

# Which Hospital Financial Characteristics Are Associated with Medical Debt?

## *Hospital Profitability, the Provision of Charity Care, and Medical Debt in Hospital Markets*

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Medical debt affects families' financial health and well-being. People with medical debt are likely to forgo needed medical care (Hamel et al. 2016) and face an elevated risk of personal bankruptcy (Dobkin et al. 2018). In a recent brief (Blavin, Braga, and Gangopadhyaya 2022), we explored which county characteristics were correlated with medical debt and found that an area's underlying health and health insurance coverage were the most predictive factors of the county's share of adults with medical debt in collections. In this fact sheet, we explore whether hospitals' operating margins and charity care have any clear correlation with medical debt in collections at the hospital market level, defined by hospital referral regions (HRRs).<sup>1</sup>

We find the following:

- **Average rates of HRR-level hospital operating margins, or profitability from operating activities (e.g., delivery of health care services), are unrelated to medical debt.** This may be because the ways operating margins affect medical debt counterbalance one another. Areas with higher prices for inpatient services could yield higher profit margins for hospitals while increasing medical debt for consumers through higher cost-sharing burdens. On the other hand, hospitals might experience financial losses if they serve, for example, low-income or uninsured patients who cannot pay their medical bills. In addition, hospitals with lower operating margins may feel more compelled to aggressively pursue outstanding medical debt. Other researchers have found that low hospital revenue is a strong predictor of "extraordinary collection actions" among nonprofit hospitals (Eliason, MacDougall, and Peterson 2022).
- **The amount of charity care hospitals deliver in an HRR is positively related to medical debt.** This is likely because the need for charity care is greater in areas with uninsured and low-income patients, a characteristic previously found to be strongly correlated with medical debt (Blavin, Braga, and Gangopadhyaya 2022).

### HOSPITAL PROFITABILITY IS NOT RELATED TO MEDICAL DEBT

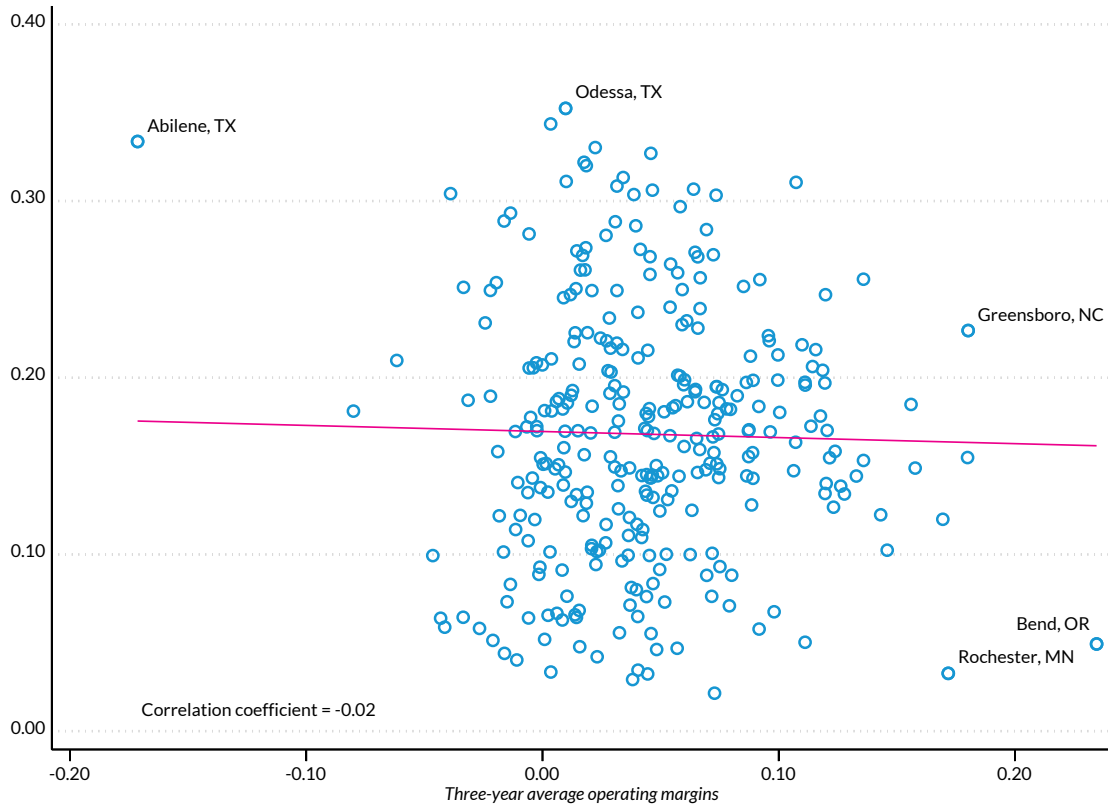
Our analysis of data from a major credit bureau finds little association between hospital operating margins and medical debt. We present a scatterplot and a line of best fit of the average hospital operating margins in HRRs and the shares of adults with medical debt in collections in the same areas (figure 1). We find no association (correlation coefficient = -0.02) between HRR-level hospital operating margins and the share of adults with medical debt in collections. In other words, hospitals are not more profitable or less profitable in markets with high concentrations of patients with unpaid medical debt. Some areas with exceptionally high hospital profitability had low rates of medical debt in collections, such as the HRRs that contain Bend, Oregon, and Rochester, Minnesota. In contrast, other areas with high hospital

