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An Analysis of Hospital Prices for Commercial and Medicare Advantage Plans

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Research Objective

- Examine the payment rates for hospital inpatient services in private insurers' commercial plans and Medicare Advantage (MA) plans
- Compare those rates with Medicare fee-for-service (FFS) rates
- Investigate the variation in commercial and MA rates among and within markets

Study Design

- Used 2013 claims for three large insurers (Aetna, Humana, and UnitedHealthcare) from the Health Care Cost Institute (HCCI) to estimate private insurers' hospital payment rates
- Defined the price of each hospital stay as the allowed amount (which includes the payment from the insurer plus patient cost sharing)

Study Design (continued)

- Used Medicare's FFS payment rules to compute the amount that the Medicare FFS program would have paid for each stay in the HCCI data, accounting for:
 - The diagnosis related group (DRG)
 - The area wage index
 - Indirect medical education (IME) and disproportionate share hospital (DSH) payments
- Excluded IME payments from Medicare FFS rates when comparing those rates with MA rates (because Medicare makes IME payments directly to hospitals for MA enrollees)
- Therefore measured MA and Medicare FFS payment rates on the same basis (because IME payments were excluded from both)

Study Design (continued)

- Did not factor in lump-sum payments (such as direct graduate medical education) that the Medicare program makes to many hospitals
- Applied an adjustment factor to account for outlier payments to the estimates of the national average Medicare FFS rates
- Limited the analysis to stays at acute care hospitals located in metropolitan statistical areas (MSAs)
- Examined the variation in payment rates among and within those areas

Study Design (continued)

- Compared prices nationally by computing the average commercial, MA, and Medicare FFS prices across all DRGs in about 300 MSAs
- Examined price variation among MSAs by computing the average price for 20 common DRGs in each MSA
- Examined price variation among hospitals within MSAs for selected DRGs and MSAs

Comparison of Commercial Prices with Medicare FFS Prices

- The average commercial payment rate for a hospital admission in 2013 was about \$21,400.
- The average Medicare FFS rate for the same set of stays (in the same hospitals) was about \$11,400.
- On average, commercial rates were 89 percent higher than Medicare FFS rates.
- Commercial payment rates were higher for surgical stays than for medical stays, on average. The ratio of commercial rates to Medicare FFS rates was similar for the two types of stays.

Table 1. Comparison of Mean Commercial and Medicare FFS Payment Rates for All Stays, Medical Stays, and Surgical Stays, 2013

	All MS-DRGs	Medical MS-DRGs	Surgical MS-DRGs
Commercial Price	\$21,433	\$13,469	\$30,880
Medicare FFS Base Price Plus IME, DSH, and Outliers	\$11,354	\$7,117	\$16,454
Ratio of Commercial to Medicare FFS Price	1.89	1.89	1.88
Number of Stays in Analysis	620,922	336,899	284,023
Number of MSAs in Analysis	297	296	297

The commercial sample excludes maternal stays associated with childbirth and was limited to adults 18 to 64 years old.

DSH = disproportionate share hospital payments; FFS = fee-for-service; IME = indirect medical education payments; MSA = metropolitan statistical area; MS-DRG = Medicare severity-diagnosis related group.

Comparison of Medicare Advantage Prices With Medicare FFS Prices

- The average MA payment rate for a hospital admission in 2013 was about \$10,700.
- The average Medicare FFS payment rate for the same set of stays was also about \$10,700.
- That estimate of the average Medicare FFS rate is lower than the \$11,400 value reported previously, for two reasons:
 - The mix of hospitals and DRGs
 - Exclusion of IME payments

Table 2. Comparison of Mean Medicare Advantage and Medicare FFS Payment Rates for All Stays, Medical Stays, and Surgical Stays, 2013

	All MS-DRGs	Medical MS-DRGs	Surgical MS-DRGs
Medicare Advantage Price	\$10,667	\$7,281	\$17,661
Medicare FFS Base Price Plus DSH and Outliers	\$10,716	\$7,236	\$17,932
Ratio of Medicare Advantage to Medicare FFS Price	1.00	1.01	0.98
Number of Stays in Analysis	593,044	399,597	193,447
Number of MSAs in Analysis	297	296	296

The Medicare Advantage sample was limited to adults 65 years old or older.

