
Urban	5,112	806,972	3,865	204,261	3,487	171,911
Rural	2,641	424,515	1,943	135,298	1,703	98,359
Super rural	1,854	203,052	1,149	84,881	921	35,107
Public safety						
Yes	4,447	356,056	3,317	111,779	2,967	83,127
No	5,161	737,660	3,640	231,782	3,144	181,394

	n	Medicaid	n	Commer-cial Insurance	n	Patient Self-Pay	n	All Other Payers
All NPIs	6,318	62,326	6,687	155,177	6,338	28,845	7,072	12,735
Provider vs. supplier status								
Suppliers	5,960	57,792	6,295	145,309	5,972	28,210	6,671	11,665
Providers	358	248,273	392	417,230	366	44,769	401	34,303
Medicare transport volume								
Low	2,245	12,254	2,511	36,389	2,282	7,702	2,735	2,467
Medium	2,006	72,601	2,071	177,768	2,023	31,863	2,140	16,881
High	1,235	221,030	1,245	453,083	1,197	87,144	1,320	50,151
Very high	833	1,006,319	860	1,711,030	836	370,542	876	239,842

	n	Medicaid	n	Commer-cial Insurance	n	Patient Self-Pay	n	All Other Payers
Ownership category								
Non-profit	1,699	41,823	1,820	121,504	1,734	25,809	1,903	10,769
For-profit/ unknown	1,097	163,154	1,109	457,783	1,045	74,658	1,267	28,279
Governm ent	3,522	58,490	3,758	145,309	3,559	24,390	3,901	11,646
Service area pop. density								
Urban	3,573	83,464	3,706	263,385	3,548	43,048	3,923	16,246
Rural	1,778	54,285	1,865	104,636	1,773	23,741	1,976	11,248
Super rural	967	25,518	1,115	59,941	1,017	11,680	1,173	6,694
Public safety								
Yes	2,990	41,863	3,241	120,475	3,041	20,587	3,377	9,110
No	3,328	87,077	3,446	205,705	3,297	41,224	3,694	18,519

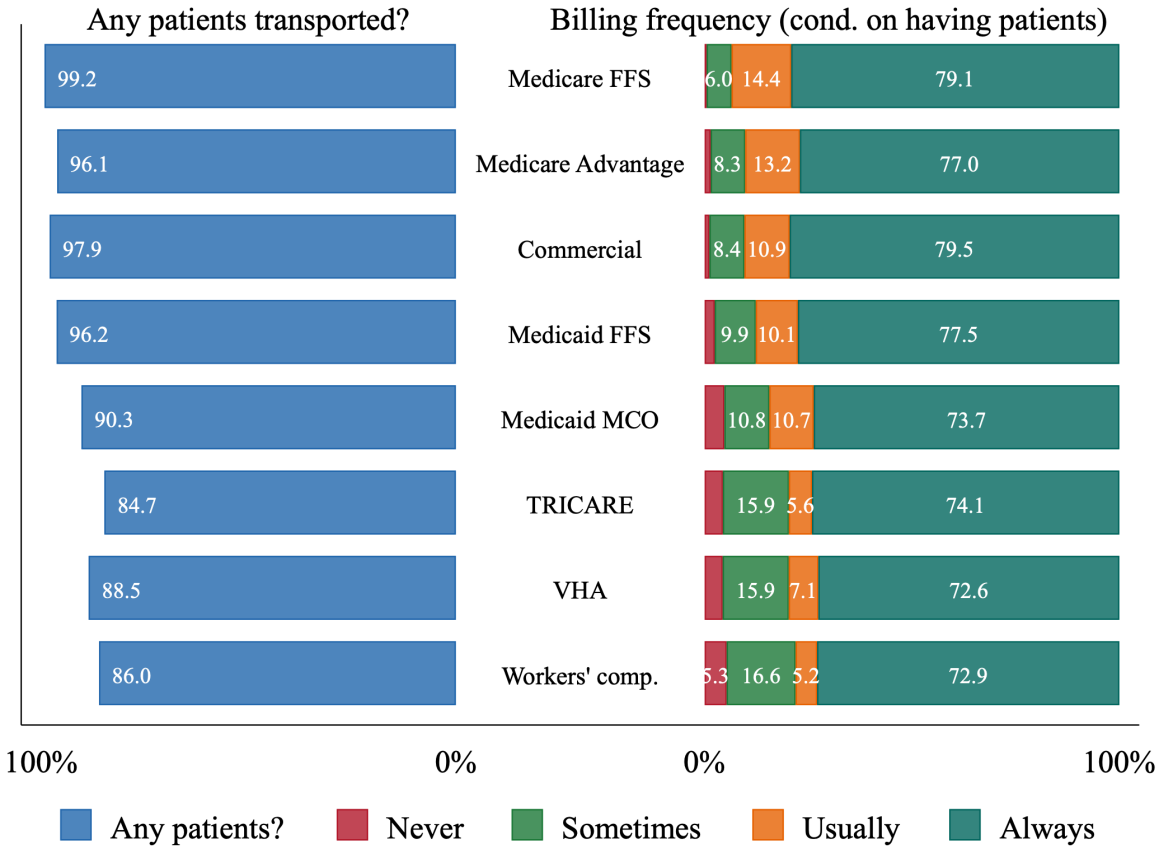
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. NPIs that did not report total revenue by payer are only included in the Total Revenue column. Otherwise, statistics reflect only those NPIs that reported revenue by payer.

Figure 2.35. Association Between Log-Transformed Traditional Medicare and Medicare Advantage Transport Revenue



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.

Figure 2.36. Billing Frequency by Payer



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: MCO = managed care organization. FFS = fee-for-service. VHA = Veterans Health Administration. "cond." is conditional. "comp." is compensation. Billing frequency value labels are suppressed for values <5 percent.

