

Mandated report: Assessment of the Medicare Ground Ambulance Data Collection System

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Previous presentations related to mandated report

- March 2025: Introduction to the ambulance fee schedule (AFS), Ground Ambulance Data Collection System (GADCS), and congressionally mandated report
- December 2025: Built on March 2025 presentation and provided preliminary results of analysis of GADCS data

Presentation roadmap

- 1 Bipartisan Budget Act of 2018 mandate
- 2 Medicare's ground ambulance fee schedule
- 3 CMS's Ground Ambulance Data Collection System (GADCS)
- 4 Analysis of GADCS data
- 5 Assessment of GADCS data
- 6 Chair's draft recommendation

BBA of 2018 mandate

- Ground ambulance services provided to FFS Medicare beneficiaries are paid under the AFS
- BBA of 2018 required CMS to implement a comprehensive ground ambulance data-collection system that includes data on ground ambulance costs and revenues
- CMS created the GADCS
- BBA of 2018 also directs MedPAC to assess the GADCS and review AFS payments

Note: BBA of 2018 (Bipartisan Budget Act of 2018), FFS (fee-for-service), AFS (ambulance fee schedule), GADCS (Ground Ambulance Data Collection System).

Motivation for collecting ground ambulance cost and revenue data

- AFS payment adjustments are largely not based on cost data and have not been updated since they were implemented
- Without cost data, it may not be clear:
 - Whether AFS payments vary appropriately with the costs of providing care to beneficiaries with different needs in different locations
 - Whether aggregate AFS payments are adequate to ensure access to care and good value for the Medicare program

Note: AFS (ambulance fee schedule).

BBA of 2018 requirement for MedPAC

- MedPAC required to produce a report that includes:
 - A recommendation as to whether collection of the GADCS data should continue or the data-collection system should be revised
- Report is due June 15, 2026

Note: BBA of 2018 (Bipartisan Budget Act of 2018), GADCS (Ground Ambulance Data Collection System).

Ambulance fee schedule

- In 2002, Medicare payment for ambulance services shifted to the AFS:
 - Previously, payments were based on costs (for organizations affiliated with hospitals) or charges (for all other organizations)
 - At that time, few data were available for setting payment rates
- Under the AFS in 2024:
 - 10,600 ground ambulance organizations provided services to FFS Medicare beneficiaries
 - 11.3 million FFS transports
 - \$5.3 billion in FFS payments

Note: AFS (ambulance fee schedule), FFS (fee-for-service).

What is covered under the AFS?

- Emergency and nonemergency transports from the point of patient pickup to an appropriate medical facility or to the patient's home
- Examples of covered transports:
 - Unscheduled emergency transports to a hospital ED
 - Scheduled nonemergency transports from inpatient care to a SNF
 - Scheduled repetitive nonemergency transports to and from dialysis facilities
- Payment under the AFS has two parts:
 - Mileage
 - Services provided during transport

Note: AFS (ambulance fee schedule), ED (emergency department), SNF (skilled nursing facility).

AFS payments for mileage and services during transport

- Payment for mileage is a function of:
 - A conversion factor (\$9.15 in 2026)
 - The location of the ambulance pickup (urban, rural, super rural)
 - An add-on payment for first 17 miles of rural/super-rural pickups
- Payment for services during a transport is a function of:
 - A conversion factor (\$284.56 in 2026)
 - The applicable RVU (service complexity)
 - Location of the pickup (urban, rural, super rural); these are temporary
 - PE GPCI (geographic differences in costs)

Note: AFS (ambulance fee schedule), RVU (relative value unit), PE GPCI (practice expense geographic practice cost index). CMS defines "rural" as ZIP codes outside of metropolitan statistical areas (MSAs) or ZIP codes in rural census tracts within MSAs, "super rural" as ZIP codes in rural counties that are among the lowest quartile of all rural counties by population density, and "urban" as ZIP codes in MSAs modified to exclude rural census tracts in MSAs.

