

Hospital Prices in the United States: An Analysis of U.S. Cities and States

Johns Hopkins University
Cost and Policy in Healthcare Research Group

September 10, 2019



Contents

	Page
About this Report	3
Executive Summary	4
Methodology	5
Most Expensive States	6
Map of Most Expensive States	7
Most Expensive Cities in the United States	8
Cheapest Cities in the United States	9
The Story No One is Talking About: Unexplained Variation in Hospital Pricing	10
Notes	11



About this Report

The growing cost of health care jeopardizes spending on other important national priorities. It is estimated that health care is now the largest industry in the U.S., with a size greater than \$3.5 trillion¹. The purpose of this report is to inform patients seeking medical care that is out of their insurance network, those with high health insurance deductibles, those with a lapse in health insurance, and payers about variations of hospital pricing by region.

The data presented in this report describes average hospital price mark-ups above the Medicare allowable amount. Importantly this report does not suggest that the Medicare care allowable amount is the correct amount that a hospital should be paid, instead it is a reference price to gauge variations in the mark-up above that amount by region. The report identifies the most expensive and least expensive regions of the country. The results in this report are based on a one-year measurement period using 2018 Medicare fee-for-service claims (both institutional and non-institutional claims).

The health care marketplace is littered with pricing failures. Secret discounts offered to different patients and groups depending on the terms of a proprietary contract define the market. This report is meant to inform those patients and organizations who are sent and expected to pay a bill that uses the reported price that a hospital lists as their charge.

The authors of this report include Peiqi Wang, MD, MPH; Simon C. Mathews, MD; Heidi N. Overton, MD; Will E. Bruhn, Ilaria A. Santangelo, Joseph J. Paturzo, Martin A. Makary, MD, MPH.

Executive Summary

- The most expensive states (Texas, Nevada, and California) have an average mark-up of 6.4, 6.2, and 6.0 times over the Medicare allowable amount
- 7 of the top 10 most expensive states are in the southern United States
- The most expensive city mark-up (Brownsville-Harlingen, TX) has an average mark-up 9.4 times the Medicare allowable amount, followed by Laredo, TX (9.0) and El Paso, TX (8.7)
- The least expensive city mark-up is Pittsfield, MA with an average mark-up of 3.0.
- The national average hospital mark-up is 5.2 times over the Medicare allowable amount.

Methodology

The data used generated using 2018 CMS claims. The data source provided access to Medicare and Medicaid program data. We performed our analysis with 100% of the 2018 Medicare fee-for-service claims (both institutional and non-institutional). For the purpose of this report, we have defined a mark-up as the mean charge-to-cost ratio reported by health care organizations reporting to CMS. In other words, a mark-up estimate reported in this report approximates the average hospital charge relative to the Medicare allowable amount. It is important to note that the Medicare allowable amount is not a price, rather it is the amount that Medicare will pay for a particular procedure or treatment.

To calculate the national average mark-up ratio, we summed the charged amounts for all Medicare fee-for-service claims in 2018 and summed the allowed amounts for all claims. We then divided the total charged amount by the total allowed amount to calculate a national average mark-up of 5.2.

Similarly, we used all 2018 Medicare fee-for-service claims to calculate the state and city mark-ups. We summed the submitted charge amount on all claims by geographical region (city or state) to attain an estimate of the total charged amount for all Medicare covered services in each area. We then summed the Medicare allowed amount on all claims by geographical region to obtain an estimate of the total allowed amount for all Medicare covered services in each area. We then divided the total charged amount by the total allowed amount to calculate an estimate of each area's mark-up ratio (i.e. charge-to-cost ratio).