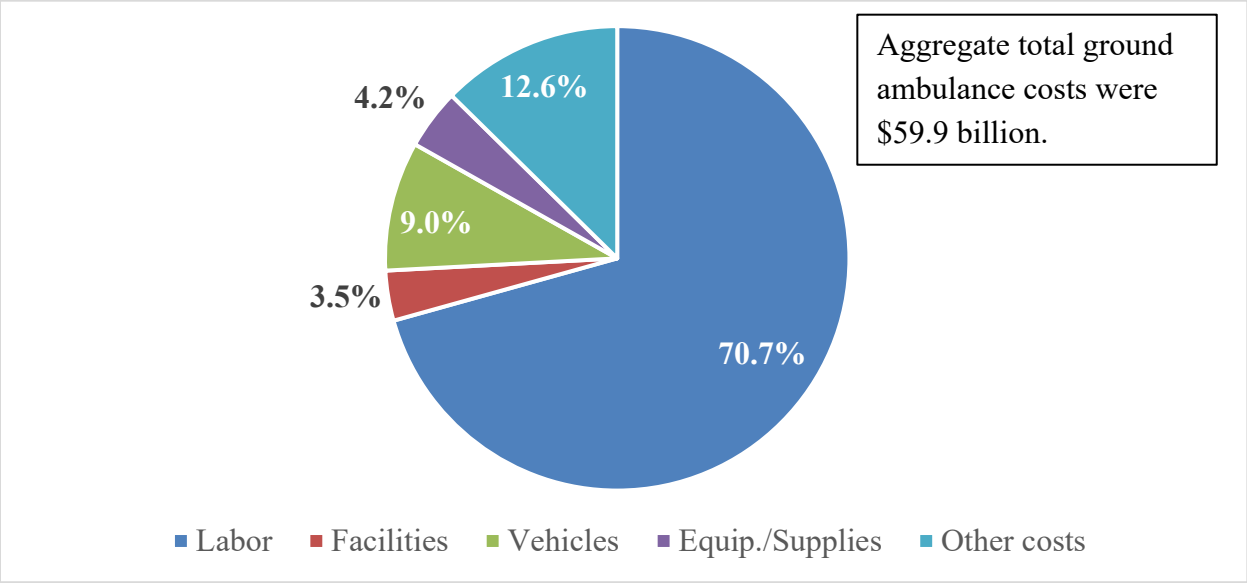
Table 2.32. Share of Organizations With Revenue and Conditional Annual Mean and Median Revenue for Section 13, Question 5 Revenue Categories

	Share With Section 13, Question 5 Revenue >$0, %	Conditional Mean, Revenue >$0, ($)	Conditional Median Revenue >$0, ($)
Total across all Question 5 categories	74.5	2,177,569	162,265
Contracts with facilities	18.6	922,555	48,393
Revenue from payers for non-transport EMS/medical services	11.3	476,059	18,800
Revenues for subcontracted ground ambulance services	4.4	662,560	49,792
Fees for standby events	24.5	77,192	5,313
Membership fees	7.6	101,355	31,000
Charitable donations	25.7	35,545	5,870
Executive loan programs	N/R	N/R	N/R
Program-related investments	4.1	173,814	17,686
Local taxes earmarked for EMS	23.4	3,135,660	352,117
Contract revenue from local governments in return for services	15.4	556,091	112,426
Enterprise funds and utility rates	0.9	1,190,450	70,548
Sale of assets and services	8.2	85,431	8,428
Bond or debt financing	1.5	1,050,500	75,230
State or local donations of surplus vehicles or equipment	0.4	47,316	12,000
Other donations	3.6	38,250	5,289
Special-purpose grants	23.4	136,300	17,000
Matching grants	4.5	121,300	16,322
Technical assistance	2.0	149,806	4,540
Demonstration grants	2.5	579,554	97,321
Congressional earmarks	0.6	467,137	40,283
Other	20.8	1,984,525	36,343

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: EMS = emergency medical services. "N/R" is not reported due to small cell size. See the printable GADCS instrument for full Section 13, Question 5 response categories and instructions. Note that reported dollar amounts are allocated to represent a ground ambulance portion of total revenue only.

Chapter 3. Decomposition of Total Costs

Figure 3.1. Relative Contribution of Cost Categories to Aggregated Total Ground Ambulance Costs



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: "Equip." is equipment.

Table 3.1. Aggregated Ground Ambulance Costs by Organization Type

	Labor Costs		Facilities Costs		Vehicles Costs		Equipment and Other Costs	
	Dollars (millions)	% Total	Dollars (millions)	% Total	Dollars (millions)	% Total	Dollars (millions)	% Total
All NPIs	42,327	70.7	2,086	3.5	5,398	9.0	10,079	16.8
Provider vs. supplier status								
Suppliers	40,415	70.9	2,009	3.5	5,049	8.9	9,551	16.7
Providers	1,912	66.7	77	2.7	349	12.2	528	18.4
Medicare transport volume								
Low	3,394	59.1	281	4.9	927	16.2	1,137	19.8
Medium	7,902	67.6	556	4.8	1,074	9.2	2,165	18.5
High	10,741	73.9	454	3.1	1,073	7.4	2,271	15.6
Very high	20,290	72.7	795	2.8	2,323	8.3	4,505	16.1
Ownership category								
Non-profit	6,413	65.0	368	3.7	1,129	11.4	1,953	19.8
For-profit/unknown	9,410	63.6	409	2.8	1,640	11.1	3,343	22.6
Government	26,504	75.2	1,309	3.7	2,628	7.5	4,783	13.6
Service area pop. density								
Urban	34,430	72.0	1,679	3.5	3,912	8.2	7,786	16.3
Rural	6,044	67.0	282	3.1	1,018	11.3	1,671	18.5
Super rural	1,852	60.4	126	4.1	468	15.3	621	20.3
Public safety								
Yes	24,194	76.1	1,286	4.0	2,199	6.9	4,129	13.0
No	18,133	64.6	800	2.8	3,198	11.4	5,949	21.2

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. “pop.” is population. Dollars are presented in millions.

Table 3.2. Average Share of Total Ground Ambulance Costs by Organization Type

	n	Labor Costs (%)	Facilities Costs (%)	Vehicles Costs (%)	Equipment and Other Costs (%)
All NPIs	9,608	43.7	5.8	22.7	27.9
Provider vs. supplier status					
Suppliers	9,094	43.0	5.8	22.9	28.3
Providers	514	56.3	4.9	17.6	21.2
Medicare transport volume					
Low	4,064	30.5	7.0	31.5	31.0
Medium	2,791	50.9	5.5	17.7	25.9
High	1,689	55.4	4.4	14.8	25.3
Very high	1,063	56.3	3.7	14.5	25.5
Ownership category					
Non-profit	2,612	37.3	6.3	25.0	31.5
For-profit/unknown	1,869	43.7	4.5	23.1	28.7
Government	5,126	46.9	6.0	21.3	25.8
Service area pop. density					
Urban	5,112	47.7	5.9	19.5	26.8
Rural	2,641	41.0	5.7	24.7	28.7
Super rural	1,854	36.3	5.5	28.5	29.7
Public safety					
Yes	4,447	44.4	6.9	22.3	26.4
No	5,161	43.0	4.8	23.0	29.2

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. “pop.” is population. “n” indicates the sum of GADCS weights across organizations within each subgroup. Subgroup totals may not always add up to the overall total due to rounding. Percentages may not sum to 100 due to rounding.

