

Association between CMS Price Transparency Compliance and Hospital Characteristics



Xinshi Ma¹, Yuqi Zhang MD², Marcelo Cerullo MD MPH²

¹Trinity College of Arts & Sciences, Duke University, Durham, NC, USA ²Department of Surgery, Duke University School of Medicine, Durham, NC, USA

Introduction

- Total healthcare spending amounts to ~19% of U.S. GDP, projected to grow at average annual rate of 5.4%
- Centers for Medicare and Medicaid Services (CMS) introduced price transparency regulations effective January 1, 2021
- Require machine-readable file listing payer-specific negotiated prices, discounted cash prices, and standard charges for all inpatient service
- Penalties for non-compliance: \$300 per day for small hospitals with a bed count of 30 or fewer, and \$10 per bed per day for hospitals with a bed count greater than 30, maximum daily amount \$5,500
- Previous studies have found low compliance (~40%) associated with IT-preparedness, for-profit status, hospital system affiliation, size
- Coronavirus Aid, Relief, and Economic Security (CARES) Act Provider Relief Fund provided \$175 billion to reimburse hospitals of COVID-19 related costs
- We connect compliance with federal funding and hospital for-profit status to investigate impact of compliance on hospital financials

Objectives

- Evaluate overall rate of compliance across states and hospital categories
- Investigate association with compliance: federal funding, financial, and operational features



