



National Comparisons of Commercial and Medicare Fee-For-Service Payments to Hospitals

DATA BRIEF

FEBRUARY 2016

KEY TAKEAWAYS



In 2012, average payments for commercial inpatient hospital stays were higher than Medicare fee-for-service payments for 96 percent of the diagnosis related groups (DRGs) analyzed.



Between 2008 and 2012, the commercial-to-Medicare payment difference had an average increase of 14 percent.



Longer hospital stays do not appear to be a factor for higher average commercial payments. During this period, 86 percent of the DRGs analyzed had commercial-to-Medicare average length-of-stay of ratios less than one.



Evidence shows that one of the key factors driving these large price differences is provider consolidation. Cost shifting may also be a contributing factor to commercial-Medicare price differentials and the degree of cost shifting can vary based on a hospital's bargaining power.

Background

Understanding differences in payments between private and public payers and the factors that drive these differences is critical to addressing the affordability challenges facing patients. In addition, provisions in the Affordable Care Act (ACA) that reduce Medicare payments to hospitals have created a renewed interest in understanding the payment differences between private payers and Medicare.

Numerous studies assessing the variation between hospital payments across commercial payers and Medicare point to provider market power and cost shifting as key factors contributing to the cost differences.¹⁻⁷ It is important to re-examine differences in such payments and to analyze the degree to which these differences are driven by provider consolidation and cost shifting. This data brief analyzes differences in Medicare and commercial payments for inpatient hospital stays from 2008–2012 as well as changes in these payment differences over time.

Data Sources

For the purposes of this analysis, we used two data sources: the Truven Health MarketScan® Commercial Claims and Encounters Database (2008–2012), and the Centers for Medicare and Medicaid Services (CMS) 100 percent fee-for-service limited datasets (2008-2012). The Truven Health MarketScan® Commercial Claims and Encounters Database contains de-identified administrative data from large employers and health plans who provide private health care coverage across the United States for approximately 45–53 million individuals. The CMS 100 percent fee-for-service files contain data for 48 to 53 million of Medicare beneficiaries for the years in the study period.

The Truven Health MarketScan® data files used for each year include: the inpatient services file, inpatient admissions file, and enrollment file. For Medicare, the specific files we used for each year contain the final action fee-for-service data by inpatient hospital providers for reimbursement of facility costs.

Methods

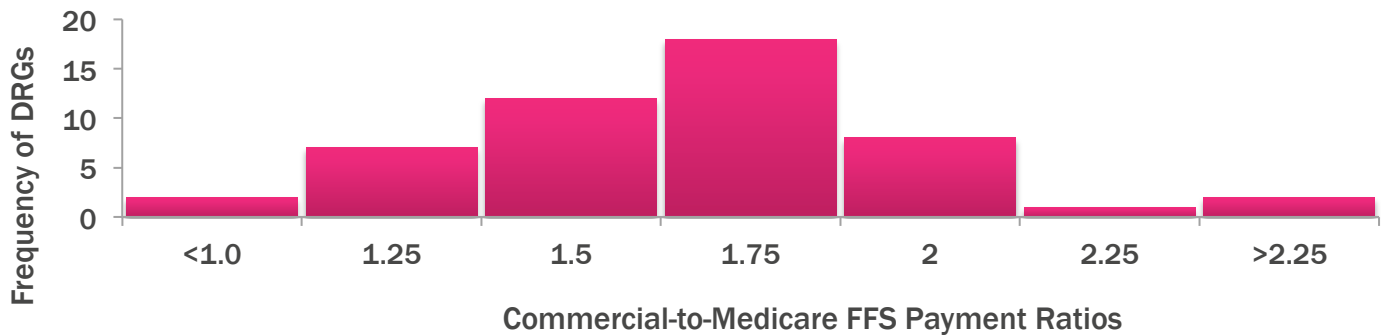
The diagnosis-related group (DRG) is a classification system that organizes hospital admissions into groups based on diagnosis codes.⁸ To compare payments for commercial

and Medicare inpatient stays, we developed a list of DRGs that were common for the 2008-2012 study period. In other words, all DRGs that did not appear in both commercial and Medicare datasets, or did not consistently occur across all study years, were excluded. We also removed any DRG that was titled “other” from the list, such as “other heart assistant system implants” (DRG 215) since the composition of the admissions for these DRGs may be different for the two populations.

We sought to ensure that admissions and the related payments can be compared meaningfully between commercial and Medicare datasets. From the commercial data files, any commercial admission that had been paid entirely or in part by capitation was excluded. In using the Medicare fee-for-service data for comparison, it was important to only examine commercial fee-for-service admissions.