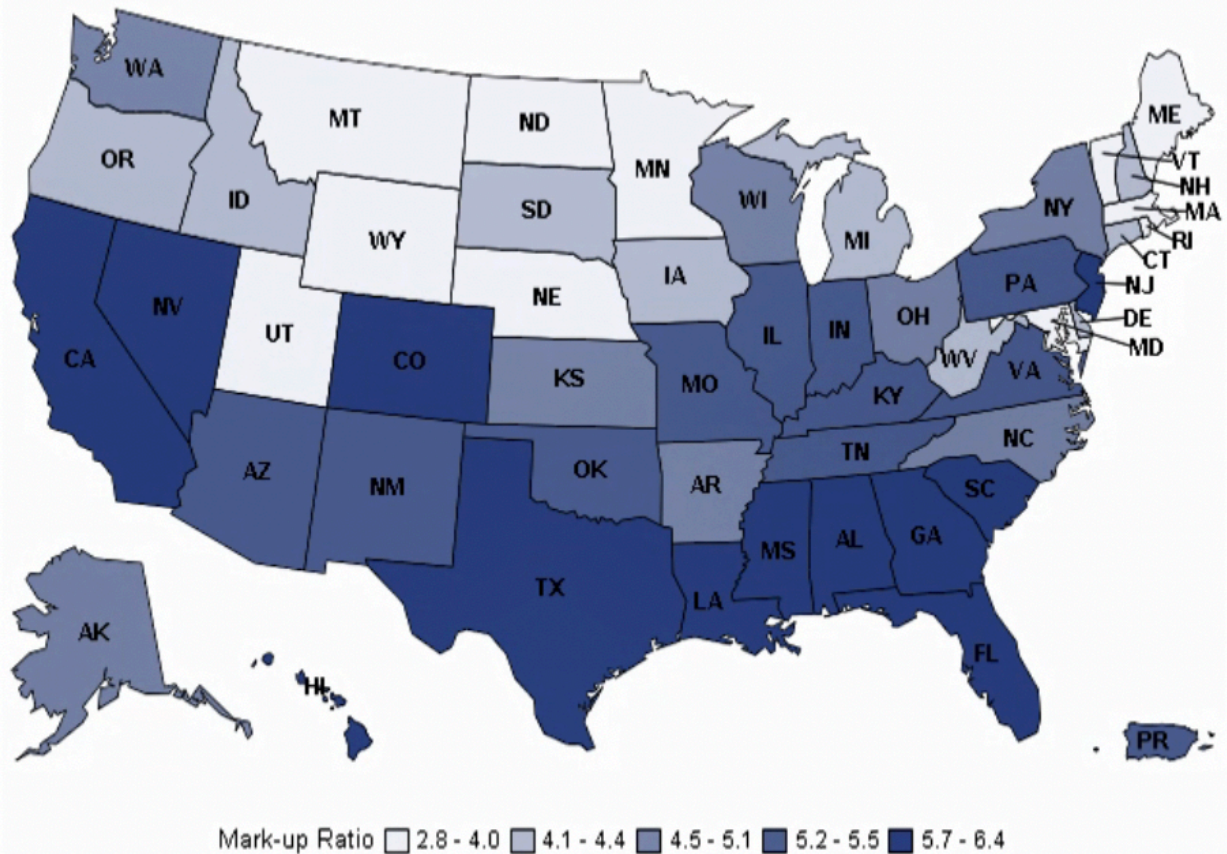
It is also important to note that we defined a city as a Metropolitan Statistical Area (MSA). An MSA included a core city and neighboring communities.

Most Expensive States

	<u>State</u>	<u>Mark-up</u>		<u>State</u>	<u>Mark-up</u>
1	Texas	6.4	26	Kansas	4.9
2	Nevada	6.2	27	Ohio	4.8
3	California	6.0	28	Arkansas	4.6
4	Mississippi	6.0	29	New York	4.6
5	Georgia	6.0	30	Washington	4.5
6	Alabama	5.8	31	West Virginia	4.4
7	Florida	5.8	32	Connecticut	4.4
8	Hawaii	5.8	33	New Hampshire	4.3
9	New Jersey	5.8	34	Delaware	4.2
10	Louisiana	5.7	35	Idaho	4.2
11	South Carolina	5.7	36	Oregon	4.2
12	Colorado	5.7	37	Michigan	4.1
13	Pennsylvania	5.5	38	South Dakota	4.1
14	New Mexico	5.5	39	Iowa	4.1
15	Illinois	5.4	40	Wyoming	4.0
16	Indiana	5.4	41	Nebraska	4.0
17	Tennessee	5.3	42	Utah	4.0
18	Oklahoma	5.3	43	Minnesota	4.0
19	Kentucky	5.2	44	Rhode Island	3.9
20	Arizona	5.2	45	Maine	3.7
21	Virginia	5.2	46	Massachusetts	3.7
22	Missouri	5.2	47	Vermont	3.6
23	Alaska	5.1	48	Montana	3.4
24	Wisconsin	5.1	49	North Dakota	3.4
25	North Carolina	5.0	50	Maryland*	2.8

*Maryland data relies on professional fees only since the state has a Medicare waiver for hospital payments

