

# Comments on Two Recent Studies of Hospital Payment Rates

Monica Noether and Ben Stearns<sup>1</sup>

*White, Chapin and Christopher Whaley, “Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely: Findings from an Employer-Led Transparency Initiative”<sup>2</sup>*

In their study, White and Whaley present a descriptive analysis of hospital prices. They find that commercial payors paid on average approximately 240 percent of Medicare rates for inpatient and outpatient hospital services between 2015 and 2017.<sup>3</sup> In addition to this finding concerning the overall price level paid by commercial payors, the authors observe substantial variation in hospital prices across states and across hospitals within a state.<sup>4</sup>

Importantly, the authors do not attempt to analyze *why* commercial payors pay more than Medicare does, or *why* price dispersion exists in the market. Rather, they are silent as to which of at least two competing theories—one based on hospitals’ need to cover losses in providing care to non-commercial patients and one based on hospitals’ market position—is driving the observed results. Despite the different implications of these two theories, the authors suggest that reducing commercial payors’ payments to Medicare rates is a reasonable objective. They also suggest that commercial payors and, by extension, employers who sponsor health plans, are unaware of the prices they pay to hospitals in the marketplace.

In this brief discussion we discuss several issues with the underlying data used by the authors, as well as flaws in the implications that the authors draw from their analysis.

## **The Data Are Sparse and May Not Be Representative**

Relative to total commercial payor expenditures on hospital services in the United States, the data used by the authors are relatively sparse, and the authors have made no efforts to ensure that these data are representative:

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<sup>1</sup> The authors are economists at Charles River Associates. The conclusions set forth herein are based on independent research and publicly available material. The views expressed herein are the views and opinions of the authors and do not reflect or represent the views of Charles River Associates or any organizations with which the authors are affiliated. Financial support was provided by the American Hospital Association. The authors would like to thank Sean May for valuable comments.

<sup>2</sup> White, Chapin, and Christopher Whaley. “Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely: Findings from an Employer-Led Transparency Initiative.” Santa Monica, CA: RAND Corporation, 2019. [https://www.rand.org/pubs/research\\_reports/RR3033.html](https://www.rand.org/pubs/research_reports/RR3033.html).

<sup>3</sup> White and Whaley, p. 18.

<sup>4</sup> White and Whaley, p. 20, p. 23.

- Total Expenditures on Hospital Care: The \$13.0 billion<sup>5</sup> in hospital spending included in the analyzed claims represents only one percent of commercial hospital expenditures over the time period.<sup>6</sup>
- Number of Covered Lives: The data used by the authors represent claims for only 4 million covered lives, or “only about 2 percent of the population of enrollees in employer-sponsored health benefits in the United States.”<sup>7</sup>
- Geographic Coverage: While the authors note that their data include claims from 25 states,<sup>8</sup> nearly three quarters (73 percent) of commercial payor allowed amounts analyzed in the study come from just three states: Colorado (48 percent), New Hampshire (15 percent), and Michigan (10 percent).<sup>9</sup> Collectively, hospitals in these states accounted for only five percent of national expenditure on healthcare services in 2014,<sup>10</sup> and only five percent of 2017 nationwide admissions to short term general acute care hospitals.<sup>11</sup>
- Hospital Revenue: Individual hospital price estimates are based on limited data: on average, the authors account for only \$2.7 million of commercial net revenue per hospital per year.
- Hospital Services: Nearly 60 percent of the hospitals in the authors’ data have fewer than ten admissions across all three years of data.<sup>12</sup> Due to confidentiality restrictions, the authors do not report inpatient or overall (combined inpatient and outpatient) prices for these hospitals. As a result, the average relative prices they report reflect both inpatient and outpatient data for only 15 percent of community hospitals in the U.S.<sup>13</sup>

The sparsity of the authors’ data is of particular importance because these data represent a convenience sample comprised of three disparate data sources, with no analysis of whether these sources are representative of the universe of commercial claims in the United States. In particular, the authors do not identify the 50 self-insured employers or the (unknown number of) health plans that volunteered to participate in the study, nor how these participants compare to

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<sup>5</sup> White and Whaley, p. 18.

<sup>6</sup> Historical National Health Expenditure Data, Centers for Medicare & Medicaid Services. Available at: <https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nationalhealthaccountshistorical.html>

<sup>7</sup> White and Whaley, p. 9.