Table 3.3. Average Ground Ambulance Costs per Organization, by Organization Type

	n	Total Costs ($)	Labor Costs ($)	Facilities Costs ($)	Vehicle Costs ($)	Equipment and Other Costs ($)
All NPIs	9,608	6,233,483	4,405,510	217,151	561,803	1,049,019
Provider vs. supplier status						
Suppliers	9,094	6,270,748	4,444,275	220,964	555,228	1,050,281
Providers	514	5,574,205	3,719,708	149,694	678,116	1,026,686
Medicare transport volume						
Low	4,064	1,412,297	835,112	69,165	228,146	279,874
Medium	2,791	4,190,700	2,831,075	199,121	384,944	775,561
High	1,689	8,608,958	6,360,049	268,804	635,263	1,344,842
Very high	1,063	26,250,732	19,081,091	748,083	2,184,694	4,236,864
Ownership category						
Non-profit	2,612	3,775,735	2,454,900	140,982	432,199	747,654
For-profit/ unknown	1,869	7,918,641	5,034,085	218,787	877,538	1,788,230
Government	5,126	6,871,563	5,170,417	255,374	512,720	933,051
Service area pop. density						
Urban	5,112	9,352,235	6,735,287	328,484	765,318	1,523,146
Rural	2,641	3,412,828	2,288,218	106,622	385,228	632,760
Super rural	1,854	1,653,809	998,925	67,681	252,286	334,917
Public safety						
Yes	4,447	7,153,546	5,441,014	289,321	494,580	928,631
No	5,161	5,440,813	3,513,385	154,974	619,718	1,152,738
Contract out key functions*						
Yes	829	8,048,811	5,607,541	243,269	799,596	1,948,007
No	8,779	6,062,109	4,292,034	215,874	550,173	1,005,053

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "pop." is population. Subgroup numbers of NPIs may not always add up to the overall total due to rounding.
* For facilities costs, vehicle costs, and equipment and other costs, the definition of whether organizations contract out key functions is different. 448 weighted NPIs contract out key functions, and 9,160 do not.

Table 3.4. Median Ground Ambulance Costs per Organization, by Organization Type

	n	Total Costs ($)	Labor Costs ($)	Facilities Costs ($)	Vehicle Costs ($)	Equipment and Other Costs ($)
All NPIs	9,608	1,525,689	620,643	43,085	271,297	311,021
Provider vs. supplier status						
Suppliers	9,094	1,482,596	597,028	42,445	267,925	306,371
Providers	514	2,451,365	1,346,714	56,720	335,674	463,942
Medicare transport volume						
Low	4,064	526,273	125,018	16,354	132,139	110,394
Medium	2,791	1,979,325	928,738	54,095	261,337	393,628
High	1,689	3,979,141	2,036,721	89,397	435,178	833,613
Very high	1,063	10,448,353	5,646,438	263,340	1,216,119	2,529,248
Ownership category						
Non-profit	2,612	1,016,001	348,343	33,216	215,966	236,661
For-profit/unknown	1,869	2,140,722	894,921	67,269	394,500	540,330
Government	5,126	1,701,171	735,843	43,137	264,996	304,297
Service area pop. density						
Urban	5,112	2,461,224	1,067,733	69,515	354,669	510,155
Rural	2,641	1,230,058	493,877	33,565	237,406	256,602
Super rural	1,854	665,186	221,968	15,796	149,067	138,191
Public safety						
Yes	4,447	1,533,809	604,995	44,614	252,750	279,908
No	5,161	1,518,724	632,769	41,875	294,490	345,686
Contract out key functions*						
Yes	829	1,546,932	495,345	44,614	261,867	461,085
No	8,779	1,525,611	632,769	43,041	272,372	307,028

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. "pop." is population. Subgroup total n's may not always add up to the overall n due to rounding.
* For facilities costs, vehicles costs, and equipment and other costs, the definition of whether organizations contract out key functions is different. 448 weighted NPIs contract out key functions, and 9,160 do not.

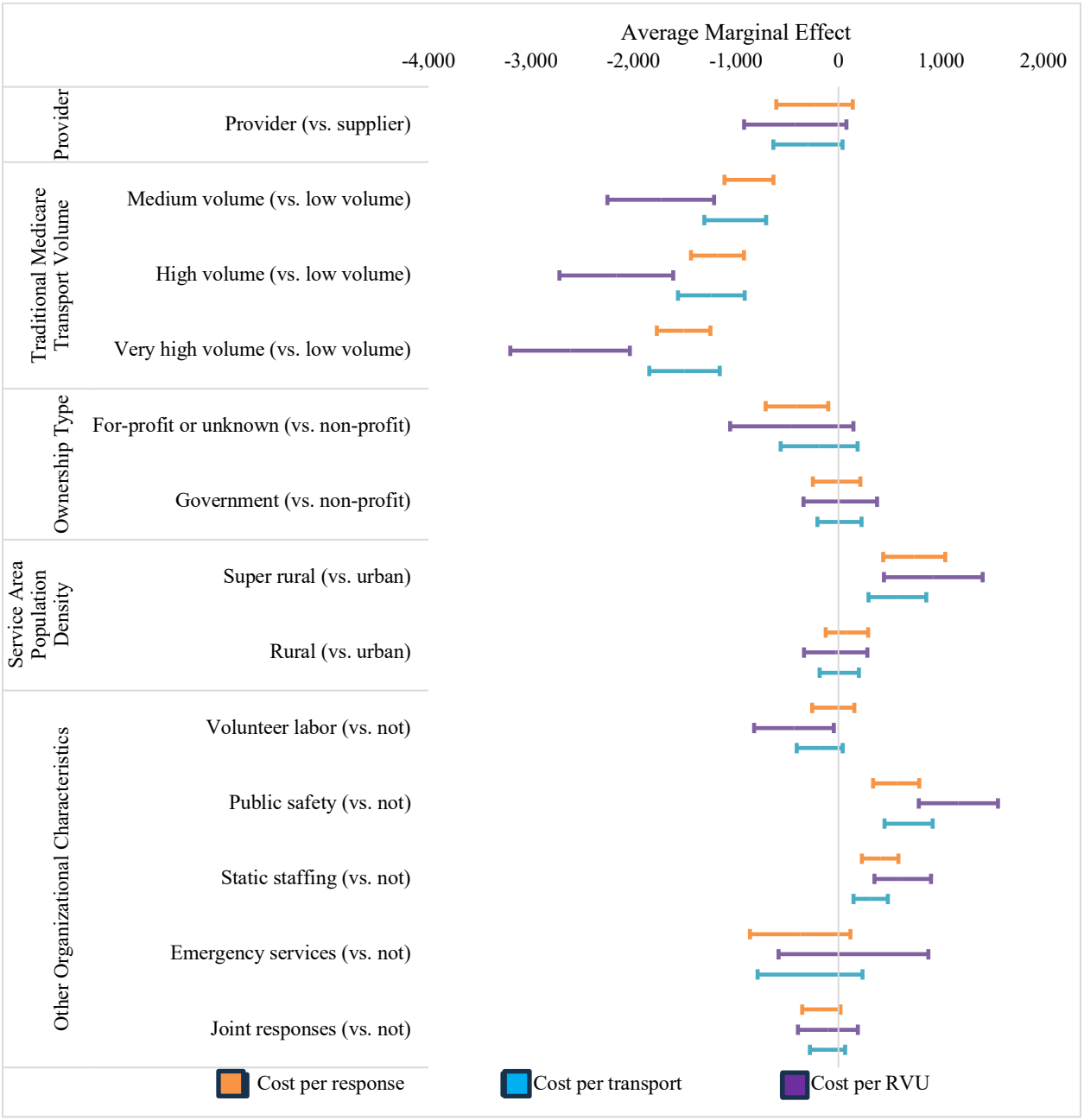
Chapter 4. Regression Models and Analysis Results

