Medicare Advantage Plans Pay Hospitals Less Than Traditional Medicare Pays

ABSTRACT There is ongoing debate about how prices paid to providers by Medicare Advantage plans compare to prices paid by fee-for-service Medicare. We used data from Medicare and the Health Care Cost Institute to identify the prices paid for hospital services by fee-for-service (FFS) Medicare, Medicare Advantage plans, and commercial insurers in 2009 and 2012. We calculated the average price per admission, and its trend over time, in each of the three types of insurance for fixed baskets of hospital admissions across metropolitan areas. After accounting for differences in hospital networks, geographic areas, and case-mix between Medicare Advantage and FFS Medicare, we found that Medicare Advantage plans paid 5.6 percent less for hospital services than FFS Medicare did. Without taking into account the narrower networks of Medicare Advantage, the program paid 8.0 percent less than FFS Medicare. We also found that the rates paid by commercial plans were much higher than those of either Medicare Advantage or FFS Medicare, and growing. At least some of this difference comes from the much higher prices that commercial plans pay for profitable service lines.

There is much debate among health policy researchers about the performance of the Medicare Advantage program. On the one hand, some researchers have found that privately administered Medicare Advantage plans offer better-coordinated care of equal or higher quality, and for less cost, compared to traditional fee-for-service (FFS) Medicare. This literature also demonstrates that enrollment in Medicare Advantage creates positive spillovers for FFS Medicare enrollees in the same geographic area. On the other hand, different researchers have expressed various concerns about Medicare Advantage—most notably that a substantial share of the cost savings from Medicare Advantage compared to FFS Medicare goes to health plan profits instead of to expanded benefits or reduced public expenditures.

Despite the substantial literature on this topic, there has been virtually no systematic analysis of the unit prices that Medicare Advantage plans pay to doctors and hospitals, relative to the prices paid by FFS Medicare or commercial (employer-sponsored plus individually purchased private insurance) plans. This gap is important for several reasons.

First, without information on the unit prices paid by Medicare Advantage plans relative to FFS Medicare, there is no way to know whether the cost advantage of Medicare Advantage is attributable to lower quantities of treatments per enrollee, lower prices per treatment, or both. Since cost is the product of price and quantity, the cost advantage could be due to one or the other, or both. According to conventional wisdom, compared to FFS Medicare, Medicare Advantage plans pay slightly higher unit prices because they lack FFS Medicare's monopsony buying power. This implies that Medicare Advantage's cost ad-
vantage is due to lower quantities. However, that hypothesis has not been formally tested.

Second, even if conventional wisdom about the source of Medicare Advantage’s cost advantage is correct, information on unit prices can illuminate whether and how the program’s lower quantities improve economic efficiency. For example, some investigators have proposed that the prices that Medicare Advantage plans pay may better reflect the value of various treatment options than do FFS Medicare’s administratively set prices. That hypothesis has not been formally tested either.

Third, identifying the unit prices paid by Medicare Advantage plans is an essential first step to understanding the extent to which the plans are subject to providers’ market power. Given how much providers’ (especially hospitals’) market power has been shown to increase the prices that commercial plans pay, any serious evaluation of the performance of the Medicare Advantage program must consider how market characteristics—including the program’s penetration and FFS Medicare spending levels—influence Medicare Advantage prices.

In this study we used data from the Health Care Cost Institute (HCCI) and the Centers for Medicare and Medicaid Services (CMS) to identify the prices paid for hospital services by Medicare Advantage, FFS Medicare, and commercial plans in 2009, 2011, and 2012. The HCCI data include information from Aetna, Humana, and UnitedHealthcare on approximately forty million individuals who represent all fifty states and account for 27 percent of the nonelderly population covered by commercial insurance and 31 percent of the elderly Medicare Advantage population. The HCCI information constitutes one of the largest databases on the privately insured ever assembled. The CMS data include information on all of the payments for hospital services made on behalf of elderly FFS Medicare enrollees.