<sup>8</sup> White and Whaley, p. 18.

<sup>9</sup> White and Whaley, Table 1.

<sup>10</sup> National Health Expenditure Data, State (Provider), Centers for Medicare & Medicaid Services. Available at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsProvider.html>

<sup>11</sup> AHA Survey 2017.

<sup>12</sup> Another 16 percent have 30 or fewer admissions over the time period (*i.e.*, ten or fewer per year). White and Whaley, Table 1. In addition, insufficient outpatient data were present for 12 hospitals.

<sup>13</sup> AHA Survey 2017.

the broader set of employers and commercial health plans. Nor do the authors assess how the employee populations of Colorado and New Hampshire (the two states whose all-payor claims databases are used) compare to those in the other 48 states.<sup>14</sup>

### **Hospitals Would Be Financially Insolvent If Paid Medicare Rates**

The authors imply that reducing commercial payor rates to Medicare levels is a viable means to achieve cost saving. They note that “if the [commercial] health plans participating in the study had paid hospitals using Medicare’s payment formulas, the total allowed amount over the 2015–2017 period would have been reduced by \$7.7 billion, a decline of nearly 60 percent.”<sup>15</sup>

However, it is widely recognized that commercial payors subsidize underpayment by government insurance programs, and that commercial patients comprise a declining portion of most hospitals’ patients. Medicare and Medicaid covered only approximately 87 percent of hospitals’ costs of providing care to beneficiaries in 2016—that is, hospitals do not break even on Medicare and Medicaid patients—while these programs’ share of total inpatient patient volume increased from 58 to 65 percent between 2007 and 2016.<sup>16</sup> As a result, as the chart below demonstrates, the total annual shortfall that hospitals experienced from government payors increased to more than \$68 billion in 2016.<sup>17</sup> In 2017, Medicare and Medicaid continued to cover only 87 percent of hospital costs and the annual shortfall grew to \$76.8 billion.<sup>18</sup> In addition, hospitals provide substantial amounts of financial assistance—including to uninsured patients who receive free emergency and other care from hospitals—for which they either receive no reimbursement or are reimbursed at rates far below the costs of the care provided.<sup>19</sup> For hospitals to remain financially viable, these shortfalls must be covered by revenue from other sources, including commercially insured patients. This need to cover losses from government programs, which set reimbursement rates administratively rather than through negotiations, is a fundamental challenge facing community hospitals.

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<sup>14</sup> As the authors also acknowledge, state APCDs also suffer from incompleteness due to exemptions and options to opt out.

<sup>15</sup> White and Whaley, p. 18.

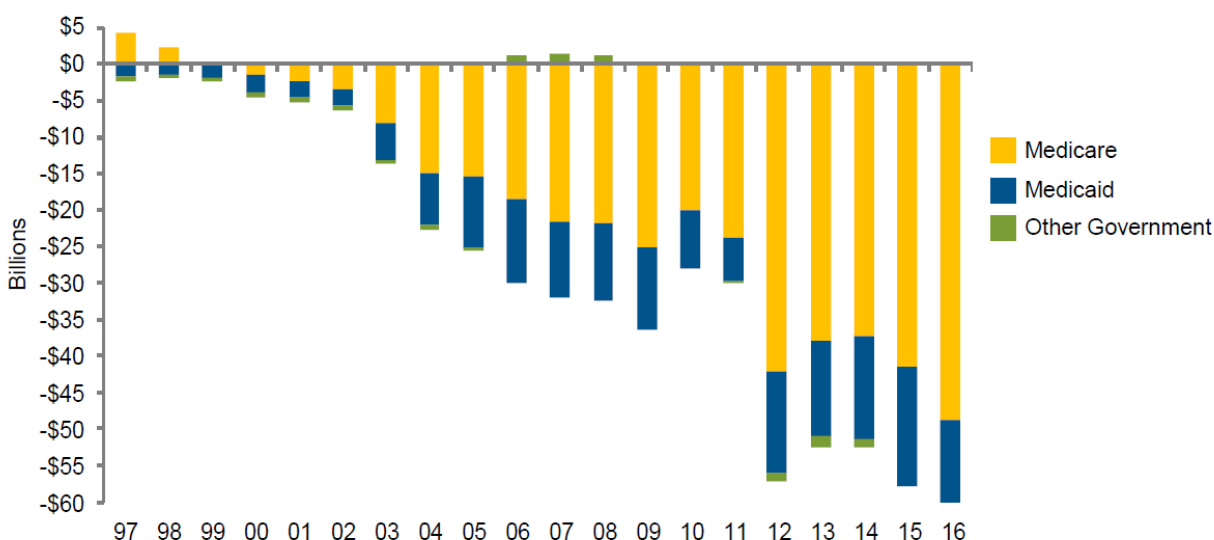
<sup>16</sup> Calculations based on Healthcare Cost and Utilization Project, Trends in Inpatient Stays, available at <https://www.hcup-us.ahrq.gov/faststats/NationalTrendsServlet?measure1=01>