From the Medicare data files, we excluded any admission for dual-eligible patients given that this is a unique population in Medicare. We also excluded admissions of Medicare beneficiaries who did not have both Part A and B coverage throughout the entire year, since some inpatient hospital services, such as mental health claims, could be paid under Part B. We only included admissions where Medicare was the primary payer in our analysis.

Figure 1: 2012 Commercial-to-Medicare FFS Payment Ratios for 50 DRGs



Additionally, DRGs that had fewer than 1,000 admissions from either the commercial or Medicare dataset were removed from the list to ensure adequate sample size. Following all exclusions, we randomly selected 50 out of 488 DRGs using SAS Enterprise Guide 6.1, based on a margin of error of 8.9 percent, which we considered a reasonable threshold given this was a pooled calculation of payment averages across a diverse set of DRGs.*

Statistical Analysis

For each of the 50 DRGs, we calculated average facility-only Medicare and commercial payments for each study year. We defined payments to only include the payer-portion, thus excluding out-of-pocket costs and third party payments. We calculated an average payment per DRG after excluding any admissions with extreme payment values (i.e., payments greater than three standard deviations from the mean for each DRG, year, and payer (commercial and Medicare)). We report the results as commercial-to-Medicare DRG payment ratios.

Findings

Our analysis showed that average commercial payments are higher than average Medicare payments for most of the 50 DRGs. In 2012, 96

percent of DRGs (48 out of 50) had commercial-to-Medicare payment ratios greater than 1.0, indicating that commercial average payments were overall higher than Medicare average payments for the same DRG. This observation was not unique to the hospital admissions in calendar year 2012. For the 2008-2012 analysis period, at least 92 percent of DRGs (46 out of 50) had average commercial payments higher than the average Medicare payments.

In 2012, the top 10 percent of DRGs with the highest ratio of commercial-to-Medicare payments had payment ratios ranging from 1.89 to 5.26, indicating that there were some DRGs where average commercial payments were more than double the average Medicare payments. With the exception of one DRG (DRG 895 – Alcohol/Drug Abuse or Dependence with Rehabilitation Therapy), the bottom 10 percent of DRGs had payment ratios close to 1.0 in 2012, suggesting that there were some DRGs without a strong payment differential.

In 2012, 60 percent of DRGs had a commercial-to-Medicare payment ratio between 1.25 and 1.75, and 22 percent of DRGs had a commercial-to-Medicare payment ratio between 1.76 and 5.26. See Figure 1 for details on the distribution of the commercial-to-Medicare payment ratios.

* We determined the number of DRGs to sample based on the total average payments of a stratified random sample of 25 DRGs (one for every medical diagnostic code). The parameters assumed 95 percent confidence and 80 percent power on a variance set by 1 percent trimmed total payments.

Trends in Commercial-to-Medicare FFS Payment Ratios

Our analysis found that commercial plans not only paid more than Medicare for the same DRG, but that this differential exhibited an overall average increase of 14 percent across all 50 DRGs from 2008 to 2012 (from 1.4 in 2008 to 1.6 in 2012). While the payment differential decreased for twelve (24 percent) of the 50 DRGs between 2008 and 2012, 11 of these 12 DRGs still had payment ratios above 1.0 in 2012. Among the 50 DRGs, 38 (76 percent) DRGs had an increased payment differential between 2008 and 2012, with a 15 percent increase or greater

for 24 of the DRGs (see Appendix A). Trends for five DRGs with the highest commercial-to-Medicare payments are presented in Figure 2.

We also examined differences in average length of stay of commercial patients to Medicare patients. Length of stay was a proxy measure for patient morbidity. In 2012, 86 percent of DRGs (43 out of 50) had ratios of commercial-to-Medicare average length of stay that were less than one, indicating that the majority of commercial admissions had shorter stays compared to Medicare, yet had higher average payments. Thus, our data suggest that length of stay may not be a factor for the higher average payments among the commercial payers.