Table 4.1. Summary Table of Unadjusted Total Cost per Service

	Total Cost per Response ($)			Total Cost per Transport ($)			Total Cost per RVU ($)	
	n	Mean	Median	n	Mean	Median	Mean	Median
All NPIs	9,607	1,907	999	9,599	2,763	1,355	1,673	812
Provider vs. supplier status								
Suppliers	9,093	1,921	1,003	9,085	2,804	1,378	1,694	816
Providers	514	1,669	919	514	2,024	1,108	1,301	710
Medicare transport volume								
Low	4,063	2,652	1,481	4,056	4,034	2,055	2,436	1,228
Medium	2,791	1,668	999	2,791	2,273	1,349	1,348	794
High	1,689	1,235	696	1,689	1,648	910	1,024	569
Very high	1,063	758	475	1,063	968	585	651	395
Ownership category								
Non-profit	2,612	1,935	888	2,609	2,578	1,199	1,578	736
For-profit/ unknown	1,869	1,318	519	1,869	1,912	609	1,230	441
Governme nt	5,125	2,108	1,279	5,121	3,167	1,794	1,884	1,045
Service area pop. density								
Urban	5,112	1,675	885	5,112	2,529	1,196	1,522	739
Rural	2,640	1,775	926	2,637	2,458	1,246	1,500	772
Super rural	1,854	2,735	1,468	1,851	3,843	1,971	2,339	1,171
Public safety								
Yes	4,447	2,251	1,382	4,443	3,545	1,969	2,116	1,141
No	5,160	1,611	735	5,156	2,088	951	1,292	605

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. RVU = relative value unit. "pop." is population. One NPI did not have responses, and two additional NPIs did not have transports after data cleaning, reducing the weighted sample size to 9,607 and 9,599 for these analyses, respectively. Sum of number of organizations with each characteristic may not equal total for subcategories due to rounding. The second "n" column represents the total number of organizations used in both the total cost per transport and total cost per RVU columns. Data that would allow costs to be calculated separately for emergency versus non-emergency transports are not available.

Figure 4.1. Estimated Regression Model AMEs, Cost per Service



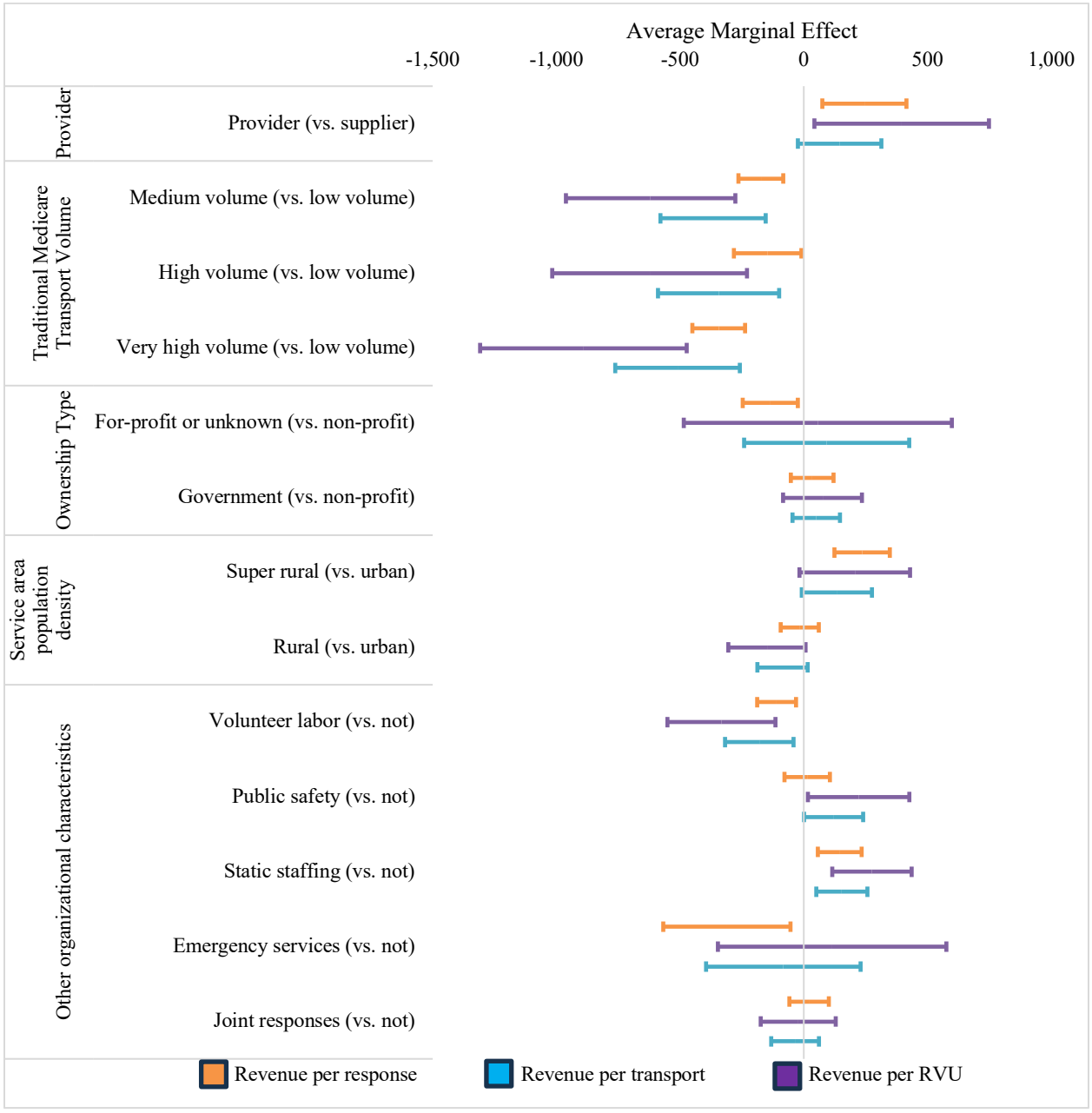
SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: RVU = relative value unit. AME = average marginal effect. AMEs report the estimated incremental change in the model's dependent variable from a discrete change in one or more independent variables. For example, the AME for the provider flag in the cost per response model is an estimate of the average incremental change in modeled cost per response by assuming that all organizations are providers versus suppliers. The bars on each line in the figure represent the 5th and 95th percentiles.