<https://www.cms.gov/hospital-price-transparency>

Methods

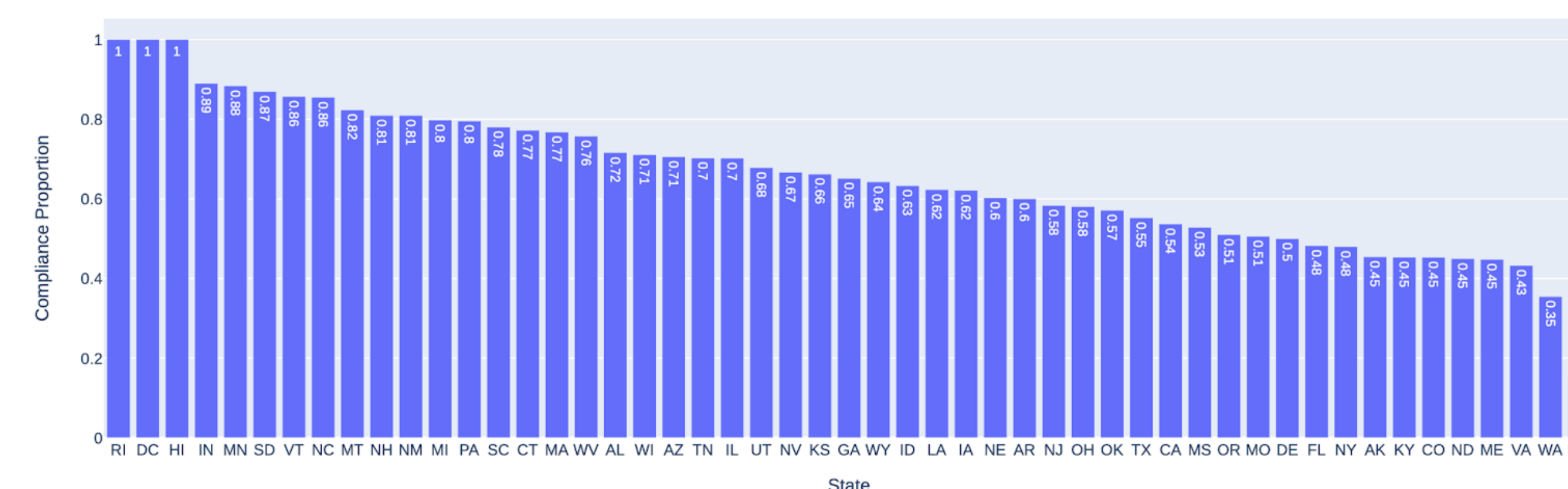
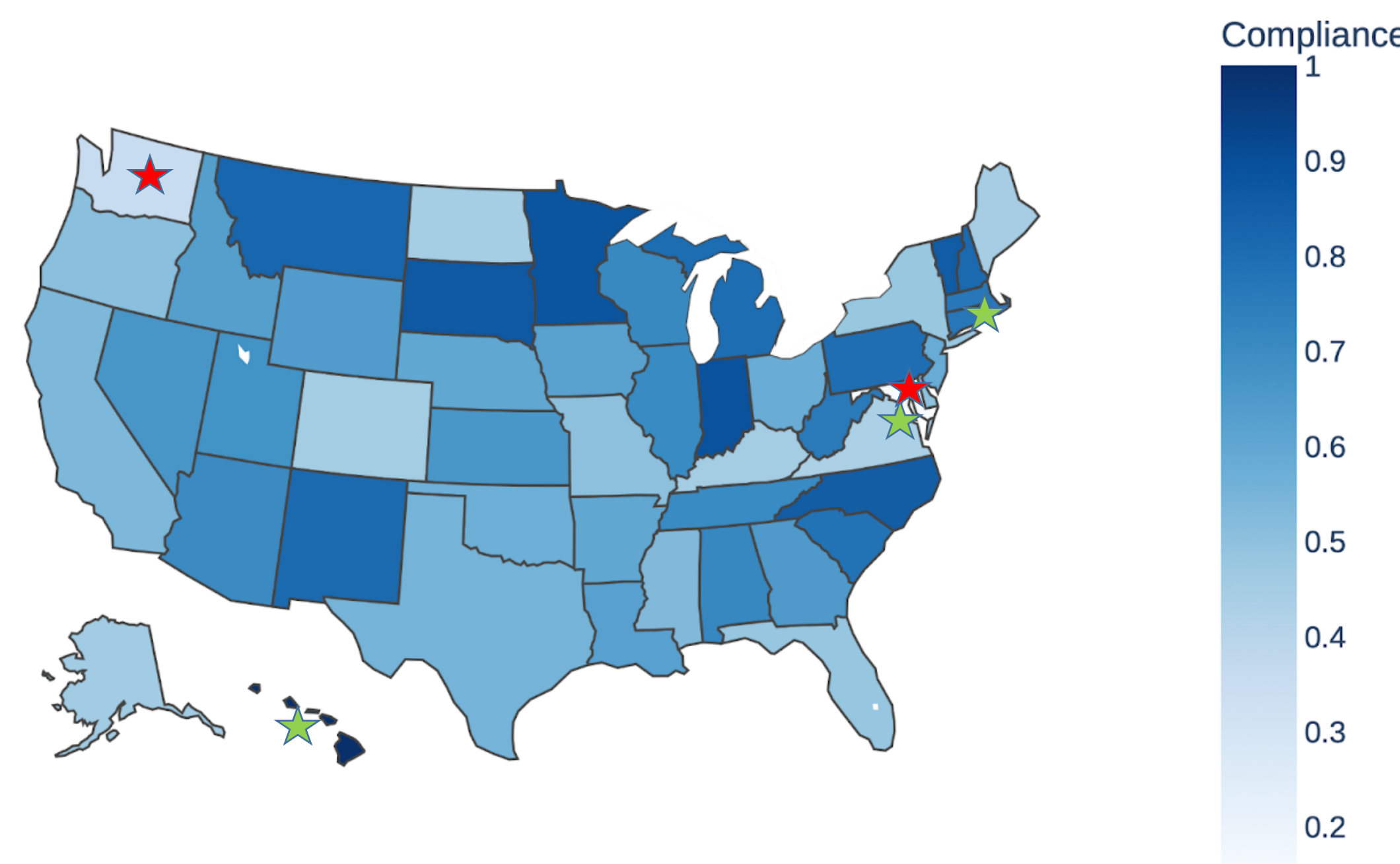
- Cross-sectional retrospective study of short-term acute care hospitals
- Compliance data compiled by Turquoise Health
- HCRIS reports and publicly available data used to compile hospital-specific features including for-profit status, teaching status, bed size, wage index, total margins, employee FTEs, and CARES Act payment standardized by patient days.
- State fixed-effects and stratified (hospital for-profit status) logistic regression were used to evaluate the association between compliance and hospital financial and operational characteristics



<https://turquoise.health>
<https://www.cms.gov/About-CMS/Agency-Information/CMS-Brand-Identity>