We calculated the average price per admission and its trend over time for each of the three types of insurance for a fixed market basket of hospital services. Below we also report the following information by insurance type: the average price per admission for the market basket for selected metropolitan areas (Core Based Statistical Areas, or CBASAs) with the highest and lowest prices, and the average price per admission for selected diagnosis-related groups (DRGs) nationwide. Actual hospital prices were not available to us. Hospital prices are negotiated between hospitals and insurance plans and are considered proprietary information by both.

Previous Literature
Until recently, little was known about the average prices paid by Medicare Advantage, FFS Medicare, and commercial health insurance plans, likely because of a lack of available data. However, several new studies have documented that commercial plans pay more for hospital services than FFS Medicare pays—in some cases, much more. Based on data from eight metropolitan areas, the Center for Studying Health System Change found that commercial payment rates to hospitals were 147–210 percent of FFS Medicare rates, on average, with the seventy-fifth percentile in many markets paying more than 300 percent of FFS Medicare rates. New research using the HCCI data has confirmed these findings using a longer time period and a broader set of geographic areas. By contrast, there has been virtually no systematic analysis of the unit prices that Medicare Advantage plans pay doctors and hospitals. Based on interviews with industry sources, the Congressional Budget Office found that "rates paid for Medicare Advantage enrollees are similar to or slightly above those that Medicare pays for FFS patients’ care." Other work based on interviews with industry sources suggests that in some cases, Medicare Advantage plans pay effective rates (that is, rates adjusted for the cost of other contract terms between plans and hospitals) that are lower than FFS Medicare rates. Because neither of these studies used information from Medicare Advantage and FFS Medicare claims, however, neither can provide the relative prices that Medicare Advantage plans pay.

Study Data And Methods
METHODS To calculate the average price per admission for Medicare Advantage, we examined the allowed amount from inpatient hospital claims from the HCCI for beneficiaries ages sixty-five and older who were enrolled in Medicare health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point-of-service (POS) plans. We excluded beneficiaries enrolled in private FFS plans. An allowed amount is the amount paid to a facility by a plan plus any copayment or deductible payments made by the beneficiary.

To calculate the average price per admission for commercial plans, we examined the allowed amount from inpatient hospital claims from the HCCI for enrollees and their dependents ages sixty-four and younger who were enrolled in HMO, PPO, or POS plans.

To calculate the average price per admission for FFS Medicare, we used data from CMS’s Medicare Provider Analysis and Review (MED-
PAR) File for a 100 percent sample of FFS Medicare enrollees. For each admission, we added the DRG amount, pass-through amounts (that is, payments for unusual capital and other costs), and outlier payments, which together represent the total due from the Medicare program and the beneficiary to the hospital for the services in question. In all three cases, we aggregated claims to the admission level. We dropped claims with zero or negative payments and those in the top and bottom 1 percent of the payment amount distribution by DRG and insurance type. We stratified claims by DRG and the CBSA in which the hospital is located.

We began with analyses of prices that used the complete samples of claims from Medicare Advantage, FFS Medicare, and commercial insurance. These samples may differ in the DRGs and geographic areas that they cover.

To construct average prices for comparable sets of DRGs and geographic areas, we used the following approach. First, for each insurance type, we ranked DRGs by the number of admissions; the DRG with the most admissions was ranked number 1. Second, we chose the twenty-five most common DRGs (those with the lowest sum of ranks across the three insurance types). Third, we chose the CBSAs that had at least one admission from each insurance type for the twenty-five most common DRGs. Fourth, we calculated the average price per admission by CBSA-DRG pair for each insurance type. And fifth, to determine the average price per admission by CBSA or nationwide for each insurance type, we weighted each CBSA-DRG pair by the number of Medicare Advantage admissions in that pair (instead of by the number of admissions of enrollees with that insurance type). This allowed us to evaluate all insurance types at the same CBSA-DRG mix.

We repeated this approach for the hundred most common DRGs. This reduced the number of CBSAs we could examine but allowed us to investigate the extent to which our calculation depended on the particular set of DRGs or areas represented. Below we also report information about the ten CBSAs with the lowest ratios of Medicare Advantage to FFS Medicare payments per admission, and the highest ratios of commercial insurance to FFS Medicare payments per admission. Finally, we report the average price per admission nationwide for some of the most common DRGs to illustrate how Medicare Advantage, FFS Medicare, and commercial prices differ by types of care.

