

# Financial Complexities Behind Medical Expenses

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## Abstract

Healthcare costs in the U.S. continue to burden patients, with prices shaped by more than just production costs. This study examines how medical supply pricing, physician compensation, and hospital business strategies influence patient billing. Using hospital pricing data, compensation benchmarks, and interviews with healthcare professionals, it reveals significant price variation at Houston Methodist Sugar Land Hospital and differences in physician pay between nonprofit and for-profit institutions. Although the hospital complies with price transparency laws, cost information remains hard to access. These findings call for reforms that align financial practices with patient-centered care and equitable access.

## Introduction

The high cost of healthcare in the U.S. is often driven by complex pricing structures rather than production costs alone. For example, hospitals may charge several dollars for a suture that costs cents to make (Healthcare Value Hub). Beyond supplies, physician compensation and hospital strategies play major roles in determining patient bills. Financial incentives can influence treatment decisions, and hospital markups can make essential care unaffordable (Kurani et al.). While past studies have addressed hospital pricing and transparency, few explore how physician pay, medical supply costs, and business models interact to shape expenses. Research highlights growing financialization in healthcare, with profit-driven motives raising costs and complicating access (Healthcare Value Hub). Despite federal transparency regulations, inconsistent reporting continues to obscure pricing for patients (Kurani et al.). This study seeks to bridge existing research gaps by analyzing how these financial elements intersect and affect healthcare affordability.