Ground Ambulance Data Collection System (GADCS)

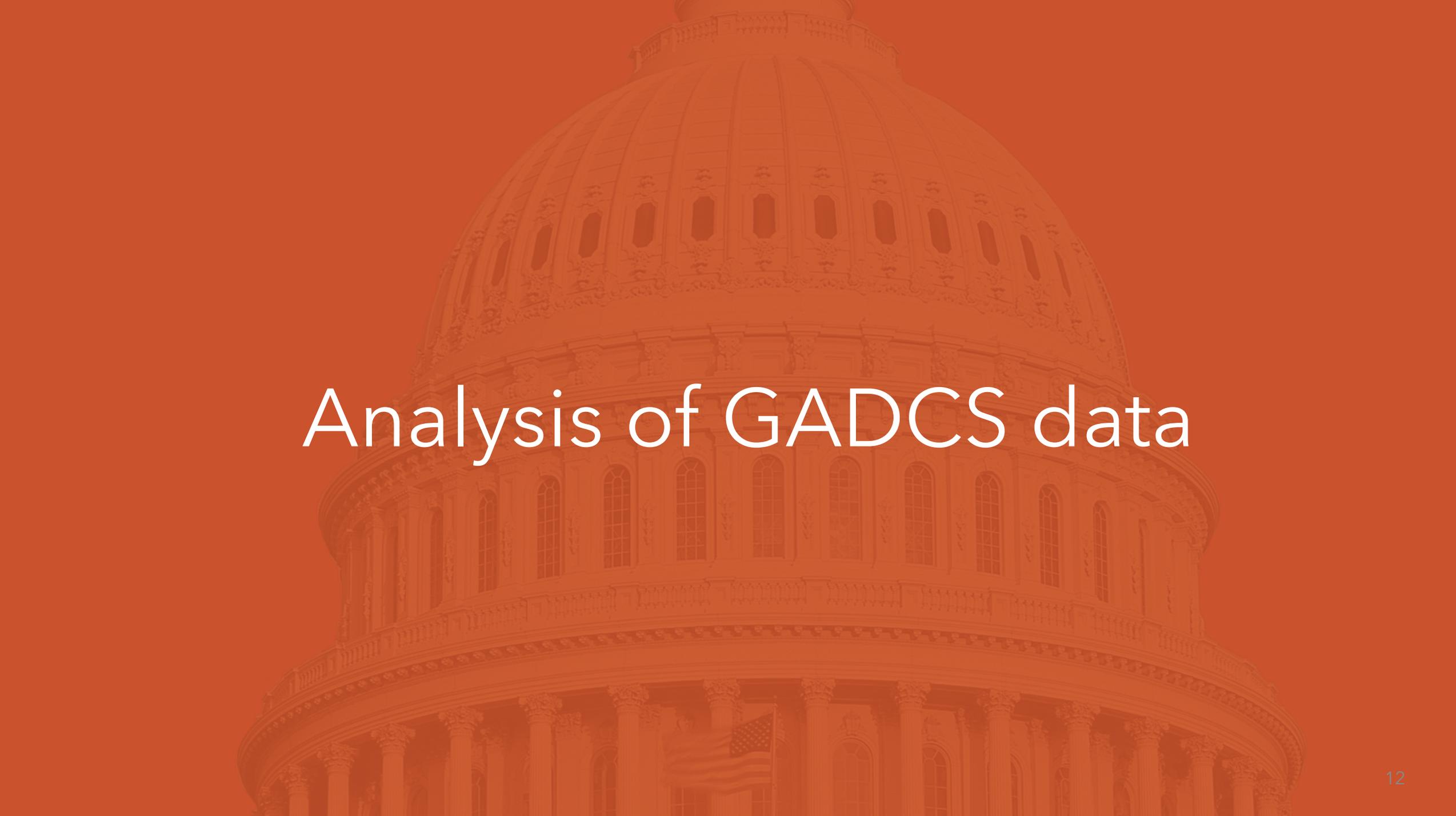
- GADCS includes data on ambulance organizations' characteristics, service area, service volume, service mix, staffing, costs, and revenues
- CMS surveyed 10,600 ambulance organizations that provided services in 2017, 2018, or 2020
 - 7,572 organizations submitted GADCS data for 2022 or 2023
 - About 1,650 organizations dropped because no longer active
 - About 1,350 chose not to participate in the survey (10 percent AFS payment reduction for 1 year)

Note: AFS (ambulance fee schedule).