Table 4.2. Summary Table of Unadjusted Revenue per Service

	Total Revenue per Response ($)			Total Revenue per Transport ($)			Total Revenue per RVU ($)	
	n	Mean	Median	n	Mean	Median	Mean	Median
All NPIs	9,607	840	464	9,599	1,268	613	771	380
Provider vs. supplier status								
Suppliers	9,093	819	457	9,085	1,256	601	767	375
Providers	514	1,226	708	514	1,487	876	847	536
Medicare transport volume								
Low	4,063	966	520	4,056	1,645	716	987	443
Medium	2,791	789	467	2,791	1,072	621	635	375
High	1,689	800	417	1,689	1,034	527	665	337
Very high	1,063	559	388	1,063	719	479	477	325
Ownership category								
Non-profit	2,612	843	478	2,609	1,136	642	670	391
For-profit/unknown	1,869	710	395	1,869	1,135	466	762	331
Government	5,125	886	486	5,121	1,384	680	827	402
Service area pop. density								
Urban	5,112	785	409	5,112	1,267	539	776	342
Rural	2,640	767	468	2,637	1,062	618	641	379
Super rural	1,854	1,098	698	1,851	1,567	909	944	561
Public safety								
Yes	4,447	831	437	4,443	1,460	607	866	363
No	5,160	849	487	5,156	1,104	618	689	396

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: NPI = National Provider Identifier. RVU = relative value unit. "pop." is population. One NPI did not have responses, and two additional NPIs did not have transports after data cleaning, reducing the weighted sample size to 9,607 and 9,599 for these analyses, respectively. Sum of number of organizations with each characteristic may not equal total for subcategories due to rounding. The second "n" column represents the total number of organizations used in both the total cost per transport and total cost per RVU columns. Data that would allow revenue to be calculated separately for emergency versus non-emergency transports (or other service categories) are not available.

Figure 4.2. Estimated Regression Model AMEs, Revenue per Service



SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: RVU = relative value unit. AME = average marginal effect. AMEs report the estimated incremental change in the model's dependent variable from a discrete change in one or more independent variables. For example, the AME for the provider flag in the cost per response model is an estimate of the average incremental change in modeled cost per response by assuming that all organizations are providers versus suppliers. The bars on each line in the figure represent the 5th and 95th percentiles.

Full Regression Model Results

Table 4.3. Estimated Regression Model AMEs, Cost per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–233	–606	140	0.221
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–873	–1,112	–634	<0.001
High volume	–1,180	–1,438	–922	<0.001
Very high volume	–1,510	–1,772	–1,249	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–405	–710	–99	0.009
Government	–18	–249	214	0.882
Service Area Population Density (vs. urban)				
Rural	83	–124	290	0.433
Super rural	740	437	1,042	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–50	–256	155	0.630
Public safety (vs. not)	563	338	789	<0.001
Static staffing (vs. not)	407	229	585	<0.001
Emergency services (vs. not)	–373	–863	117	0.136
Joint responses (vs. not)	–167	–354	20	0.080

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.4. Estimated Regression Model AMEs, Cost per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–421	–920	78	0.098
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–1,734	–2,254	–1,213	<0.001
High volume	–2,167	–2,722	–1,612	<0.001
Very high volume	–2,619	–3,202	–2,035	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–455	–1,057	146	0.138
Government	18	–341	377	0.922
Service Area Population Density (vs. urban)				
Rural	–27	–336	282	0.864
Super rural	926	444	1,407	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–434	–823	–45	0.029
Public safety (vs. not)	1,171	784	1,557	<0.001
Static staffing (vs. not)	627	351	903	<0.001
Emergency services (vs. not)	147	–584	878	0.694
Joint responses (vs. not)	–103	–395	189	0.490

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.5. Estimated Regression Model AMEs, Cost per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–297	–635	40	0.084
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–1,007	–1,308	–705	<0.001
High volume	–1,240	–1,566	–915	<0.001
Very high volume	–1,502	–1,846	–1,158	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–188	–564	187	0.326
Government	10	–205	225	0.926
Service Area Population Density (vs. urban)				

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Rural	8	–184	200	0.934
Super rural	576	294	857	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–183	–407	41	0.110
Public safety (vs. not)	685	450	920	<0.001
Static staffing (vs. not)	315	147	482	<0.001
Emergency services (vs. not)	–277	–789	235	0.289
Joint responses (vs. not)	–107	–279	65	0.225