**Limitations** Our work had at least two limitations. First, although the HCCI data are national in scope and the most comprehensive of their kind, the distribution of HCCI enrollees across geographic areas is not identical to the national distribution of Medicare Advantage or commercial insurance enrollees. Thus, the relative prices we report may not precisely reflect those in the United States as a whole.

Second, to the extent that there were unobserved differences in severity of illness within DRGs across insurance types, our calculated differences in payment rates across insurance types could be the result of a combination of the true differences and the unobserved differences in severity. We reason that, if anything, unobserved differences in severity likely biased us against finding what we observed. Hospitalized patients in Medicare Advantage are likely in worse overall health than those in FFS Medicare because Medicare Advantage plans use more prehospital screening and prior authorization than FFS Medicare does. Commercial insurance plans may also use more screening and prior authorization than FFS Medicare does. However, compared to hospital patients in Medicare Advantage plans or FFS Medicare, those with commercial insurance are younger, and we would therefore expect them overall to be in similar or better health.

**Study Results** Medicare Advantage plans paid hospitals less than FFS Medicare did. Without adjusting for differences in the mix of DRGs and geographic areas in Medicare Advantage and FFS Medicare, we found that Medicare Advantage plans paid hospitals about 12 percent less per admission: 88.3 percent of FFS Medicare in 2009 and 88.5 percent in 2012 (Exhibit 1).

However, these comparisons did not account
for the fact that the mix of DRGs and geographic areas in Medicare Advantage might differ from those in FFS Medicare. To account for this, we restricted our analysis to those CBSA-DRG pairs that were common to FFS Medicare and Medicare Advantage, and we calculated the national average payment per admission using as weights the number of admissions in each pair in Medicare Advantage. When the CBSA-DRG mix was held constant in this way, Medicare Advantage still paid less than FFS Medicare, although the difference between the two was smaller—about 8 percent.

When we restricted our analysis to the top twenty-five or top hundred DRGs that appeared in Medicare Advantage, FFS Medicare, and commercial plans, and to CBSAs with admissions in each of these groups of DRGs, our results were not materially different. In 2012 Medicare Advantage plans generally paid hospitals 91–92 percent of FFS Medicare payments (Exhibit 2). Consistent with previous work, we found that commercial plans paid significantly more than either Medicare Advantage or FFS Medicare. In addition, the disparity between commercial plans and FFS Medicare grew from 2009 to 2012: Depending on the set of DRGs used, commercial rates increased from approximately 146 percent of FFS Medicare rates to approximately 165 percent, on average.

Differences in CBSA-level Medicare Advantage, FFS Medicare, and commercial rates could be due to the differences in the prices that the three types of insurance pay, with the mix of hospitals held constant, or due to the differences in the mix of hospitals that care for patients with the three types of insurance. To investigate the relative importance of these two factors, we used 2011 FFS Medicare data and each hospital’s base rate to calculate the payment that would have been made for each Medicare Advantage and commercial admission had the patient been covered by FFS Medicare instead. We calculated this payment by multiplying each hospital’s base rate by the DRG weight for each admission. (We used 2011 data because we could not obtain 2012 base-rate data in a form that could be matched to the HCMI claims.) Then, instead of calculating CBSA-level prices for the actual mix of admissions across hospitals in the three types of insurance, we calculated CBSA-level prices that FFS Medicare and commercial plans would have paid if they had had the mix of admissions across hospitals in Medicare Advantage.

We found that hospital mix accounts for about one-third, or 2.4 percentage points, of the 8-percentage-point difference between Medicare Advantage and FFS Medicare rates. In the 127 CBSAs with admissions in all of the top twenty-five DRGs in 2011, Medicare Advantage plans paid hospitals 92.0 percent of FFS Medicare payments (data not shown). If FFS Medicare had had the same mix of admissions across hospitals as Medicare Advantage did, FFS Medicare would have paid 97.6 percent of what it actually paid. Thus, taking into account the narrower networks of Medicare Advantage, Medicare Advantage plans paid 5.6 percent less for services than FFS Medicare did (8.0 percent [100.0 percent minus 92.0 percent] minus 2.4 percent [100.0 percent minus 97.6 percent]).