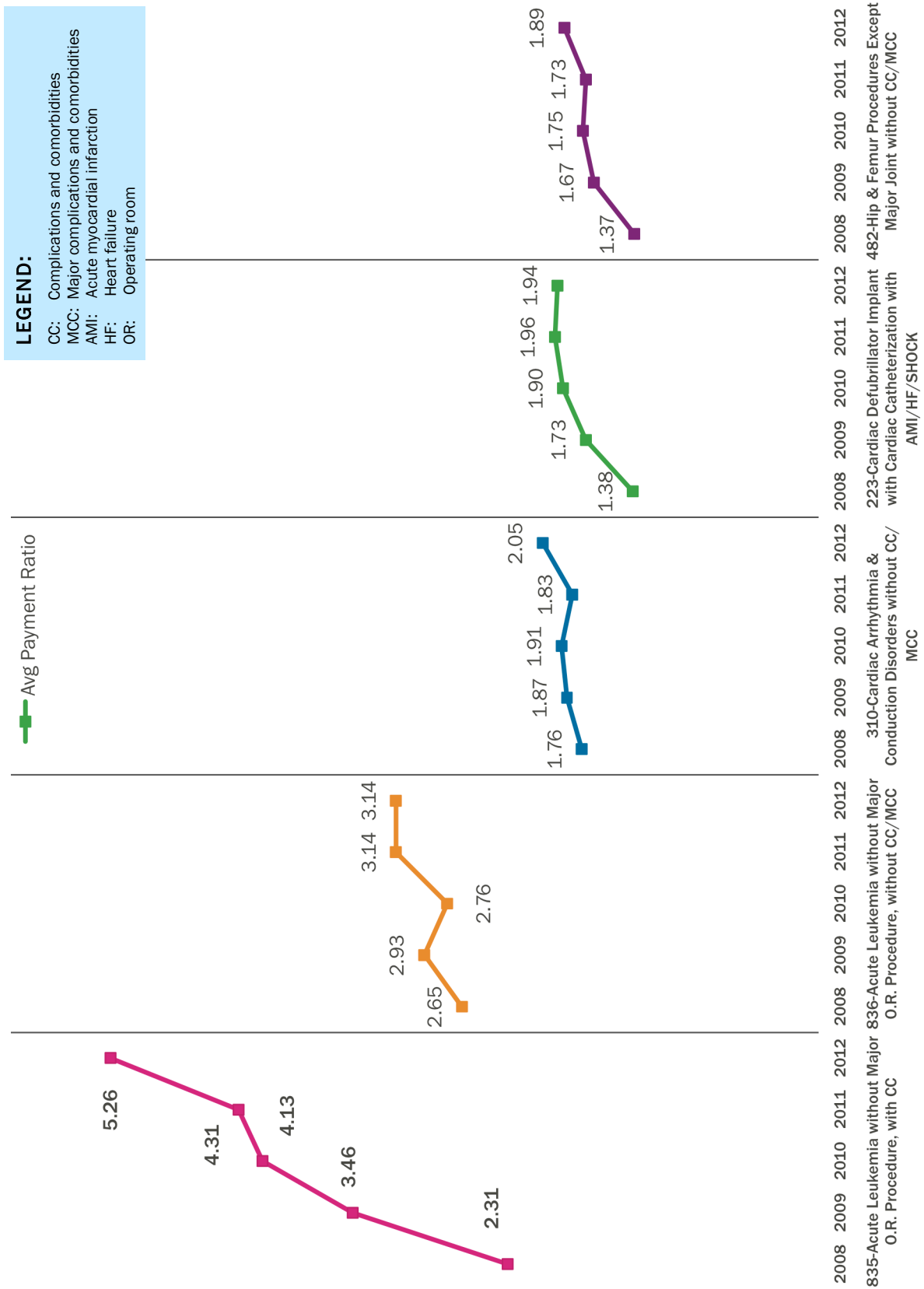
Conclusion

Overall, our study observed higher average payment per DRG between commercial insurers and Medicare for the majority of DRGs analyzed over the study period. In addition, we observed that the payment differences between commercial and Medicare payments increased between 2008 and 2012 for the majority of DRGs included in the analysis. Given that our sample was selected at random, these findings on the observed trends and payment differences may be applicable to common DRGs that occur in the Medicare and commercial populations.

The payment differences observed from commercial-to-Medicare payment ratios could be attributed to factors such as hospital market power and cost shifting, as suggested by published literature. Existing research shows that hospital market power affects pricing differences between commercial insurers and Medicare and consequently hospital margins.⁹⁻¹⁰ Studies have shown that market-related hospital margins for privately insured patients ranged from \$6,202 for patients undergoing knee replacement to \$10,990 for patients who underwent lumbar fusion. Additionally, Medicare margins in highly concentrated markets were lower and in some cases negative for select procedures such as knee replacement and hip replacement.