<sup>17</sup> American Hospital Association 2018 Chartbook, Table 4.5, (p. A-34).

<sup>18</sup> American Hospital Association. Underpayment by Medicare and Medicaid Fact Sheet, January 2019. <https://www.aha.org/system/files/2019-01/underpayment-by-medicare-medicaid-fact-sheet-jan-2019.pdf>

<sup>19</sup> American Hospital Association 2018 Chartbook, Chart 4.5, (p. 39), indicates that 4.2 percent of hospital costs are incurred for care that is uncompensated.

Chart 4.7: Hospital Payment Shortfall Relative to Costs for Medicare, Medicaid and Other Government, 1997 – 2016<sup>(1)</sup>



Source: Analysis of American Hospital Association Annual Survey data, 2016, for community hospitals.

<sup>(1)</sup> Costs reflect a cap of 1.0 on the cost-to-charge ratio.

This is supported by analysis from the Medicare Payment Advisory Commission, a government agency that advises Congress on the Medicare program. MedPAC analysis shows that both overall, and in each of 11 categories of hospitals shown below, hospitals have had consistently negative margins for Medicare patients, averaging a nearly 10 percent loss in 2017.<sup>20</sup> Moreover, the extent of losses has doubled in percentage terms in the seven years between 2010 and 2017.

As a result, more than one quarter of hospitals had negative *total* operating margins in 2016,<sup>21</sup> and the number of hospital bond rating downgrades (hospitals issue debt to invest in the capital required to provide high-quality patient care) has exceeded the number of upgrades for non-profit hospitals in six of the last eight years.<sup>22</sup>

<sup>20</sup> MedPAC Report to the Congress: Medicare Payment Policy, March 2019, Table 3-8, p. 86.

<sup>21</sup> American Hospital Association 2018 Chartbook, Table 4.1, (p. A-30).

<sup>22</sup> American Hospital Association 2018 Chartbook, Chart 4.9, (p. 41).

**TABLE  
3-8****Overall Medicare margins by hospital type**

Hospital group	2010	2011	2012	2013	2014	2015	2016	2017
All hospitals (excluding CAHs)	-4.9%	-5.7%	-5.4%	-5.0%	-5.6%	-7.6%	-9.7%	-9.9%
Urban	-5.1	-6.0	-5.9	-5.9	-5.8	-7.9	-9.9	-10.0
Rural								
Excluding CAHs	-2.6	-2.6	-1.0	2.7	-3.5	-4.9	-7.5	-8.2
Including CAHs	-1.7	-1.4	0.3	2.7	-1.9	-3.2	-5.4	-5.9
Nonprofit	-6.2	-7.1	-7.0	-6.5	-7.1	-9.1	-11.1	-11.0
For profit	-0.1	-0.3	1.0	1.2	0.8	-1.3	-2.1	-2.6
Major teaching	-0.8	-2.1	-2.8	-3.5	-3.7	-6.3	-8.5	-9.0
Other teaching	-4.6	-5.4	-5.0	-4.8	-5.0	-6.3	-8.6	-8.2
Nonteaching	-8.1	-8.6	-7.9	-6.5	-7.7	-9.9	-11.7	-12.2
High DSH	0.2	-1.5	-1.3	-1.5	-2.3	-4.6	-7.2	-8.1
Moderate-to-low DSH	-6.6	-7.0	-6.7	-6.0	-6.4	-8.1	-10.0	-9.9
No DSH	-12.9	-13.5	-13.4	-12.5	-13.3	-15.3	-15.7	-16.4

In fact, if hospitals did receive the same rates from commercial payors as from Medicare, their average margin would be an unsustainable *negative* 20 percent. Not only would this amount not provide any funds to invest in the facilities, information technology infrastructure, research, and other support necessary to maintain and improve clinical quality and patient experience, but many hospitals would likely find it difficult to stay in business at all.<sup>23</sup>