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.6. Estimated Regression Model AMEs, Revenue per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	245	75	415	0.005
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–174	–264	–83	<0.001
High volume	–146	–283	–10	0.036
Very high volume	–344	–450	–237	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–135	–247	–24	0.017
Government	34	–52	120	0.440
Service Area Population Density (vs. urban)				
Rural	–16	–93	61	0.679
Super rural	236	124	348	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–110	–188	–31	0.006
Public safety (vs. not)	14	–78	106	0.768
Static staffing (vs. not)	145	57	234	0.001
Emergency services (vs. not)	–311	–568	–54	0.018
Joint responses (vs. not)	22	–58	101	0.595

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.7. Estimated Regression Model AMEs, Revenue per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	396	43	749	0.028
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–619	–962	–277	<0.001
High volume	–623	–1,017	–230	0.002
Very high volume	–891	–1,308	–473	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	57	–485	599	0.837
Government	76	–84	235	0.352
Service Area Population Density (vs. urban)				
Rural	–149	–305	7	0.061
Super rural	206	–17	430	0.071
Other Organizational Characteristics				
Volunteer labor (vs. not)	–333	–551	–114	0.003
Public safety (vs. not)	222	17	427	0.034
Static staffing (vs. not)	276	115	436	0.001
Emergency services (vs. not)	115	–347	577	0.626
Joint responses (vs. not)	–22	–174	129	0.771

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.8. Estimated Regression Model AMEs, Revenue per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	145	–24	314	0.092
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–367	–579	–154	0.001
High volume	–344	–589	–100	0.006
Very high volume	–510	–762	–258	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	93	–241	426	0.587
Government	50	–46	146	0.304
Service Area Population Density (vs. urban)				

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Rural	–86	–187	16	0.098
Super rural	134	–8	276	0.065
Other Organizational Characteristics				
Volunteer labor (vs. not)	–180	–318	–41	0.011
Public safety (vs. not)	121	1	240	0.048
Static staffing (vs. not)	154	51	257	0.004
Emergency services (vs. not)	–83	–395	230	0.604
Joint responses (vs. not)	–35	–132	61	0.475

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Sensitivity Analysis

Table 4.9. Estimated Regression Model AMEs With Outliers Excluded, Cost per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–330	–517	–143	0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–822	–988	–657	<0.001
High volume	–966	–1,168	–763	<0.001
Very high volume	–1,255	–1,458	–1,052	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–262	–493	–31	0.026
Government	88	–72	248	0.281
Service Area Population Density (vs. urban)				
Rural	–38	–178	103	0.598
Super rural	587	364	809	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–96	–246	55	0.213
Public safety (vs. not)	396	226	566	<0.001
Static staffing (vs. not)	351	214	488	<0.001
Emergency services (vs. not)	–120	–468	227	0.498
Joint responses (vs. not)	–113	–263	37	0.140

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.10. Estimated Regression Model AMEs With Outliers Excluded, Cost per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–548	–852	–243	<0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–1,697	–2,180	–1,214	<0.001
High volume	–1,945	–2,478	–1,412	<0.001
Very high volume	–2,344	–2,907	–1,780	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–295	–847	258	0.296
Government	132	–151	415	0.360
Service Area Population Density (vs. urban)				
Rural	–172	–411	68	0.160
Super rural	725	315	1,136	0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–448	–795	–100	0.012
Public safety (vs. not)	884	572	1,196	<0.001
Static staffing (vs. not)	538	306	770	<0.001
Emergency services (vs. not)	379	–209	966	0.206
Joint responses (vs. not)	–52	–300	197	0.683

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.11. Estimated Regression Model AMEs With Outliers Excluded, Cost per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–412	–573	–251	<0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–976	–1,248	–704	<0.001
High volume	–1,082	–1,386	–778	<0.001
Very high volume	–1,312	–1,634	–990	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–109	–448	230	0.529
Government	74	–93	241	0.384

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Service Area Population Density (vs. urban)				
Rural	–78	–223	67	0.290
Super rural	473	237	709	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–185	–382	11	0.065
Public safety (vs. not)	505	322	689	<0.001
Static staffing (vs. not)	263	125	401	<0.001
Emergency services (vs. not)	–26	–402	349	0.891
Joint responses (vs. not)	–72	–216	72	0.325

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. RVU = relative value unit.

Table 4.12. Estimated Regression Model AMEs With Outliers Excluded, Revenue per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–330	–517	–143	0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–822	–988	–657	<0.001
High volume	–966	–1,168	–763	<0.001
Very high volume	–1,255	–1,458	–1,052	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–262	–493	–31	0.026
Government	88	–72	248	0.281
Service Area Population Density (vs. urban)				
Rural	–38	–178	103	0.598
Super rural	587	364	809	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–96	–246	55	0.213
Public safety (vs. not)	396	226	566	<0.001
Static staffing (vs. not)	351	214	488	<0.001
Emergency services (vs. not)	–120	–468	227	0.498
Joint responses (vs. not)	–113	–263	37	0.140

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.13. Estimated Regression Model AMEs With Outliers Excluded, Revenue per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–548	–852	–243	<0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–1,697	–2,180	–1,214	<0.001
High volume	–1,945	–2,478	–1,412	<0.001
Very high volume	–2,344	–2,907	–1,780	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–295	–847	258	0.296
Government	132	–151	415	0.360
Service Area Population Density (vs. urban)				
Rural	–172	–411	68	0.160
Super rural	725	315	1,136	0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–448	–795	–100	0.012
Public safety (vs. not)	884	572	1,196	<0.001
Static staffing (vs. not)	538	306	770	<0.001
Emergency services (vs. not)	379	–209	966	0.206
Joint responses (vs. not)	–52	–300	197	0.683

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.14. Estimated Regression Model AMEs With Outliers Excluded, Revenue per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–412	–573	–251	<0.001
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–976	–1,248	–704	<0.001
High volume	–1,082	–1,386	–778	<0.001
Very high volume	–1,312	–1,634	–990	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–109	–448	230	0.529
Government	74	–93	241	0.384
Service Area Population Density (vs. urban)				
Rural	–78	–223	67	0.290

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Super rural	473	237	709	<0.001
Other Organizational Characteristics				
Volunteer labor (vs. not)	–185	–382	11	0.065
Public safety (vs. not)	505	322	689	<0.001
Static staffing (vs. not)	263	125	401	<0.001
Emergency services (vs. not)	–26	–402	349	0.891
Joint responses (vs. not)	–72	–216	72	0.325

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval.