Another factor that plays a role in price differences between commercial and Medicare is cost shifting. A review by Austin Frakt found that cost shifting can and has occurred, though the extent and pervasiveness of the phenomenon is unclear.⁵ A 2009 study found that on average, hospitals shifted 21 cents for each Medicare dollar lost to private payers, and this degree of cost shifting varied by a hospital's bargaining power.⁶ A study by Cutler found that between 1980 and 1985, following the reduction in Medicare payments, hospitals shifted costs dollar for dollar to private insurers.⁷ In light of the ACA provisions, further research is needed to understand the factors influencing payment differences between Medicare and commercial insurers and to isolate the effects of cost shifting and hospital consolidation on such differences.

Figure 2: Commercial-to-Medicare FFS Ratio for Top 5 DRGs (2008 - 2012)



National Comparisons of Commercial and Medicare FFS Payments to Hospitals

Appendix A

Commercial-to-Medicare FFS Payment Ratios for Select DRGs, 2008-2012

DRG	Commercial-to-Medicare Payment Ratio				
	2008	2009	2010	2011	2012
835 – Acute Leukemia w/o Major O.R. Procedure w/ CC*	2.31	3.46	4.13	4.31	5.26
836 – Acute Leukemia w/o Major O.R. Procedure w/o CC/MCC*	2.65	2.93	2.76	3.14	3.14
310 – Cardiac Arrhythmia & Conduction Disorders w/o CC/MCC	1.76	1.87	1.91	1.83	2.05
223 – Cardiac Defib Implant w/ Cardiac Cath w/ AMI/HF/Shock w/o MCC	1.38	1.73	1.90	1.96	1.94
482 – Hip & Femur Procedure Except Major Joint w/o CC/MCC	1.37	1.67	1.75	1.73	1.89
443 – Disorders of Liver Except Malig, Cirr, Alc Hepa w/o CC/MCC	1.45	1.61	1.72	1.79	1.88
159 – Dental & Oral Diseases w/o CC/MCC	1.52	1.64	1.72	1.73	1.85
809 – Major Hematol/Immun Diag Exc Sickle Cell Crisis & Coagul w/ CC	1.51	1.75	1.79	1.72	1.83
340 – Appendectomy w/ Complicated Principal Diag w/o CC/MCC	1.69	1.63	1.64	1.68	1.81
287 – Circulatory Disorders Except Ami, w/ Card Cath w/o MCC	1.35	1.56	1.65	1.72	1.81
494 – Lower Extrem & Humer Proc Except Hip, Foot, Femur w/o CC/MCC	1.52	1.65	1.80	1.74	1.76
747 – Vagina, Cervix & Vulva Procedures w/o CC/MCC	1.50	1.51	1.66	1.84	1.73
592 – Skin Ulcers w/ MCC	1.57	1.60	1.63	1.58	1.72
231 – Coronary Bypass w/ PTCA w/ MCC	1.50	1.46	1.53	1.70	1.72
475 – Amputation for Musculoskeletal Sys & Conn Tissue Dis w/ CC	1.41	1.41	1.40	1.41	1.71
455 – Combined Anterior/Posterior Spinal Fusion w/o CC/MCC	1.78	1.50	1.70	1.64	1.68
054 – Nervous System Neoplasms w/ MCC	1.39	1.51	1.56	1.60	1.63
374 – Digestive Malignancy w/ MCC	1.64	1.49	1.59	1.58	1.61
577 – Skin Graft Exc for Skin Ulcer or Cellulitis w/ CC	1.52	1.60	1.60	1.58	1.61