Map of the Most Expensive States



*The darker color indicates a higher mark-up ratio and a more expensive state

Most Expensive Cities in the United States

	<u>Metropolitan Statistical Area</u>	<u>Mark-up</u>		<u>Metropolitan Statistical Area</u>	<u>Mark-up</u>
1	Brownsville-Harlingen, TX	9.4	14	Anniston-Oxford-Jacksonville, AL	7.4
2	Laredo, TX	9.0	15	Longview, TX	7.3
3	El Paso, TX	8.7	16	San Jose-Sunnyvale-Santa Clara, CA	7.2
4	McAllen-Edinburg-Mission, TX	8.4	17	Corpus Christi, TX	7.2
5	Gadsden, AL	8.4	18	Victoria, TX	7.2
6	Bloomsburg-Berwick, PA	8.3	19	Abilene, TX	7.1
7	Gulfport-Biloxi-Pascagoula, MS	8.2	20	Richmond, VA	7.0
8	Vallejo-Fairfield, CA	8.1	21	Tyler, TX	7.0
9	Trenton, NJ	8.1	22	Stockton-Lodi, CA	6.9
10	Modesto, CA	8.0	23	Scranton—Wilkes-Barre—Hazleton, PA	6.9
11	Crestview-Fort Walton Beach-Destin, FL	7.9	24	Macon, GA	6.8
12	Lubbock, TX	7.8	25	Merced, CA	6.8
13	Florence, SC	7.6			

*The top 25 most expensive mark-up ratios out of 388 total cities

Least Expensive Cities in the United States

	Metropolitan Statistical Area	Mark-up
1	Pittsfield, MA	3.0
2	Bismarck, ND	3.1
3	Rochester, MN	3.2
4	Logan, UT***	3.4
5	Springfield, MA	3.4
6	Barnstable Town, MA	3.4
7	Lewiston, ID****	3.5
8	Missoula, MT	3.5
9	St. Cloud, MN	3.5
10	Billings, MT	3.5

*The top ten least expensive mark-up ratios out of 388 total cities

** Because only professional fee data was available for MD, we did not include Maryland cities in the city rank lists.

*** MSA includes some parts of Idaho

**** MSA includes some parts of Washington

The Story No One is Talking About: Unexplained Variation in Hospital Pricing

Pricing failures represent a major issue to our health care system. Patients seeking non-emergent care are often frustrated, struggling to get an answer to the natural question: How much will this cost me? This dilemma is further magnified for patients paying out of pocket and patients experiencing financial hardship.

The problem can be best characterized by a study conducted by the University of Iowa. They reached out to 101 U.S. hospitals asking for the cost of a standard coronary bypass surgery (CABG). Out of 101 hospitals, only 53 were able to provide a price. Not only did they find many of the hospitals were unable to answer what should be a simple ask, but the average price for CABG was \$151,271, with prices ranging from \$44,000 to \$448,000².

We found that hospital prices vary widely by geographic region at both the city and state level. However, the true price to many payers is often below mark-up price because the discounts that each payer may have is unknown. Patients paying their medical bills out-of-network represent one of the fastest growing groups of people interfacing with the health care system. These groups of people are sometimes charged a full marked-up, non-discounted price depending on the medical center doing the billing.

Approximately one in five Americans have medical debt in collections, and one third of the population is in debt due to medical expenses³. Health care costs are only continuing to rise. In 2017, the average per person health care expenditure was upwards of \$10,000 and estimated to be more than \$16,900 by 2027⁴.

Not only is this absence of pricing information frustrating everyday Americans, the lack of price transparency is also putting American health at risk as 64% percent of patients report to have delayed or neglected care within the past year out of fear of high medical bills⁵. Price inflation is also impacting the physical health of patients by creating a perceived barrier to receiving medical care. Price inflation also threatens the public trust in the medical profession.

Notes

1. Martin, B. et al., "National Healthcare Spending in 2017. Growth Slows to Post-Great Recession Rates; Share of GDP Stabilizes," *Health Affairs* 38, no. 1 (2018).
2. B.D. et al., "Association of Hospital Prices for Coronary Artery Bypass Grafting with Hospital Quality and Reimbursement," *American Journal of Cardiology* 117, no. 7 (2016): 1101-06.
3. Peiffer, E. (2018, December 12). "Debt in America: An Interactive Map." Urban Institute.
4. Kamal, R. et al., (2019, March 12). "How much is health spending expected to grow?" Peterson-Kaiser Health System Tracker.
5. Heath, S. (2018, February 15). "64% of Patients Avoid Care Due to High Patient Healthcare Costs." Patient Engagement HIT.
6. Makary MA. *The Price We Pay*. Bloomsbury Press U.S.A. (2019).