In the forty-one CBSAs with admissions in all of the top hundred DRGs in 2011, Medicare Advantage plans paid hospitals 91.6 percent of FFS Medicare. If FFS Medicare had had the same mix of admissions across hospitals as Medicare Advantage did, FFS Medicare would have paid 96.6 percent of what it actually paid. Thus, in this smaller group of CBSAs with a larger group of DRGs represented, hospital mix accounted for about 40 percent of the price difference between Medicare Advantage and FFS Medicare.

Hospital mix accounted for a smaller share of the difference between commercial and FFS Medicare hospital prices. In the 127 CBSAs with admissions in all of the top twenty-five DRGs in 2011, commercial plans paid hospitals 158.9 percent of FFS Medicare payments. If FFS Medicare and commercial plans had had the same mix of admissions across hospitals as Medicare Advantage did, commercial plans would have paid hospitals 157.9 percent of FFS Medicare payments. In the forty-one CBSAs with admissions in all of the top hundred DRGs in 2011, commercial plans paid hospitals 156.5 percent of FFS Medicare payments. If FFS Medicare and commercial plans had had the same mix of admissions across hospitals as Medicare Advantage did, commercial plans would have paid hospitals 152.0 per-

### Exhibit 2

<table>
<thead>
<tr>
<th>CBSAs and DRGs covered</th>
<th>MA</th>
<th>FFS Medicare</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>91.2</td>
<td>100.0</td>
<td>146.6</td>
</tr>
<tr>
<td>66 CBSAs with top 100 DRGs</td>
<td>92.6</td>
<td>100.0</td>
<td>146.3</td>
</tr>
<tr>
<td>2012</td>
<td>90.7</td>
<td>100.0</td>
<td>161.6</td>
</tr>
<tr>
<td>125 CBSAs with top 25 DRGs</td>
<td>91.5</td>
<td>100.0</td>
<td>165.2</td>
</tr>
</tbody>
</table>

**Source:** Authors' analysis of data from the Health Care Cost Institute and the Medicare Provider Analysis and Review File. **Notes:** The prices are for a fixed market basket of hospital services and metropolitan areas for each insurance type, relative to FFS Medicare. CBSA is Core Based Statistical Area. DRG is diagnosis-related group.
cent of FFS Medicare payments.

We investigated the extent to which the level of FFS Medicare spending—which is used to determine the level of Medicare Advantage payments under the Affordable Care Act (ACA)—affected Medicare Advantage prices relative to FFS Medicare prices. We found that Medicare Advantage plans in CBSAs in the highest quartile of FFS Medicare spending paid lower hospital prices than Medicare Advantage plans in CBSAs in the other quartiles. For example, among the forty CBSAs with admissions in all of the top hundred DRGs in 2012, the prices paid by Medicare Advantage plans in the ten CBSAs in the highest quartile of FFS Medicare spending were 87.1 percent of FFS Medicare prices (Exhibit 3). In contrast, the prices paid by Medicare Advantage plans in the ten CBSAs in the lowest quartile of FFS Medicare spending was 93.4 percent of FFS Medicare prices. This difference in spending between the highest and lowest quartiles is statistically significant.

In addition, higher FFS Medicare spending in a CBSA was associated with lower commercial prices. For example, the prices paid by commercial plans in the thirty-one CBSAs in the highest quartile of FFS Medicare spending were 163.5 percent of FFS Medicare prices, compared to 176.7 percent in the thirty-two CBSAs in the lowest quartile. This finding is consistent with those of other research.

Next, we stratified CBSAs by their Medicare Advantage penetration rate (that is, their rate of Medicare Advantage enrollment relative to their rate of Medicare Advantage and FFS Medicare enrollment combined). We found that Medicare Advantage plans in the CBSAs in the highest quartile of Medicare Advantage penetration paid lower hospital prices than Medicare Advantage plans in CBSAs in the other quartiles, although none of these differences was statistically significant. For example, among the forty CBSAs with admissions in all of the top hundred DRGs in 2012, the prices paid by Medicare Advantage plans in the ten CBSAs in the highest quartile of Medicare Advantage penetration were 88.2 percent of FFS Medicare prices, whereas the prices paid by Medicare Advantage plans in the ten CBSAs in the lowest quartile were 92.6 percent of FFS Medicare prices (Exhibit 4).