MedPAC recommendation(s) required by BBA of 2018

- Should the GADCS data continue to be collected?
- Should the GADCS data collection be revised?

Note: BBA of 2018 (Bipartisan Budget Act of 2018), GADCS (Ground Ambulance Data Collection System).



Analysis of GADCS data

GADCS analysis: Number of transports has strong effect on costs

Quartile of transports	Ambulance transports per organization	Cost per transport
Lowest quartile	166	\$2,852
Q2	795	1,970
Q3	2,600	1,485
Highest quartile	15,721	914

- Earlier analyses by MedPAC (2013) and GAO (2007, 2012) also found that number of transports has a strong effect on costs

Note: GADCS (Ground Ambulance Data Collection System), Q (quartile), GAO (Government Accountability Office).
Source: MedPAC analysis of data from Ground Ambulance Data Collection System.

GADCS analysis: Type of ownership associated with costs; location has smaller relationship

Characteristic	Ambulance transports per organization	Cost per transport
Ownership		
For profit	10,838	\$575
Nonprofit	3,500	849
Government	3,400	1,675
Service-area location		
Urban	7,402	1,046
Rural	2,448	1,021
Super rural	959	1,293

Note: GADCS (Ground Ambulance Data Collection System).
Source: MedPAC analysis of data from Ground Ambulance Data Collection System.

Isolating the effects that different factors have on ambulance costs

- Many factors contribute to the differences in costs across ground ambulance organizations
 - For example, low costs of for-profit organizations relative to government-owned organizations are likely due to several factors: more transports, less complex service mix, different staffing models
- Simple tabulations cannot tell us the magnitude of the impact of each factor on costs
- To isolate the effect of each cost driver, we used a regression analysis

Regression analysis

- Estimated the effects of relevant factors on natural log of ground ambulance costs
- Regression allows us to see the impact of each cost driver while holding all the others constant
- Several explanatory variables were significant, but 2 stand out:
 - Number of transports
 - Location of the organization

Regression result: Economies of scale

- Costs rise at a slower rate than transports, indicating economies of scale (coefficient = 0.71)
 - 10% increase in transports increases costs by only 7%
- The implication is that smaller organizations have higher costs per transport relative to larger organizations
- However, the AFS does not have a payment adjustment for low-volume organizations
- MedPAC recommended that the AFS add-on payment for the first 17 miles of a rural transport be replaced with an adjustment for low-volume organizations in isolated areas (MedPAC June 2013)

Note: AFS (ambulance fee schedule).

Regression result: AFS add-on for rural transports may not be well targeted

- Regression coefficient for rural organizations (-0.13) indicates that costs are *lower* for rural organizations relative to urban organizations, holding other factors constant
 - However, AFS has adjustments that *increase* payments for rural organizations relative to urban organizations
 - Lower cost for rural organizations is due to controlling for the effects of other factors such as volume
 - Coefficient for super-rural organizations is positive (0.03), but not statistically significant

Note: AFS (ambulance fee schedule).

Preliminary comparison of organization revenues with organization costs

- Revenue from all sources and costs of providing ambulance services to all patients
 - Measure: Revenue-to-cost ratio (revenue divided by cost)
- Concerns about the revenue data in the GADCS
 - First year of data collection
 - Government organizations receive over half their revenue from sources unrelated to billing for ambulance services (local tax revenue)
 - CMS expressed concern that revenue from these sources may be underreported
 - Some organizations have extremely large differences between revenues and costs
- We trimmed the 5% most negative and 5% most positive differences between revenues and costs

Note: GADCS (Ground Ambulance Data Collection System),

Preliminary analysis: Revenue lower than cost for government organizations

Type of ownership	Revenue-to-cost ratio (full dataset)	Revenue-to-cost ratio (trimmed, weighted by transports)
For profit	1.03	1.13
Nonprofit	0.91	1.03
Government	0.71	0.98

Note: The reported revenue-to-cost ratios are the median for each group. "Revenue" is revenue from all sources, and "cost" is cost from providing services to all patients. Results from the trimmed data are weighted by number of transports for each organization.