DSH = disproportionate share hospital payments; FFS = fee-for-service; MSA = metropolitan statistical area; MS-DRG = Medicare severity-diagnosis related group.

Variation of Average Prices Among Metropolitan Statistical Areas

- When measured in relation to Medicare FFS prices, the average commercial price for 20 common DRGs varied greatly among MSAs, whereas the average MA price varied much less.
- On average, commercial prices were about 150 percent higher than Medicare FFS prices in the MSA at the 90th percentile of the distribution and about 45 percent higher than Medicare FFS prices in the MSA at the 10th percentile.
- By contrast, the average MA rate in the MSA at the 90th percentile of the distribution was only 6 percent higher than the average FFS rate, and the average MA rate in the MSA at the 10th percentile of the distribution was only 2 percent below the average FFS rate.

Table 3. Variation Among Metropolitan Areas in the Weighted Average Ratio of Commercial Prices and Medicare Advantage Prices to Medicare FFS Prices for Top 20 DRGs, 2013

	Weighted Average Ratio of Commercial Prices to Medicare FFS Prices for Top 20 DRGs	Weighted Average Ratio of Medicare Advantage Prices to Medicare FFS Prices for Top 20 DRGs
Percentile		
10th	1.44	0.98
25th	1.65	1.00
50th	1.88	1.01
75th	2.16	1.03
90th	2.48	1.06
Ratio		
10th to median	0.77	0.97
90th to median	1.32	1.05
75th to 25th	1.31	1.03
90th to 10th	1.72	1.08
Number of MSAs in Analysis	137	196

The commercial sample excludes maternal stays associated with childbirth and was limited to adults 18 to 64 years old, and the Medicare Advantage sample was limited to adults 65 years old or older.

The ratio of the average commercial price to the average Medicare FFS price and the ratio of the average MA price to the average Medicare FFS price were calculated in each MSA. Those ratios were used to rank MSAs from lowest to highest.

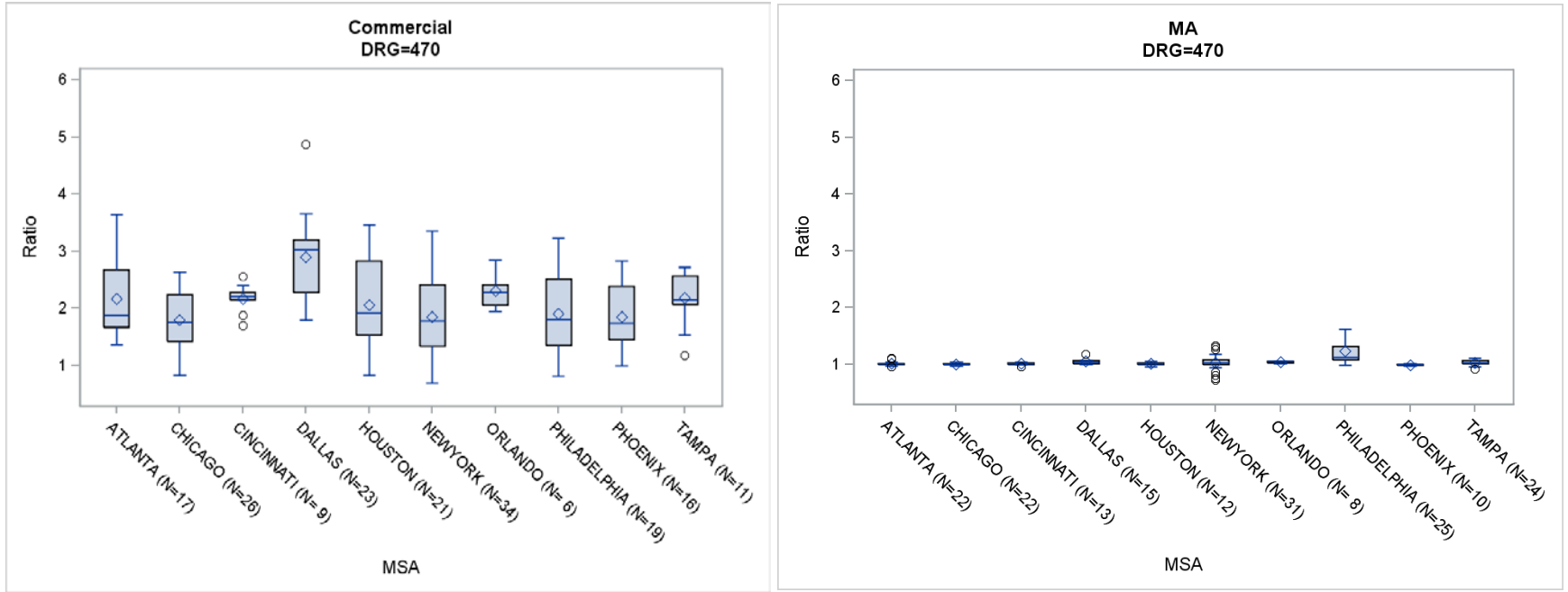
The analysis of variation in commercial prices among MSAs was restricted to the MSAs with at least one discharge in each of the top 20 DRGs in the commercial sample. An analogous restriction was imposed for the Medicare Advantage sample.