### Other Limitations of the Analysis

#### *Price dispersion in highly differentiated markets is expected*

The authors assess the relationship between price and quality and find that higher-priced hospitals tend to have higher quality: while 40 percent of “low-priced” hospitals receive star ratings of 4 or 5, 60 percent of high-priced hospitals do.<sup>24</sup> Given that (1) price and star ratings appear to be positively correlated and (2) the star rating system is recognized to be flawed in various ways,<sup>25</sup> the observed price differences may simply be manifestations of varying consumer demand for particular hospitals (which are highly differentiated on the basis of reputation, patient amenities, medical staffs, clinical quality, location, breadth of service, and other factors).

<sup>23</sup> Based on AHA annual survey data, which include a much larger and more complete set of hospitals. (approximately 3,600 responses), and which include *all* revenue and expenses for these hospitals, we find that commercial payors pay 167 percent of what Medicare pays. This estimate is based on the ratio of commercial payor to Medicare payments as a percentage of costs. This is well below the authors’ average estimate of 241 percent and further indicates that the data used by White and Whaley are not representative. American Hospital Association 2018 Chartbook, Table 4.4, (p. A-33).

<sup>24</sup> White and Whaley, pp. 24-25.

<sup>25</sup> These include that these ratings do not reflect the myriad dimensions on which patients and their physicians evaluate hospitals and they use a flawed methodology that can lead to inaccurate and misleading comparisons of hospitals. See, e.g., <https://www.modernhealthcare.com/safety-quality/hospitals-hopeful-big-changes-are-coming-cms-star-ratings>; <https://www.modernhealthcare.com/article/20181203/TRANSFORMATION01/181209988/cms-changes-to-hospital-star-ratings-don-t-address-concerns>

*Implications of the results ignore important market characteristics*

While White and Whaley’s results are primarily descriptive in nature—the authors do not attempt to explain why commercial prices are higher than Medicare prices or why variation in the prices paid to hospitals exists—the authors do prescribe some strategies to help employers control expenditures on hospital care: change the terms of the contracts from discounted charges to a multiple of Medicare, or steer patients away from high-priced, low-value hospitals.<sup>26</sup>

These suggestions ignore the role that competition among commercial payors plays in ensuring that employers can obtain benefit plans that meet their and their employees’ demands.<sup>27</sup> Even if employers were themselves unaware of the range of hospital rates, the commercial payors that provide employers with access to provider networks and that negotiate rates with hospitals are surely aware of which hospitals are low quality and/or high cost. Competition among commercial payors for employers’ business requires that they negotiate the best rates possible, given network demands by employers and employees. While some employers may be unaware directly of hospital rates, they can and do evaluate commercial payors’ offerings based on their expected costs as well as their benefit and network designs.

The authors also suggest that narrow or tiered networks can address high prices by placing incentives directly on employees,<sup>28</sup> however, employers must balance the need to remain attractive in the market for employees against their desire to control their health care spending. To the extent that narrow network products meet the needs of employees, commercial payors have the incentive to offer them to employers.<sup>29</sup>

The authors also recommend that employers insist upon contracts that are based on case rates (such as a percentage of Medicare) rather than discounts off charges in order to improve transparency.<sup>30</sup> However, switching to a case-rate contract may not reduce costs.<sup>31</sup> Such a change shifts risk from the health plan to the provider, which hospitals may be unwilling to bear without additional compensation in the form of higher rates.<sup>32</sup>

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<sup>26</sup> White and Whaley, pp. 27-29.

<sup>27</sup> It also ignores the role of plan benefit design consultants.

<sup>28</sup> White and Whaley, p. 29.

<sup>29</sup> Narrow networks are not very popular, with only 7 percent of all firms offering a narrow network plan to their employees. (Figure 14.5, 2018 benchmark Kaiser Family Foundation Employer Health Benefits Survey).

<sup>30</sup> White and Whaley, p. 28.

<sup>31</sup> See Noether *et al.*, “Comments on: Hospital Prices Grew Substantially Faster than Physician Prices for Hospital-Based Care in 2007-14.”