Source: MedPAC analysis of data from the Ground Ambulance Data Collection System.

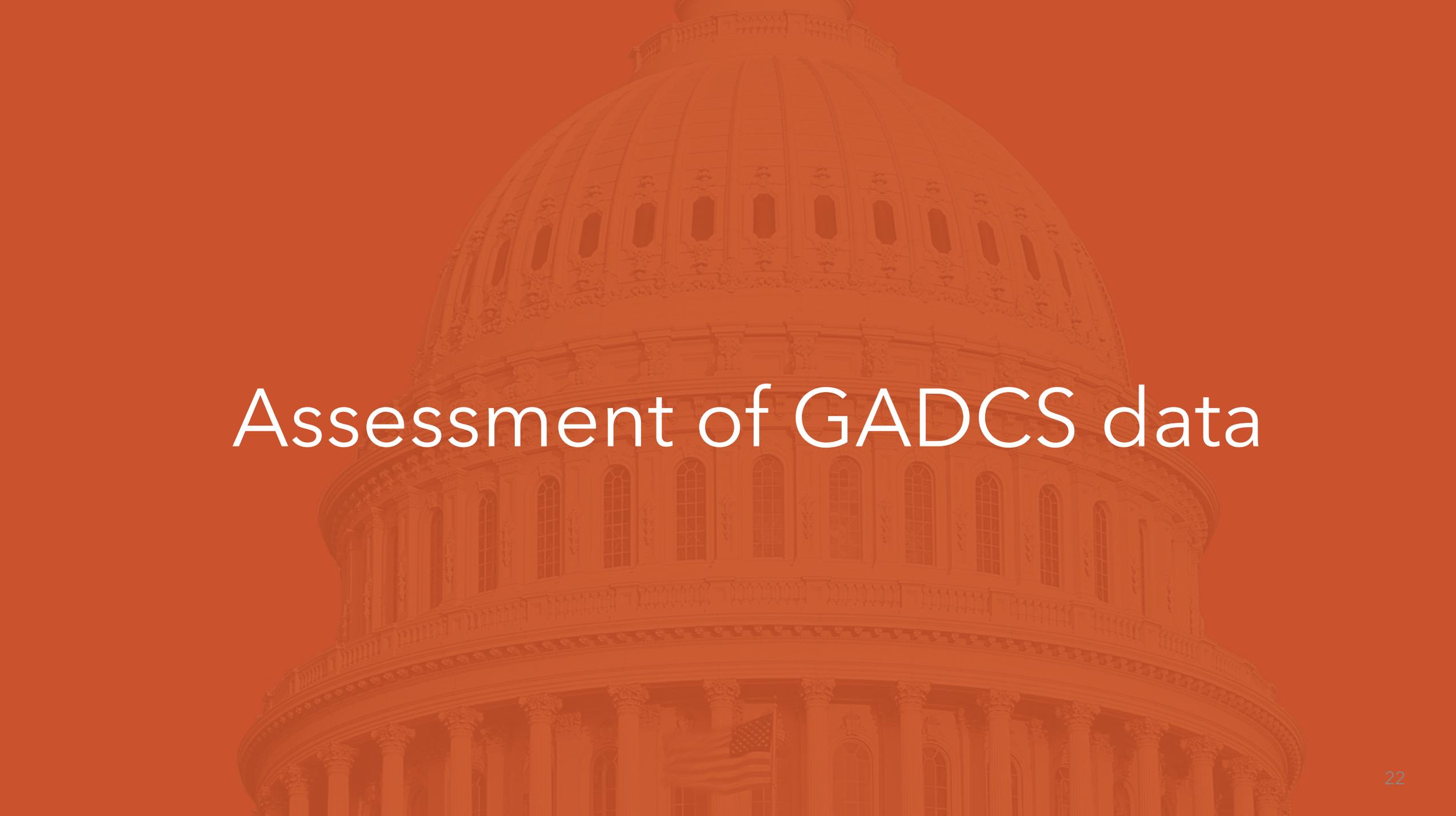
- Revenue-to-cost using both the full dataset and the trimmed dataset (median values)
- Results from trimmed data are weighted by number of transports for each organization
 - Differences indicate importance of volume
- Under both datasets, government organizations have lower ratios than for-profit and nonprofit organizations