DRG = diagnosis-related group; FFS = fee-for-service; MSA = metropolitan statistical area.

Variation of Prices Within Metropolitan Statistical Areas

- When measured in relation to Medicare FFS prices, the median commercial price for DRG 470 (major joint replacement) varied greatly among hospitals within 10 large MSAs.
- The median MA price for DRG 470 exhibited little variation among hospitals in 8 of the 10 MSAs but exhibited greater variation in Philadelphia and New York.
- The results were similar for DRG 392 (gastrointestinal disorders), although there was generally less commercial price variation among hospitals than for DRG 470.

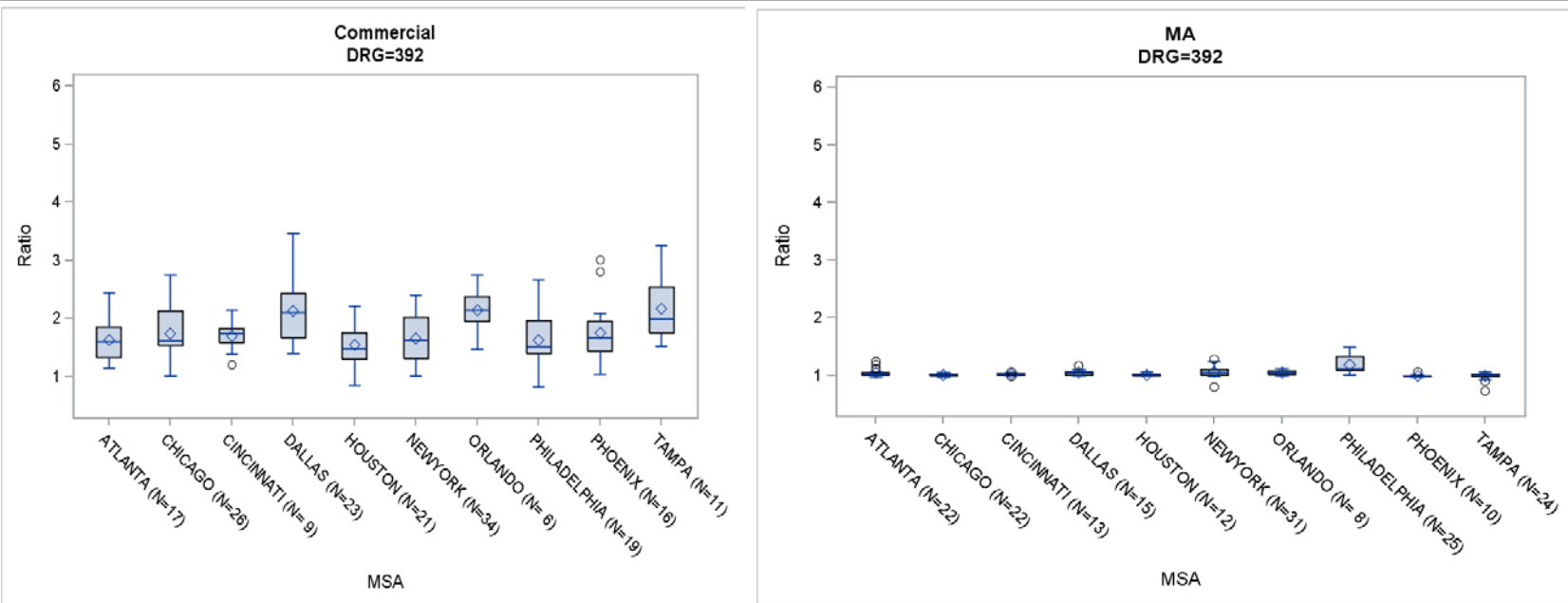
Figure 1. Variation in the Ratio of Commercial Prices to Medicare FFS Prices and the Ratio of Medicare Advantage Prices to Medicare FFS Prices Within Metropolitan Areas for DRG 470 (Major Joint Replacement or Reattachment of Lower Extremity Without Major Complications and Comorbidities), 2013