Online Appendix Tables 1–4 further explore the sources of differences in payment rates. Appendix Table 1 lists the 10 CBSAs with the lowest Medicare Advantage payment rates as a percentage of FFS Medicare rates among the 125 CBSAs with admissions in all of the top 25 DRGs in 2012. In these 10 CBSAs, the average Medicare Advantage payments ranged from 77.8 percent of FFS Medicare payments (in Miami–Fort Lauderdale, Florida) to 85.9 percent (in Toledo, Ohio). We found 1 CBSA with a payment rate above 105 percent of FFS Medicare rates and 59 CBSAs with payment rates of 95–105 percent—14 of which had rates of 99–101 percent. However, we also found 65 CBSAs with payment rates of less than 95 percent, which brought the average down to 92 percent.

Appendix Table 2 lists the 10 CBSAs with the highest commercial rates as a percentage of FFS Medicare rates in the same group of 125 CBSAs. Crestview–Fort Walton Beach–Destin, Florida, was at the top of the list, with a commercial payment rate of 37.5 percent. Although most of these high-payment CBSAs had above-average Medicare Advantage prices, not all of them did. And none of the CBSAs with above-average Medicare Advantage prices had Medicare Advantage prices of more than 101 percent of FFS Medicare prices.

We investigated why payment rates by DRG differed across the three types of insurance. Was it because some DRGs were priced higher than others? Or was there some pattern to the types of admissions for which Medicare Advantage or commercial plans paid particularly low or high prices, compared to the prices paid by FFS Medicare? To answer these questions, we examined national average payment rates by DRG for the twenty-five most common DRGs in the three types of insurance.

Appendix Table 3 lists the ten DRGs with the lowest Medicare Advantage payments as a percentage of FFS Medicare payments. It suggests at least one channel through which Medicare Advantage plans pay lower prices: by obtaining greater discounts on types of FFS Medicare ad-
missions that are known to have very short lengths-of-stay. Of these ten DRGs, eight are on a recently published Medicare Payment Advisory Commission (MedPAC) list of the fifteen DRGs with the highest proportion of one-day inpatient stays. Of the five DRGs with the lowest Medicare Advantage payment rates, four are on the MedPAC list. By paying lower prices for short stays, Medicare Advantage plans pay prices that better reflect the value of services than FFS Medicare prices do.

Appendix Table 4 lists the ten DRGs with the highest commercial payments as a percentage of FFS Medicare payments. Half of these DRGs are in orthopedics or interventional cardiology, which have been documented to be highly profitable service lines.

### Discussion

Recent research has found that commercial insurance plans pay much higher prices than FFS Medicare does. Less attention has been given to the prices that Medicare Advantage plans pay to providers. Studies based on interviews with industry experts suggest that the prices paid by Medicare Advantage plans are, on average, equal to or slightly higher than FFS Medicare prices.

There are important theoretical reasons to believe that Medicare Advantage plans’ prices are constrained, at least in part, by FFS Medicare’s bargaining power. Medicare Advantage plans compete directly with FFS Medicare for enrollees, and providers must accept payment at FFS Medicare rates for out-of-network hospital care for Medicare Advantage plan members.

Nonetheless, Medicare Advantage plans’ prices might be higher or lower than FFS Medicare prices. On the one hand, Medicare Advantage plans might be able to bargain for even lower prices than FFS Medicare if they could take advantage of competition among providers, avoid errors in assigning monetary values in FFS Medicare’s administered pricing system, or steer enrollees to in-network providers. On the other hand, compared to FFS Medicare, Medicare Advantage plans might be significantly more susceptible to hospitals’ market power, and not significantly less susceptible to pricing errors.