<sup>1</sup> "FAQ: Hospital Referral Regions (HRRs)," Dartmouth Atlas Project, accessed September 8, 2022, <https://bit.ly/3enzHnu>; Hospital referral regions are areas defined by the Dartmouth Atlas for Healthcare that consist of a minimum population of 120,000 people and include at least one hospital that performs cardiovascular surgery and neurosurgery. There are 306 unique hospital referral regions in the US. We assess the market-level relationship between hospital financial characteristics and medical debt because we cannot observe which health care provider generated the consumer's debt.

profitability had average or even high shares of adults with medical debt in collections. For example, the HRR that contains Greensboro, North Carolina, had operating margins averaging 18 percent while 23 percent of adults had medical debt in collections. The absence of a positive or negative relationship can be explained by counterbalancing theories of how hospital margins might affect medical debt: hospital margins are greater in higher-price areas (which increases the likelihood of medical debt), but hospitals are also more profitable if they serve insured patients (which decreases the likelihood of medical debt) (Bai and Anderson 2016; Blavin and Ramos 2021). Overall, findings from Virginia hospitals suggests both mechanisms are at play—medical debt collection via wage garnishments was positively associated with higher price markups and lower annual gross revenue (Bruhn, Rutkow, and Wang 2019).

**FIGURE 1**  
**Hospital Operating Margins and Medical Debt in Collections at the HRR Level**  
*Scatterplot and linear fit*

*Share with medical debt in collections*



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**Source:** Urban Institute analysis of August 2019 credit bureau data and 2017–19 federal hospital cost report data provided by the RAND Corporation.

**Notes:** HRR = hospital referral region. Each marker represents a unique HRR. Medical debt in collections is evaluated for each HRR’s adult population. To address outliers in the cost report data, we take the three-year average (2017–19) of each hospital’s operating margins and “winsorize” margins at the 2.5 and 97.5 percentiles.