Excluding government organizations, revenue-to-cost improves as number of transports increases

Characteristic	Revenue-to-cost ratio (full dataset)	Revenue-to-cost ratio (trimmed, weighted by transports)
Quartile of transports		
Lowest quartile	0.79	0.83
Q2	0.86	0.87
Q3	0.99	0.94
Highest quartile	1.05	1.11
Service-area location		
Urban	1.01	1.11
Rural	0.94	1.05
Super rural	0.91	1.04

Note: Q (quartile). These results exclude government-owned organizations. The reported revenue-to-cost ratios are the median for each group. "Revenue" is revenue from all sources, and "cost" is cost from providing ground ambulance services to all patients. Results from the trimmed data were weighted by number of transports for each organization.

Source: MedPAC analysis of data from Ground Ambulance Data Collection System.



Assessment of GADCS data

GADCS is a comprehensive dataset

- CMS collected data from 71% of the organizations that provided ground ambulance services (7,572 records)
 - Previous datasets had a few hundred records and excluded organizations that shared costs with emergency responders and hospitals, due to concerns about data accuracy
 - For GADCS, CMS worked with these organizations to ensure data accuracy
- GADCS includes detailed cost data that can be used to assess the accuracy of AFS payments
- GADCS includes sampling weights, so nationally representative results can be obtained

Note: GADCS (Ground Ambulance Data Collection System), AFS (ambulance fee schedule).

GADCS may have more variables than needed

- GADCS includes over 600 variables—many not needed for evaluating ambulance costs
 - We used only 150 of the variables to obtain our empirical results
 - Data on some GADCS cost categories (vehicles, facilities) are more granular than needed
- GADCS does not include data on providing care specifically to Medicare beneficiaries
 - Transport costs can be calculated for all patients but not specifically for Medicare beneficiaries
 - We found that the cost data for all patients are a reasonable approximation of the costs for FFS Medicare patients

Note: GADCS (Ground Ambulance Data Collection System), FFS (fee-for-service).

Interviews with stakeholders on continued collection of GADCS data

- Stakeholders: Ambulance organizations and trade associations; CMS, RAND
- In general, stakeholders noted:
 - Continued data collection would be beneficial to ensure payment adequacy and accuracy
 - Small, rural organizations reported difficulty collecting and submitting data and wondered about the usefulness of many questions
 - Survey instrument could be streamlined without loss of effectiveness
- Trade associations and organizations reported:
 - Start-up costs have been incurred, so stopping GADCS after one iteration would be unfortunate
 - Quality of data collection should improve with more experience

Note: GADCS (Ground Ambulance Data Collection System).

Summary

- Before GADCS, no dataset to assess adequacy of AFS payments
- GADCS is a good first step
 - Can be used to evaluate accuracy of AFS payments across patient severity levels and geographic locations and to assess whether aggregate AFS payments are large enough to ensure patient access
 - Stakeholders believe collection should continue
 - GADCS has many variables and could be improved through streamlining
- Regression analysis:
 - Volume is a strong driver of costs
 - Current AFS adjustments are not well targeted
 - MedPAC (2013) recommended payment adjustment for isolated, low-volume organizations

Note: GADCS (Ground Ambulance Data Collection System), AFS (ambulance fee schedule).



Chair's draft recommendation

Chair's draft recommendation

- The Congress should direct the Secretary to continue collecting cost and revenue data from suppliers and providers of ground ambulance services.
 - Data collection should focus on information essential to assessing both the accuracy of Medicare payments and Medicare beneficiaries' access to care; and
 - The Secretary should pursue opportunities to streamline data collection to minimize burden on suppliers and providers.



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