Table 4.15. Estimated Regression Model AMEs With State Fixed Effects, Cost per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–308	–604	–11	0.042
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–861	–1,092	–630	<0.001
High volume	–1,293	–1,534	–1,052	<0.001
Very high volume	–1,607	–1,860	–1,354	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–449	–721	–177	0.001
Government	15	–213	243	0.898
Service Area Population Density (vs. urban)				
Rural	47	–166	259	0.667
Super rural	299	26	571	0.032
Other Organizational Characteristics				
Volunteer labor (vs. not)	–183	–381	15	0.069
Public safety (vs. not)	431	219	644	<0.001
Static staffing (vs. not)	275	109	442	0.001
Emergency services (vs. not)	–357	–784	70	0.102
Joint responses (vs. not)	–157	–318	3	0.054

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Table 4.16. Estimated Regression Model AMEs With State Fixed Effects, Cost per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–506	–900	–112	0.012
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–1,590	–1,961	–1,219	<0.001
High volume	–2,188	–2,582	–1,794	<0.001
Very high volume	–2,622	–3,028	–2,217	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–578	–971	–186	0.004
Government	94	–226	414	0.564
Service Area Population Density (vs. urban)				
Rural	–38	–350	274	0.812
Super rural	327	–89	743	0.124
Other Organizational Characteristics				
Volunteer labor (vs. not)	–467	–779	–154	0.003
Public safety (vs. not)	803	498	1,107	<0.001
Static staffing (vs. not)	435	191	680	<0.001
Emergency services (vs. not)	98	–428	623	0.716
Joint responses (vs. not)	–157	–389	75	0.185

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Table 4.17. Estimated Regression Model AMEs With State Fixed Effects, Cost per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	–345	–607	–84	0.010
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–940	–1,169	–711	<0.001
High volume	–1,280	–1,524	–1,035	<0.001
Very high volume	–1,526	–1,784	–1,269	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–268	–518	–19	0.035
Government	46	–147	239	0.640
Service Area Population Density (vs. urban)				

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Rural	7	–188	203	0.943
Super rural	231	–23	485	0.074
Other Organizational Characteristics				
Volunteer labor (vs. not)	–217	–406	–27	0.025
Public safety (vs. not)	484	293	674	<0.001
Static staffing (vs. not)	207	56	358	0.007
Emergency services (vs. not)	–310	–705	86	0.125
Joint responses (vs. not)	–141	–281	–2	0.047

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Table 4.18. Estimated Regression Model AMEs With State Fixed Effects, Revenue per Response

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	209	48	371	0.011
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–175	–265	–84	<0.001
High volume	–166	–289	–43	0.008
Very high volume	–385	–488	–282	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–139	–245	–33	0.010
Government	35	–50	119	0.424
Service Area Population Density (vs. urban)				
Rural	–6	–85	74	0.892
Super rural	147	22	271	0.021
Other Organizational Characteristics				
Volunteer labor (vs. not)	–108	–188	–28	0.008
Public safety (vs. not)	–64	–150	21	0.139
Static staffing (vs. not)	110	29	190	0.007
Emergency services (vs. not)	–285	–522	–47	0.019
Joint responses (vs. not)	–6	–78	65	0.863

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Table 4.19. Estimated Regression Model AMEs With State Fixed Effects, Revenue per Transport

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	303	50	556	0.019
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–499	–671	–328	<0.001
High volume	–503	–708	–298	<0.001
Very high volume	–800	–1,000	–601	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–132	–292	29	0.108
Government	117	–6	239	0.063
Service Area Population Density (vs. urban)				
Rural	–77	–205	51	0.239
Super rural	122	–73	317	0.218
Other Organizational Characteristics				
Volunteer labor (vs. not)	–245	–378	–111	<0.001
Public safety (vs. not)	24	–107	156	0.715
Static staffing (vs. not)	184	62	307	0.003
Emergency services (vs. not)	–73	–368	222	0.629
Joint responses (vs. not)	–28	–139	82	0.613

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Table 4.20. Estimated Regression Model AMEs With State Fixed Effects, Revenue per RVU

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Provider (vs. supplier)	125	–12	263	0.074
Traditional Medicare Transport Volume (vs. low volume)				
Medium volume	–298	–403	–193	<0.001
High volume	–284	–411	–156	<0.001
Very high volume	–463	–586	–340	<0.001
Ownership Type (vs. non-profit)				
For-profit or unknown	–13	–120	95	0.816
Government	67	–6	139	0.072
Service Area Population Density (vs. urban)				

	AME ($)	95% CI Lower Bound	95% CI Upper Bound	*P*-Value
Rural	–37	–115	40	0.343
Super rural	94	–30	219	0.137
Other Organizational Characteristics				
Volunteer labor (vs. not)	–129	–210	–48	0.002
Public safety (vs. not)	15	–66	95	0.717
Static staffing (vs. not)	101	23	179	0.012
Emergency services (vs. not)	–214	–431	3	0.053
Joint responses (vs. not)	–29	–96	39	0.406

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: AME = average marginal effect. CI = confidence interval. State fixed effects were also included in the model.

Chapter 5. Summary of Data Validation

As explained in Appendix B of the Year 1 and Year 2 cohort analysis, we took several steps to ensure the internal validity of the reported data and to clean the data where needed. Appendix B of that report summarizes the full set of checks conducted as well as the data cleaning steps. The tables in this section update the results of the data checks using data reported through May 15, 2025.

Table 5.1. Internal Consistency Checks, Sections 3 and 4—Average Trip and Response Times

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
3	3 & 6	Is the average trip time in the primary service area less than or equal to the average trip time in the secondary service area (if applicable)?	3,782	137	26	Allows primary service area average trip time to be at most one category longer than secondary service area average trip time
3 4	3 3b	Is the average response time in S4 less than the average trip time reported in S3 (relevant only to organizations reporting data for S4)?	6,039	47	31	Allows average response time to be at most one category longer than average trip time
4	3b	Is the average response time for primary service area greater than one minute (among those using CMS definition of response time)?	4,652	10	N/A	N/A
3 4	6 3d	Is the average response time in S4 for the secondary service area less than the average trip time reported in S3 (relevant only to organizations reporting secondary service areas)?	3,158	17	8	Allows average response time to be at most one category[a] longer than average trip time
4	3b & 3d	Is the organization's average response time in their primary service area shorter than the average response time in their secondary service area (relevant	3,152	87	40	Assumes that secondary service area average response time is 25 percent higher than reported

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
	3e & 3g	only to organizations reporting secondary service areas)?	721	6	6	Assumes that secondary service area average response time is 25 percent higher than reported
4	3c	Is the share of responses that take twice more than the average less than 50 percent (it should be mathematically impossible to have a share over 50 percent)?	6,039	68	–	N/A
	3f		721	13	–	N/A

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: S = Section. Checks with tolerances described as "N/A" were not conducted as they should not have been possible, as opposed to those consistency checks where failing them is theoretically possible but unlikely.
[a] The questions on average trip time for primary and secondary service areas are reported as categorical variables (i.e., less than 30 minutes, 30–60 minutes, 61–90 minutes, 91–120 minutes, 121–150 minutes, or more than 150 minutes). For the checks with tolerances, we allowed the two questions being examined to be at most one category separate from one another (e.g., less than 30 minutes for one question and 30–60 minutes for the other).

