MEDPAC

Advising the Congress on Medicare issues

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

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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. Interviews with stakeholders
5. Analysis of GADCS data
6. Next steps and discussion

Mandated report

- Ground ambulance services provided to FFS Medicare beneficiaries are paid under the ambulance fee schedule (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 Ground Ambulance Data Collection System (GADCS)
- BBA of 2018 also directs MedPAC to assess the GADCS and review AFS payments

Note: FFS (fee-for-service), BBA of 2018 (Bipartisan Budget Act of 2018).

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:
  - If AFS payments vary appropriately with the costs of providing care to beneficiaries with different needs in different locations
  - If 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 requirements for MedPAC

- MedPAC required to produce a report that includes:
  - An analysis of the GADCS data
  - An analysis of the burden on ground ambulance organizations associated with collection of the GADCS data
  - **A recommendation as to whether collection of the GADCS data should continue or if 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 payments for ambulance services shifted to the AFS from a system that paid based on costs (for organizations affiliated with hospitals) or charges (for all other organizations)
  - At that time, little data was 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 pick-up 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 payment: Mileage

- Payment is a function of:
  - a conversion factor ($8.97)
  - the location of the ambulance pickup (urban, rural, super rural)
  - an add-on payment for 1st 17 miles of rural/super-rural pickups

Mileage payment category	Mileage payment formula
Urban pickup	$8.97 x 1.02 x miles
Rural and super-rural pickup, 1st 17 miles	$8.97 x 1.03 x 1.50 x miles
Rural and super-rural pickup, additional miles	$8.97 x 1.03 x (miles-17)

Note: AFS (ambulance fee schedule). 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.

Source: Table of AFS payment rates from the CMS website.

AFS payment: Services provided during transport

- Payment is a function of:
  - a conversion factor ($278.98)
  - the applicable RVU (service complexity)
  - location of the pickup (urban, rural, super rural)
  - PE GPCI (geographic differences in costs)
- Adjustments for location of the pickup (2% for urban, 3% for all rural, and additional 22.6% for super rural) are temporary

Service payment category	Service payment formula
Urban pickup	$278.98 x RVU x 1.02 x (0.7 x PE GPCI + 0.3)
Rural pickup	$278.98 x RVU x 1.03 x (0.7 x PE GPCI + 0.3)
Super rural pickup	$278.98 x RVU x 1.03 x 1.226 x (0.7 x PE GPCI + 0.3)

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.

Source: Table of AFS payment rates from the CMS website.

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

Assessment of GADCS

- 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 share costs with emergency responders or hospitals, due to concerns about data accuracy
  - For GADCS, CMS worked with these organizations to ensure data accuracy
- GADCS includes 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).

Assessment of GADCS, continued

- GADCS includes over 600 variables—many not needed for evaluating ambulance costs
  - We used only 150 of the variables to obtain our empirical results
- 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

Note:. GADCS (Ground Ambulance Data Collection System).

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).

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).

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), 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 owned	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 is likely due to several factors: more transports, less complex service mix, different staffing models
- Simple tabulations cannot tell us the magnitude of the impact on costs of each factor
- To isolate the effect of each cost driver, we used a regression analysis

Regression analysis

- Dependent variable: Natural log of ground ambulance costs
- Explanatory variables:
  - Operations: Number of transports (natural log), average response time, complexity of transports, type of staffing model, mix of ground ambulance workers
  - Geographic: PE GPCI (natural log); urban, rural, or super rural location
  - Ownership: For-profit, nonprofit, government
  - Share of revenue that is from local tax revenue
- Regression allows us to see the impact of each cost driver while holding all the others constant
- Several explanatory variables were significant, but two stand out: Number of transports and location of the organization

Note: PE GPCI (practice expense geographic practice cost index).

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).

Summary

- GADCS is a good first step
  - Stakeholders believe collection should continue
  - GADCS has a lot of variables and could be improved through streamlining
- GADCS does not have cost data specific to Medicare beneficiaries
  - Not an issue if Medicare costs match costs for all patients
- 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).

Next steps and discussion

- Next steps:
  - Refinements to analysis of GADCS based on commissioners' discussion
  - Return with Chair's draft recommendation(s)
  - Final report due June 2026

- Discussion
  - Questions?
  - Feedback to questions in paper:
    - Should data collection continue?
    - Should the GADCS be revised?

Note: GADCS (Ground Ambulance Data Collection System).

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