Knowing how Medicare Advantage prices compare to those of FFS Medicare is important for public policy. Health spending is the product of price and quantity. If Medicare Advantage prices are lower than those of FFS Medicare, then Medicare can obtain the same quantity of services for less money through Medicare Advantage than through FFS Medicare. However, if Medicare Advantage prices are higher than those of FFS Medicare, then Medicare would have to spend more to obtain the same quantity of services through Medicare Advantage, compared to through FFS Medicare.

No previous study has calculated an index of Medicare Advantage provider prices relative to those of FFS Medicare. In this study we used new data from the Health Care Cost Institute and Medicare claims data from CMS to investigate the relative prices paid by Medicare Advantage, FFS Medicare, and commercial health insurance plans for several market baskets of hospital services across a broad set of metropolitan areas. Contrary to conventional wisdom, we found that Medicare Advantage plans paid lower prices for hospital services than FFS Medicare—around 8 percent lower in both 2009 and 2012—once the DRG and geographic-area mix of FFS Medicare was made comparable to those of Medicare Advantage. This finding is generally unaffected by the set of DRGs and geographic areas on which the price index is based.

If differences in hospital mix are also accounted for, Medicare Advantage’s hospital prices are about 5.6 percent less than those of FFS Medicare. Thus, about a third of the 8 percent difference is attributable to the narrower hospital networks in Medicare Advantage, compared to FFS Medicare.

Some of the remaining difference is attributable to the lower prices that Medicare Advantage plans pay for DRGs that have very short lengths-of-stay—DRGs that MedPAC highlighted in a recent report. However, Medicare Advantage plans pay lower prices than FFS Medicare for most (although not all) types of admissions in most (although not all) geographic areas. Thus, our results show that at least part of the cost.
advantage of Medicare Advantage plans is due to lower prices and not lower quantities, compared to FFS Medicare. Our results also show how Medicare Advantage can be used to get a better deal (at least from hospitals) for the Medicare program as a whole, by adjusting administered prices across geographic areas and DRGs to better reflect the market.

We also found that the prices paid by Medicare Advantage plans relative to FFS Medicare varied with the Medicare Advantage market environment. Medicare Advantage hospital prices were inversely associated with the program’s penetration and the level of FFS Medicare spending. That is, Medicare Advantage hospital prices were lower where both the program’s penetration and FFS Medicare spending were higher. This suggests that the government’s ongoing efforts to adjust payments to Medicare Advantage plans, based on the ACA, should consider the Medicare Advantage market environment more broadly, instead of just the level of FFS Medicare spending.

Finally, consistent with previous research, we found that the rates commercial plans pay to hospitals are significantly higher than those of either Medicare Advantage or FFS Medicare and that they are rising. At least some of this difference is a result of the much higher prices that commercial plans pay for very profitable service lines such as orthopedics and interventional cardiology. However, commercial plans pay higher prices than FFS Medicare for almost all types of admissions in almost all geographic areas. Thus, our work echoes the growing concerns expressed by several researchers about the consequences of high commercial-plan prices for health spending. Because their studies have shown that provider (especially hospital) market power is an important cause of high commercial-plan prices, investigation of the role of market power in the process of determining Medicare Advantage prices is an important topic for future research.

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NOTES

6 Berenson RA, Ginsburg PB, Christianson JB, Yee T. The growing power of some providers to win steep payment increases from insurers suggests policy remedies may be needed. Health Aff (Millwood). 2012;31(5):973-81.
9 The Health Care Cost Institute is an independent, nonprofit research institute established in 2011 with the goal of advancing knowledge about health care use and spending in the United States.
10 CBSAs are geographic areas that center on urban areas of at least 10,000 people and adjacent places that are tied to the core area by commuting patterns.
14 In 2012 the top twenty-five DRGs (and the top hundred DRGs) accounted for 38 percent (69.5 percent) of Medicare Advantage, 39.4 percent (70.6 percent) of FFS Medicare, and 17.8 percent (39.0 percent) of commercial admissions.
15 The base rate is equal to the payment each hospital receives for an admission with a unit DRG weight, including all adjustments, net of outlier amounts.


To access the Appendix, click on the Appendix link in the box to the right of the article online.