Note: For each MSA, the median ratio of the Medicare Advantage price to the Medicare FFS price was computed for each hospital, and an analogous ratio was computed for commercial prices. The analysis was restricted to hospitals that had at least five stays in 2013 in the DRG being analyzed (that criterion was applied separately for the analysis of Medicare Advantage prices and commercial prices). The bottom and top edges of the box for each MSA represent the 25th and 75th percentiles of the price ratio, the horizontal line inside the box represents the median, the marker inside the box represents the mean, and the “whiskers” (i.e., the endpoints of the lines extending outside the box) represent the minimum and maximum values—except in cases when some values are classified as “outliers,” which are shown as circles beyond the whiskers. Outliers are defined as values that are above the 75th percentile or below the 25th percentile by at least 1.5 times the “interquartile range” (which is the difference between the 75th percentile and the 25th percentile). The Medicare Advantage sample was limited to those 65 years and older, and the commercial sample excludes maternal stays associated with childbirth and was limited to adults 18 to 64 years old.

DRG = diagnosis-related group; FFS = fee-for-service; MSA = metropolitan statistical area.

Figure 2. Variation in the Ratio of Medicare Advantage Prices to Medicare FFS Prices and the Ratio of Commercial Prices to Medicare FFS Prices Within Metropolitan Areas for DRG 392 (Esophagitis, Gastroenteritis, and Miscellaneous Digestive Disorders Without Major Complications and Comorbidities), 2013