Price Transparency Rule Compliance

- Three states had 100% compliance
 - (Rhode Island, Hawaii, and Washington D.C.)
- Two states had lower than 40% compliance
 - (Washington and Maryland)



	Compliant		Non-Compliant		Total	
	2064	62.41%	1243	37.59%	3307	
Teaching Status						
Yes	1415	68.56%	837	67.34%	2252	68.10%
No	649	31.44%	406	32.66%	1055	31.90%
Hospital Category						
For-Profit	452	21.90%	220	17.70%	672	20.32%
Government	379	18.36%	203	16.33%	582	17.60%
Non-Profit	1233	59.74%	820	65.97%	2053	62.08%

- Of 3,307 short term acute care hospitals,
 - 2,055 (62.41%) were compliant
 - 1,243 (37.59%) were non-compliant

For-profit hospitals are more compliant than non-profit (p<0.01) and government (p<0.1) hospitals

Association of Hospital Characteristics with Compliance

VARIABLES	Marginal Effects (at mean)		
	Government	For-Profit	Non-Profit
log CARES Act Payment Per Patient Days ^a	-0.009 (0.033)	0.032*** (0.012)	-0.011 (0.013)
Total Margin	0.011 (0.033)	-0.317** (0.136)	-0.218** (0.106)
1000 Employee FTEs ^b	-0.015 (0.016)	0.033 (0.033)	0.003 (0.007)
Teaching Status	0.238** (0.962)	-0.077 (0.056)	-0.019 (0.026)
Observations	581	667	2039

Standard errors in parentheses.

* p < 0.1 ** p < 0.05 *** p < 0.01

^aCoronavirus Aid, Relief, and Economic Security Act

^bFull time Equivalents

Lower compliance was strongly associated with:

- Higher margins—non-profit and for-profit hospitals and as a whole

Compliance was not associated with:

- CARES Act Funding—across all hospitals
- Teaching Status—across all hospitals

- ~62% of hospitals were compliant with price transparency regulations
- Strong association between profitability and compliance
 - Price transparency may be an important mechanism for less costly and equitable healthcare
- Using CARES Act funding as a proxy, compliance does not seem to affect the level of federal funding hospitals receive
 - Need for higher penalties for noncompliance

References

- CMS. CMS National Health Expenditure Data. Accessed March 6, 2022. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>
- Bai G, Anderson GF. A More Detailed Understanding Of Factors Associated With Hospital Profitability. *Health Aff (Millwood)*. May 1 2016;35(5):889-97. doi:10.1377/hlthaff.2015.1193
- Zhang A, Prang K-H, Devlin N, Scott A, Kelaher M. The impact of price transparency on consumers and providers: A scoping review. *Health Policy*. 2020;08/01/ 2020;124(8):819-825. doi:<https://doi.org/10.1016/j.healthpol.2020.06.001>
- CMS. Hospital Price Transparency | CMS. <https://www.cms.gov/hospital-price-transparency>
- CMS. CMS OPPI/ASC Final Rule Increases Price Transparency, Patient Safety and Access to Quality Care | CMS. <https://www.cms.gov/newsroom/press-releases/cms-oppi-asc-final-rule-increases-price-transparency-patient-safety-and-access-quality-care>
- Cantor J, Qureshi N, Briscoe B, Chapman J, Whaley CM. Association Between COVID-19 Relief Funds and Hospital Characteristics in the US. *JAMA Health Forum*. 2021;2(10):e213325-e213325. doi:10.1001/jamahealthforum.2021.3325
- Ly D, Cutler D. Factors of U.S. Hospitals Associated with Improved Profit Margins: An Observational Study. *Journal of general internal medicine*. 2018 Jul 2018;33(7):doi:10.1007/s11606-018-4347-4
- Jiang JX, Polsky D, Littlejohn J, Wang Y, Zare H, Bai G. Factors Associated with Compliance to the Hospital Price Transparency Final Rule: a National Landscape Study. *J Gen Intern Med*. Dec 13 2021;1-8. doi:10.1007/s11606-021-07237-y
- Gondi S, Beckman AL, Ofoje AA, Hinkes P, McWilliams JM. Early Hospital Compliance With Federal Requirements for Price Transparency. *JAMA Internal Medicine*. 2021;181(10):1396-1397. doi:10.1001/jamainternmed.2021.2531