<sup>32</sup> The authors themselves note that hospitals are unlikely to accept a price reduction when simply changing contract terms. “Many hospitals may not agree to a Medicare-plus contract that is not within the current multiples of Medicare prices and may instead elect to be out of network.” (p. 28).

Finally, the suggestion that more employers follow General Motors' example of direct contracting with nearby hospital systems<sup>33</sup> is unlikely to be a viable alternative for the majority of employers that lack sufficient scale or concentration of employees in one region.

*Results do not account for network status*

To correctly interpret the prices paid by payors to hospitals one must know whether the data represent *negotiated* prices. Unfortunately, the data analyzed by the authors lack indicators to distinguish between in-network claims (with lower negotiated payment rates) and out-of-network claims (with higher, non-negotiated payment rates).<sup>34</sup> This is of particular importance given the sparsity of the authors' data for many hospitals, making it impossible to know if high observed prices at a hospital reflect negotiations between a hospital and a payor, or simply reflect the hospital's undiscounted gross charges.

***Kronick, Richard and Sarah Hoda Neyaz: Private Insurance Payments to California Hospitals Average More than Double Medicare Payments***<sup>35</sup>

Kronick and Neyaz, in a study released at the same time as White and Whaley, analyze rates paid to hospitals in California in 2015 and 2016. While utilizing different datasets and slightly different methodologies, the overall analyses largely mimic White and Whaley. Specifically, the authors compare commercial rates to Medicare rates and find that “[o]n average, California hospitals were paid 209 percent as much by private [commercial] insurers as they were by Medicare for similar services.”<sup>36</sup>

Since the studies share methodologies and findings, it is not surprising that they also share several shortcomings. Most importantly, the California analysis is purely descriptive, making no attempt to explain the industry dynamics behind the observed patterns in prices or to distinguish between the two hypotheses that they posit.<sup>37</sup> Regardless, the press release associated with the study proclaims that “the [Kronick and Neyaz] West Health and [White and Whaley] RAND studies clearly demonstrate that hospitals continue to price-gouge self-insured employer plans.”<sup>38</sup> However, as Kronick and Neyaz themselves note, on average California hospitals earn only a “small positive” operating margin of 3 percent,<sup>39</sup> which belies the claim of price gouging.

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<sup>33</sup> White and Whaley, p. 29.

<sup>34</sup> White and Whaley, p. 9.

<sup>35</sup> Kronick, Richard, and Sarah Hoda Neyaz. “Private Insurance Payments to California Hospitals Average More Than Double Medicare Payments.” Washington, DC: West Health Policy Center, 2019. <https://www.westhealth.org/resource/private-insurance-payments-to-california-hospitals-average-more-than-double-medicare-payments/>

<sup>36</sup> Kronick and Neyaz, p. 2.

<sup>37</sup> As posited by White and Whaley, Kronick and Neyaz' alternative hypotheses are that hospital market position allows them to “extract relatively high rates of payment from private insurers,” or that such rates “are needed to offset payment shortfalls of Medicare and Medicaid.” (Kronick and Neyaz, p. 1).

<sup>38</sup> <https://www.westhealth.org/press-release/new-analysis-of-california-hospitals-shows-private-insurers-pay-more-than-double-what-medicare-does-for-similar-services/>

<sup>39</sup> Kronick and Neyaz, p. 5.

While the OSHPD data that Kronick and Neyaz utilize appear more representative of California hospitals than those on which White and Whaley rely for their national study, the California authors do not attempt to explain the sources of the substantial degree of variation that they observe in their measures of the ratios of private to Medicare Payment to Cost Ratios (PTCRs) or of hospital margins. These sources likely include the variety of factors that affect the demand for and supply of hospital services. Moreover, the statewide administrative data that they analyze lack information on actual negotiated inpatient or outpatient prices or claim-level detail on the inpatient and outpatient services provided by the hospitals. As a result, their measure of “price” reflects a variety of assumptions that may introduce substantial volatility into their analysis.<sup>40, 41</sup>

The authors could have used their data to provide a fuller picture of the complicated range of determinants of hospital prices and margins. For example, using the data provided by the authors, the correlation between California hospitals’ operating margins and share of hospital costs that are associated with commercial payors is only 0.03. If hospitals were truly taking advantage of market positioning, one would expect a stronger relationship between hospital profitability and the share of a hospital’s patients with commercial insurance.