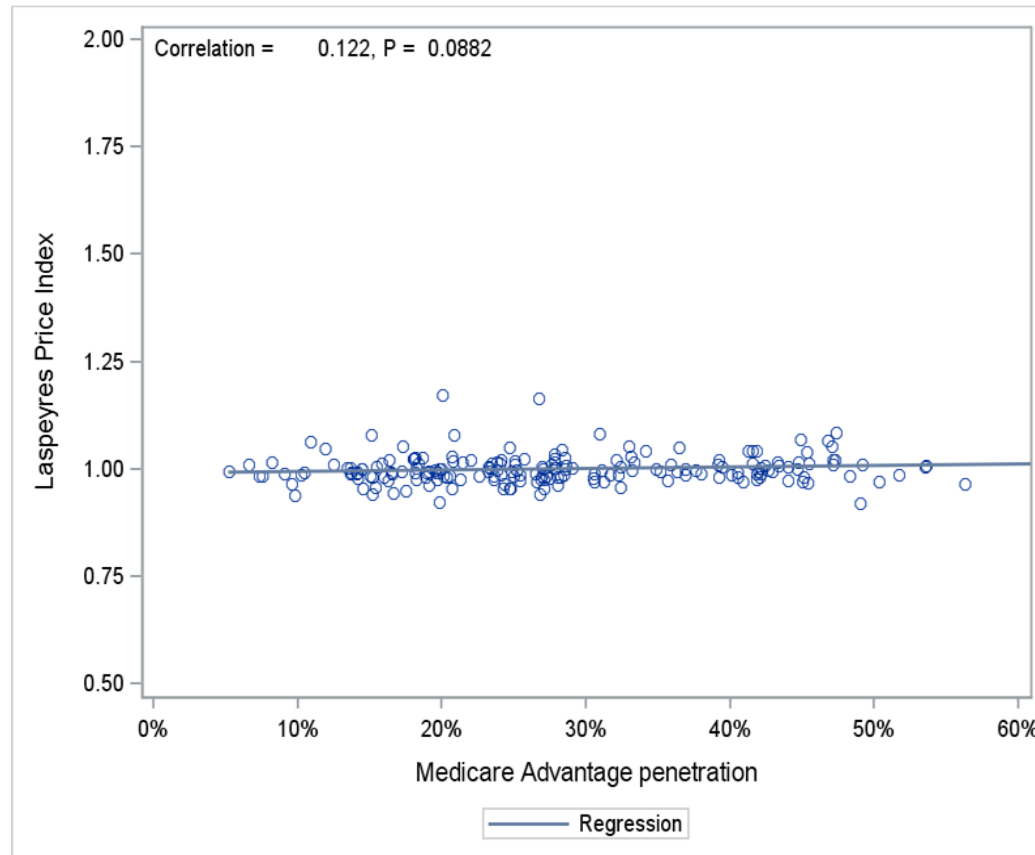
Note: For each MSA, the median ratio of the Medicare Advantage price to the Medicare FFS price was computed for each hospital, and an analogous ratio was computed for commercial prices. The analysis was restricted to hospitals that had at least five stays in 2013 in the DRG being analyzed (that criterion was applied separately for the analysis of Medicare Advantage prices and commercial prices). The bottom and top edges of the box for each MSA represent the 25th and 75th percentiles of the price ratio, the horizontal line inside the box represents the median, the marker inside the box represents the mean, and the “whiskers” (i.e., the endpoints of the lines extending outside the box) represent the minimum and maximum values—except in cases when some values are classified as “outliers,” which are shown as circles beyond the whiskers. Outliers are defined as values that are above the 75th percentile or below the 25th percentile by at least 1.5 times the “interquartile range” (which is the difference between the 75th percentile and the 25th percentile). The Medicare Advantage sample was limited to those 65 years and older, and the commercial sample excludes maternal stays associated with childbirth and was limited to adults 18 to 64 years old.

DRG = diagnosis-related group; FFS = fee-for-service; MSA = metropolitan statistical area.

Correlation of Medicare Advantage Penetration Rate and Hospital Prices

- The ratio of MA prices to Medicare FFS prices was not correlated with the share of beneficiaries enrolled in the MA program.
- Information on that relationship is important for evaluating policies that would substantially increase the share of beneficiaries enrolled in MA plans.

Figure 3. Scatter Plot of the Medicare Advantage Penetration Rate and an Index of the Ratio of Medicare Advantage Prices to Medicare FFS Prices, 2013



Note: The scatter plot shows the bivariate association between the MSA-level Medicare Advantage penetration rate and the Laspeyres price index of the ratio of Medicare Advantage prices to Medicare FFS prices on the basis of the top 20 DRGs for Medicare Advantage. There are 196 MSAs in this analysis. The Medicare Advantage sample was limited to adults 65 years or older.

DRG = diagnosis-related group; FFS = fee-for-service; MSA = metropolitan statistical area.

Conclusions

- The hospital prices paid by MA plans are nearly identical, on average, to Medicare FFS prices but much lower than commercial prices.
- When measured in relation to Medicare FFS prices, commercial prices varied greatly among MSAs and among hospitals within MSAs, whereas MA prices varied much less.