Table 5.2. Internal Consistency Checks, S5 (Service Volume)

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
5	1 & 2	Is the total number of ground ambulance responses less than or equal to the total number of responses?	7,387	0	–	N/A
5	4	Is the percentage of ground ambulance responses in the secondary service area less than 50 percent?	3,782	96	24	Allows the percentage of ground ambulance responses in the secondary service area to be less than 75 percent
5	2 & 5	Is the number of ground ambulance responses that did not result in a transport less than the number of ground ambulance responses?	7,387	0	–	N/A
5	2 & 6	Is the number of ground ambulance transports less	7,387	112	42	Assumes that the number of ground ambulance responses is

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
		than the number of ground ambulance responses?				25 percent higher than reported
5	6 & 7	Is the number of paid ground ambulance transports less than or equal to the number of ground ambulance transports?	7,387	0	–	N/A
5	2 & 9	Is the number of responses reported in Q9[a] less than or equal to the number of ground ambulance responses?	177	2	–	N/A
5	2 & 10	Is the number of responses reported in Q10[b] less than or equal to the number of ground ambulance responses?	2,873	9	–	N/A

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Q = Question. Checks with tolerances described as "N/A" were not conducted as they should not have been possible, as opposed to those consistency checks where failing them is theoretically possible but unlikely.
[a] Q9 asked respondents to report the number of responses for which their organization provided paramedic intercepts.
[b] Q10 asked respondents to report the number of responses for which their organization provided an ALS intervention as a joint response to meet a BLS ground ambulance from another organization, excluding paramedic intercepts.

Table 5.3. Internal Consistency Checks, S7 (Labor)

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
7.1	1	Is the average dollar per hour paid to EMT staff less than $900/hour?	6,532	179	–	N/A
7.2	1	Is the average dollar per hour paid to administrative, facility, and Medical Director staff less than $900/hour?	5,957	145	–	N/A
7.3	1 & 2	Is the number of hours per EMT/response volunteer less than 2,080 (the upper bound of 40 hours per week for 52 weeks)?	2,171[a]	87	60	Increases upper bound to be 3,000 hours
7.3	3 & 4	Is the number of hours per administration/facility volunteer	1,213[b]	509	505	Increases upper bound to

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
		less than 2,080 (the upper bound of 40 hours per week for 52 weeks)?				be 3,000 hours
7.3	5	Is the number of hours per medical director volunteer less than 2,080 (the upper bound of 40 hours per week for 52 weeks, assumes one volunteer per organization)?	851	4	2	Increases upper bound to be 3,000 hours

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: Checks with tolerances described as "N/A" were not conducted as they should not have been possible, as opposed to those consistency checks where failing them is theoretically possible but unlikely.
[a] Respondents who reported the hours that volunteers worked in S7.3Q2 but reported having zero volunteers in S7.3Q1 were excluded from this check. Similarly, respondents who reported having some volunteer workers in S7Q1 but then reported no hours of volunteer work and no volunteers in S7.3 were excluded.
[b] Respondents who reported the hours that volunteers worked in S7.3Q4 but reported having zero volunteers in S7.3Q3 were excluded from this check. Similarly, respondents who reported having some volunteer workers in S7Q1 but then reported no hours of volunteer work and no volunteers in S7.3 were excluded.

Table 5.4. Internal Consistency Checks, Costs and Revenue

Section	Questions	Consistency Check—Expected Answer to Each Question Is "Yes"	Number Eligible for Check	Number Flagged by Check	Number Flagged With Additional Tolerance	Description of Tolerance
7–11, 12	All cost questions	Are the total costs reported in S7 through S11 less than or equal to the total costs reported in S12? (Ground ambulance–only organizations)	3,015	813	625	Assumes that total cost in S12 is 25% higher than reported
13	1, 2 or 3, 5	Is the total revenue reported in questions 2 or 3 and 5 less than or equal to the revenue reported in 1? (Ground ambulance–only organizations)	3,015	881	315	Assumes that total revenue in Q1 is 25% higher than reported

SOURCE: RAND analysis of the GADCS analytic file with data reported through May 15, 2025.
NOTE: S = Section.

Abbreviations

AFS	Ambulance Fee Schedule
AIF	Ambulance Inflation Factor
ALS	advanced life support
ALS1	advanced life support, level 1
ALS2	advanced life support, level 2
AME	average marginal effect
BBA	Bipartisan Budget Act
BLS	basic life support
CI	confidence interval
CMS	Centers for Medicare & Medicaid Services
COVID-19	coronavirus disease 2019
CY	calendar year
EMR	emergency medical responder
EMS	emergency medical services
EMT	emergency medical technician
ESRD	end-stage renal disease
FFS	fee-for-service
GADCS	Ground Ambulance Data Collection System
GAF	Geographic Adjustment Factor
GPCI	geographic practice cost index
HCPCS	Healthcare Common Procedure Coding System
HHS	U.S. Department of Health and Human Services
IDR	Integrated Data Repository
IQR	interquartile range
IT	information technology
MedPAC	Medicare Payment Advisory Commission
MSA	Metropolitan Statistical Area
NPI	National Provider Identifier
NPPES	National Plan and Provider Enumeration System
N/R	not reported
PECOS	Provider Enrollment, Chain, and Ownership System
PFS	Physician Fee Schedule
PHE	public health emergency
PI	Paramedic Intercept
QRV	quick response vehicle

RVU	relative value unit
SCT	specialty care transport
SD	standard deviation
SUV	sport-utility vehicle
TFP	Total Factor Productivity
USD	U.S. dollar
VHA	Veterans Health Administration

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