Moreover, repeating the analysis of White and Whaley on the relationship between Medicare star ratings and hospital prices in California reveals that these quality difference explain some of the observed price variations across hospitals. The chart below shows the average commercial to Medicare payment-to-cost ratios (PTCR) within each of the five CMS star ratings.

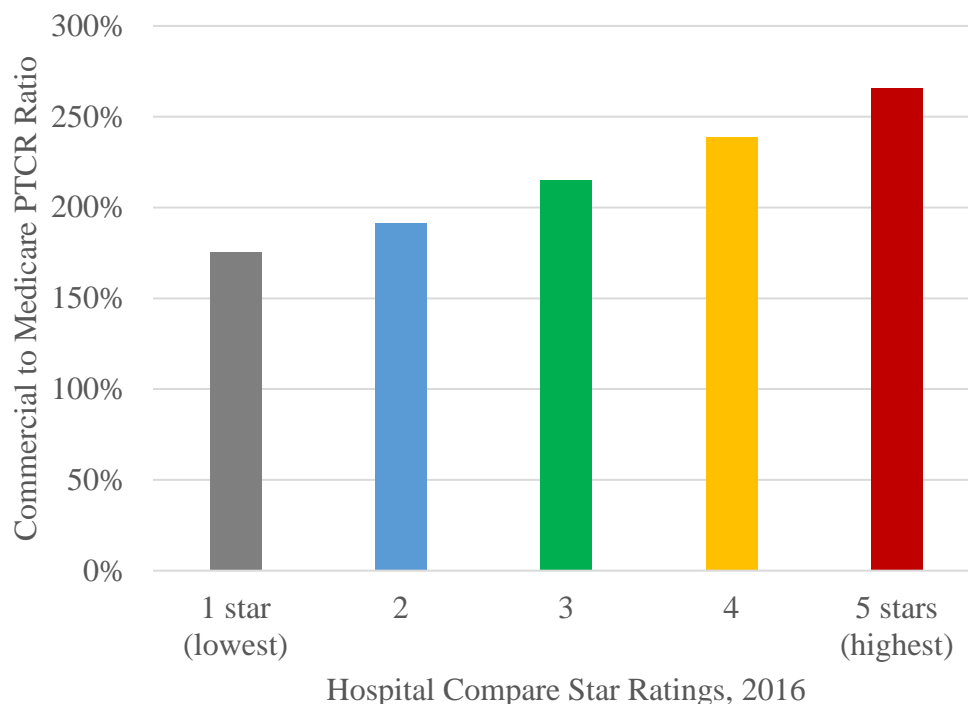
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<sup>40</sup> Specifically, the authors calculate the total number of “adjusted admissions” for each hospital based on its ratio of inpatient and outpatient charges and a count of its inpatient admissions, and then apply an inpatient-only (DRG-based) case mix index to this measure to calculate net revenue/adjusted admission. (See Appendix A of Kronick and Neyaz.) Moreover, as the authors themselves note, their cost measures, which are based on cost-charge ratios could also be noisy.

<sup>41</sup> In addition, like White and Whaley, the authors cannot distinguish between negotiated (network) and unnegotiated (out of network) rates paid to hospitals.



### Average Commercial to Medicare PTCR Ratios by CMS Star Rating



As do White and Whaley, Kronick and Neyaz appear to minimize the role that competition among knowledgeable health plans plays in the marketplace, and suggest that their report could benefit employers by increasing transparency to help them lower health care costs.<sup>42</sup> Even if it did provide information to employers, such increased general transparency of hospital prices might not benefit consumers.<sup>43</sup> In summary, neither White and Whaley nor Kronick and Neyaz attempt to identify the myriad factors that drive the substantial differences in commercial prices and hospital margins that they measure. Without any interpretation of this variation, attempts to make it “transparent” are unlikely to accurately inform employers in their purchasing decisions.

<sup>42</sup> <https://www.westhealth.org/press-release/new-analysis-of-california-hospitals-shows-private-insurers-pay-more-than-double-what-medicare-does-for-similar-services/> (“Data like these provide leverage for employers to negotiate better terms for employees and families buckling under skyrocketing costs.”)

<sup>43</sup> See Cutler, David, and Leemore Dafny. “Designing Transparency Systems for Medical Care Prices.” *New England Journal of Medicine*, 364, no. 10 (2011): 894–95. They explain how greater price transparency can, in some situations lead providers be less inclined to offer favorable discounts, thereby raising prices.