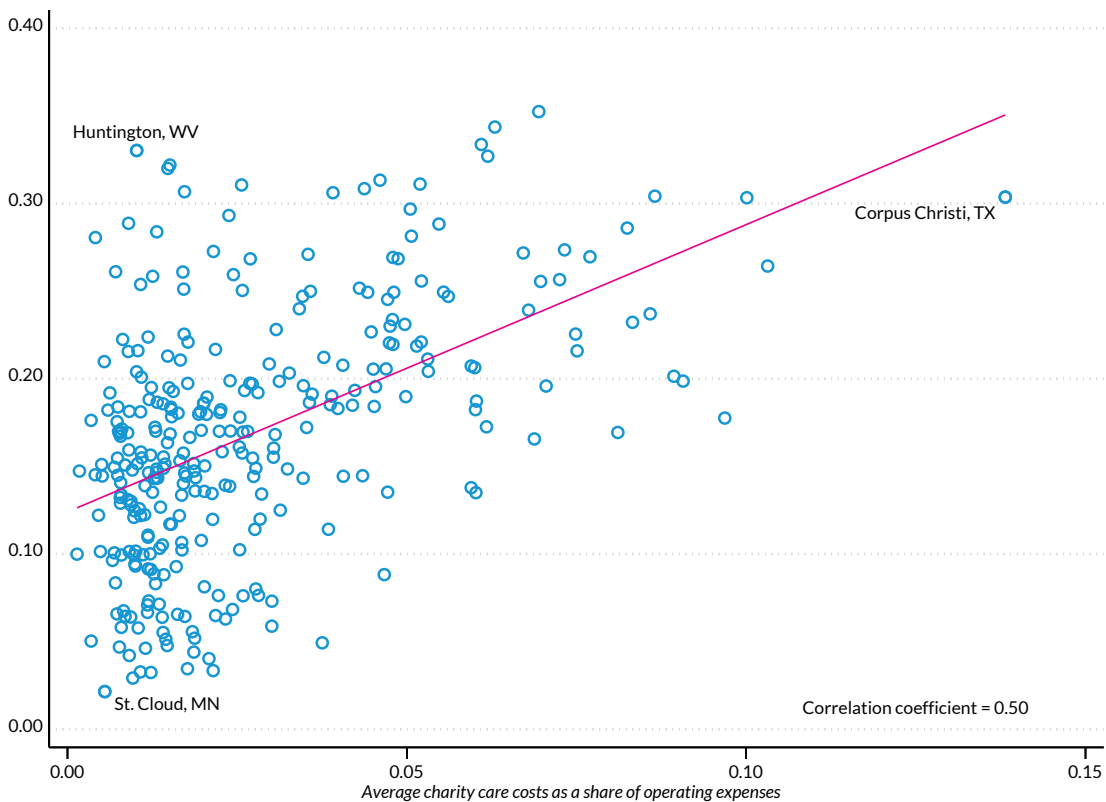
**THE AMOUNT OF CHARITY CARE DELIVERED IS POSITIVELY RELATED TO MEDICAL DEBT**

Hospitals in areas with high concentrations of medical debt in collections tend to have high levels of charity care (figure 2). We find a strong positive correlation between the average amount of charity care hospitals deliver (as a share of overall hospital expenses) in an HRR and the share of adults with medical debt. For example, the HRR that contains Corpus Christi, Texas, had high rates of both charity care (14 percent) and medical debt in collections (30 percent). At the same time, areas where hospitals delivered less charity care tended to have lower shares of adults with medical debt in collections. For example, hospitals centered around St. Cloud, Minnesota, provided charity care that amounted to less than 1 percent of operating expenses, and only 2.1 percent of adults had medical debt in collections. These

findings are consistent with the hypothesis that hospitals offer more charity care in communities where patients cannot pay their medical bills, such as communities with low health insurance coverage. But there are exceptions. In one extreme example, in the HRR that contains Huntington, West Virginia, only 1 percent of operating expenses were delivered as charity care, while 33 percent of adults in the area had medical debt in collections. In another extreme example, in the HRR that contains Corpus Christi, Texas, 10 percent of operating expenses were delivered as charity care, while 30 percent of adults in the area had medical debt in collections.

**FIGURE 2**  
**Hospital Charity Care and Medical Debt in Collections at the HRR Level**

Scatterplot and linear fit  
 Share with medical debt in collections



URBAN INSTITUTE

**Source:** Urban Institute analysis of August 2019 credit bureau data and 2019 federal hospital cost report data provided by the RAND Corporation.

**Notes:** HRR = hospital referral region. Each marker represents a unique HRR. Medical debt in collections is evaluated for each HRR’s adult population.

## IMPLICATIONS

Hospital profitability may be correlated with many hospital-level factors (e.g., structural hospital characteristics and hospital market concentration, prices, and quality) or patient characteristics (e.g., insurance coverage rates) that potentially affect the likelihood of incurring medical debt in distinct ways. The amount of charity care delivered is positively associated with the share of adults with medical debt, suggesting that hospitals provide more charity care in areas with low insurance rates and incomes. These results highlight the importance of policies—particularly those that expand subsidized or affordable insurance coverage—that help patients pay their medical bills for the financial well-being of both individuals and hospitals. Although this fact sheet presents only descriptive results, past literature offers causal evidence that expanding Medicaid reduces medical debt in collections (Caswell and Waidmann 2017), improves hospital profitability (Blavin and Ramos 2021), and reduces uncompensated care (Dranove, Garthwaite, and Ody 2016). We hope future work can better connect hospital financial characteristics and collections practices to medical debt.

## ABOUT THE DATA

We use credit bureau data consisting of a 2 percent random sample of depersonalized consumer data (more than 5 million consumers) from a major credit bureau. We use data from August 2019, a period before the COVID-19 pandemic, to avoid a period when hospital finances suffered significant disruptions. The primary outcome we study is medical debt in collections, or medical debt that was sent to a third-party collector or assigned to a creditor's internal collections department. We collect information on medical debt in collections among adults. Debt in collections is normally at least 180 days past due, where the creditor acted to collect the unpaid debt but was unsuccessful. The data on operating margins and charity care were provided by the RAND Corporation based on public data from the Centers for Medicare & Medicaid Services' Healthcare Cost Report Information System, which contains annual cost reports submitted by all Medicare-certified hospitals and provides information necessary to construct the operating margin and charity care measures.

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<sup>2</sup> "Diagnosis: Debt," *Kaiser Health News*, accessed September 8, 2021, <https://bit.ly/3cKtMbt>.