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	2008	2009	2010	2011	2012
059 – Multiple Sclerosis & Cerebellar Ataxia w/ CC	1.21	1.27	1.36	1.31	1.61
011 – Tracheostomy for Face, Mouth & Neck Diagnoses w/ MCC	1.45	1.47	1.39	1.75	1.57
180 – Respiratory Neoplasms w/ MCC	1.36	1.33	1.48	1.47	1.57
406 – Pancreas, Liver & Shunt Procedures w/ CC	1.47	1.43	1.48	1.45	1.55
745 – D&C, Conization, Laparoscopy & Tubal Interruption w/o CC/MCC	1.43	1.43	1.41	1.43	1.55
755 – Malignancy, Female Reproductive System w/ CC	1.24	1.47	1.57	1.52	1.53
459 – Spinal Fusion Except Cervical w/ MCC	1.23	1.32	1.40	1.44	1.52
540 – Osteomyelitis w/ CC	1.56	1.23	1.31	1.37	1.51
617 – Amputat of Lower Limb for Endocrine, Nutrit, & Metabol Dis w/ CC	1.49	1.43	1.38	1.39	1.51
175 – Pulmonary Embolism w/ MCC	1.40	1.35	1.44	1.56	1.51
975 – HIV w/ Major Related Condition w/ CC	1.30	1.26	1.39	1.50	1.49
864 – Fever	1.22	1.39	1.47	1.47	1.49
690 – Kidney & Urinary Tract Infections w/o MCC	1.52	1.41	1.57	1.33	1.48
469 – Major Joint Replacement or Reattachment of Lower Extremity w/ MCC	1.19	1.21	1.40	1.37	1.47
501 – Soft Tissue Procedures w/ CC	1.68	1.44	1.59	1.42	1.45
064 – Intracranial Hemorrhage or Cerebral Infarction w/ MCC	1.34	1.35	1.53	1.55	1.45
186 – Pleural Effusion w/ MCC	1.23	1.28	1.35	1.37	1.44
216 – Cardiac Valve & Oth Maj Cardiothoracic Proc w/ Card Cath w/ MCC	1.28	1.28	1.39	1.36	1.43
304 – Hypertension w/ MCC	1.38	1.28	1.41	1.41	1.42
190 – Chronic Obstructive Pulmonary Disease w/ MCC	1.31	1.41	1.38	1.36	1.38

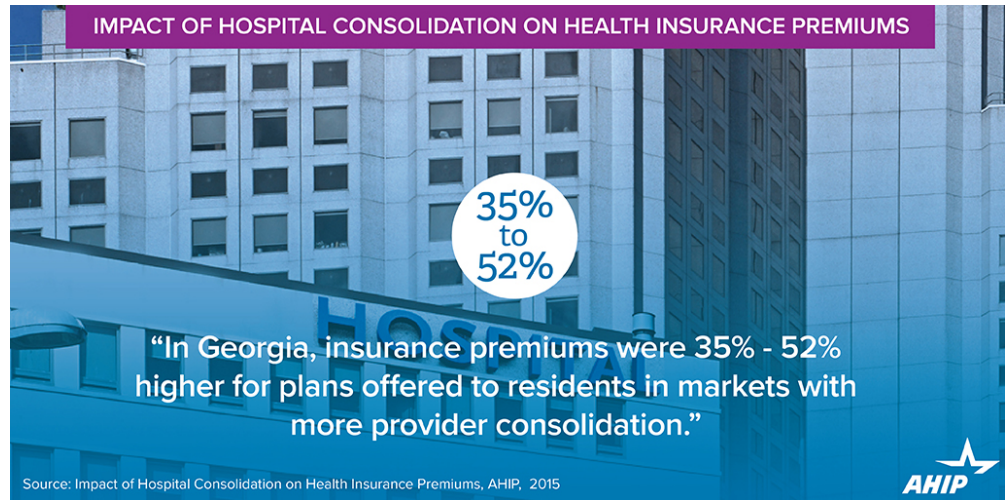
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DRG	Commercial-to-Medicare Payment Ratio				
	2008	2009	2010	2011	2012
067 – Nonspecific CVA & Precerebral Occlusion w/o Infarct w/ MCC	1.48	1.51	1.54	1.35	1.36
414 – Cholecystectomy Except by Laparoscope w/o C.D.E w/ MCC	1.14	1.32	1.11	1.17	1.30
070 – Nonspecific Cerebrovascular Disorders w/ MCC	1.22	1.12	1.48	1.08	1.20
862 – Postoperative & Post-traumatic Infections w/ MCC	0.99	1.12	1.01	1.05	1.18
121 – Acute Major Eye Infections w/ CC/MCC	1.19	1.21	1.28	1.16	1.13
693 – Urinary Stones w/o ESW Lithostripsy w/ MCC	0.99	0.99	1.06	1.03	1.12
606 – Minor Skin Disorder w/ MCC	1.22	0.93	1.17	1.10	1.07
881 – Depressive Neuroses	1.08	1.18	1.07	1.16	1.07
668 – Transurethral Procedures w/ MCC	1.05	1.04	1.07	1.05	1.04
945 – Rehabilitation w/ CC/MCC	0.78	0.83	0.83	0.85	0.90
895 – Alcohol/Drug Abuse or Dependence w/ Rehabilitation Therapy	0.78	0.68	0.68	0.69	0.71

*Some claims for drugs used in the treatment of leukemia may not be included in the CMS fee-for-service limited datasets used in this study. For example, some leukemia drugs can be covered under Medicare Part D and part D claims are not available in limited datasets.

Related Topic



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