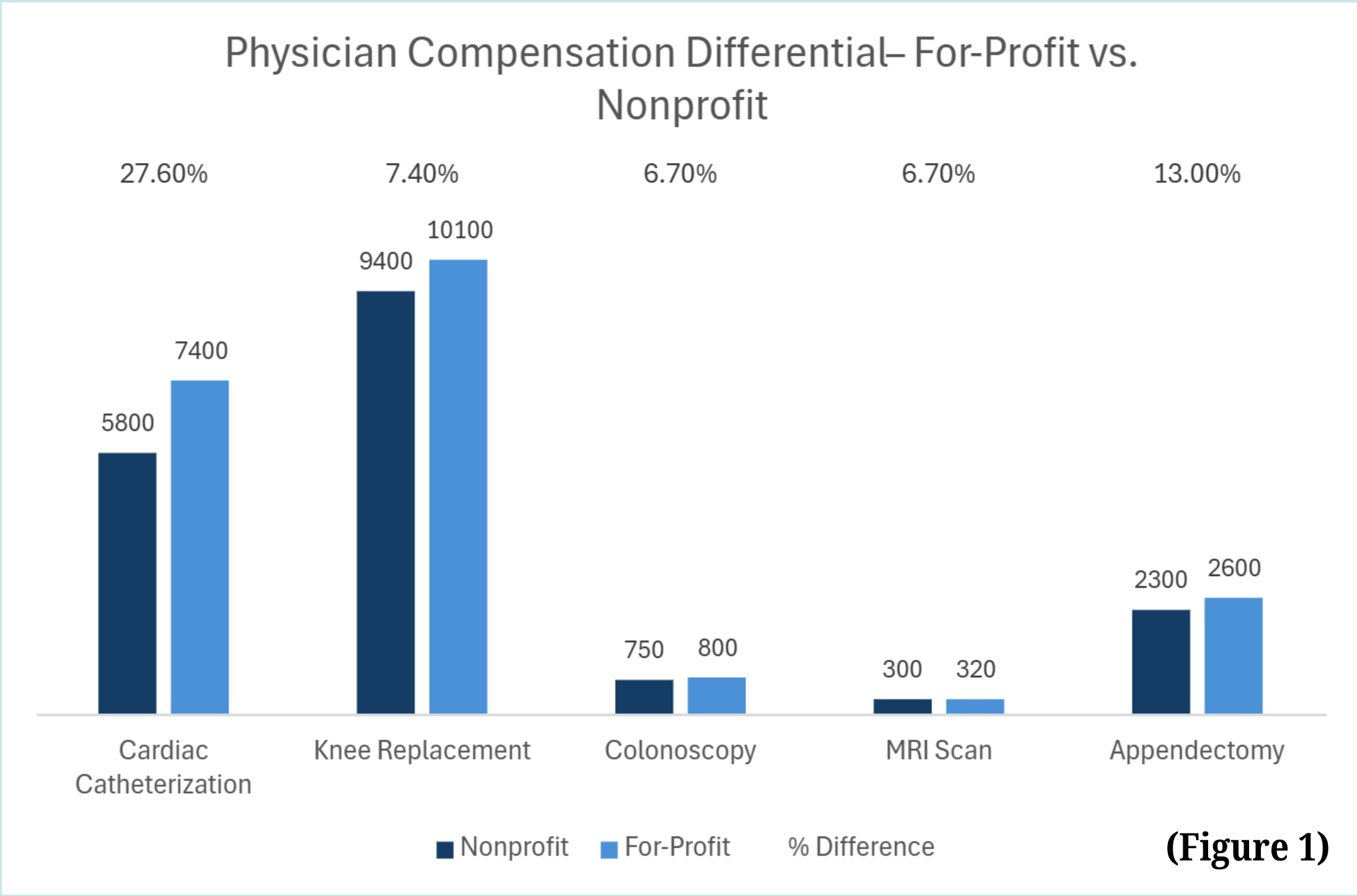
## Summary

This study explores the financial drivers of healthcare costs, focusing on medical supply pricing, physician compensation, and hospital business strategies. It reveals how prices vary widely—from basic supplies like syringes to expensive implants—and how financial incentives tied to physician pay can influence treatment decisions (Kurani et al.). Hospital strategies often prioritize financial sustainability, sometimes at the expense of affordability (Healthcare Value Hub). Existing research highlights issues like healthcare financialization, ineffective price transparency regulations, and ethical concerns around fair access (Healthcare Value Hub; Kurani et al.). By examining these interconnected factors, this study emphasizes the need for improved transparency and equity in healthcare pricing.

## Methodology

A mixed-methods approach was used, combining quantitative data from hospital pricing databases, financial reports, and administrative files with qualitative insights from interviews with physicians, administrators, and technicians. Federal pricing regulations were also reviewed to assess compliance and patient impact (United States, Congress). Key metrics include Physician Compensation Ratio (comparing pay by procedure and hospital type), the Cost Variation Index (measuring supply price disparities and using coefficient of variation (CV) estimates to show pricing inconsistencies, with higher values suggesting more unpredictability in charges. (Estimated CV  $\approx$  (Standard Deviation/Average Price) x 100%)), and Pricing Transparency Score (evaluating clarity and accessibility of pricing data through matrices such as accessibility through google search, transparency and detail behind costs, as well as recency in order to generate a total score of up to 100 points). All of which are collected to be viewed side by side in order to evaluate the the variability and predictability of medical expenses for customers.

## Results



Cost Variation Index – Medical Supplies (Table 1)

Item	Min Price (\$)	Max Price (\$)	Range (\$)	CV (Est.)
Surgical Suture	1.25	18.40	17.15	130%
Syringe	0.15	1.60	1.45	110%
IV Catheter	0.45	4.50	4.05	115%

Transparency Score Breakdown (Table 2)

Metric	Houston Methodist Sugar Land
Pricing Transparency Compliance	85/100
Accessibility of Information	80/100
Overall Transparency Score	82.5

## Findings/Conclusion

Data from Houston Methodist Sugar Land Hospital reveals significant inconsistencies in medical supply pricing, physician compensation, and pricing transparency. Common items like sutures and syringes show wide cost variations—with prices often driven by business decisions rather than medical necessity—placing unnecessary financial burdens on patients. For example, surgical sutures can cost between \$1.25 and \$18.40 despite minimal production costs (Table 1). Physician compensation also varies, with for-profit hospitals consistently paying more for the same procedures than nonprofit ones (Figure 1). These disparities suggest that financial incentives may influence treatment choices, raising ethical concerns about care decisions. While the hospital complies well with federal transparency rules (scoring 82.5 overall), the information remains difficult for patients to navigate (Table 2). This limits the effectiveness of transparency efforts in helping patients anticipate costs or make informed choices. Overall, the findings highlight a healthcare system where pricing variability, financial incentives, and limited transparency work together to inflate costs and complicate patient decision-making. Reforms are needed to standardize prices, align compensation with patient outcomes, and improve the accessibility of pricing information.

## Discussion

This study highlights how healthcare costs in the U.S. are driven by hospital pricing strategies, provider incentives, and regulatory compliance. Notably, routine medical supplies show large price variations without clinical justification, pointing to profit-driven markups that burden patients and make costs unpredictable. Physician compensation also varies, with for-profit hospitals paying more for the same procedures than nonprofits. This raises ethical concerns, as financial incentives may influence treatment choices, potentially prioritizing profit over patient care—even in nonprofit settings like Houston Methodist Sugar Land. While the hospital scores well on transparency, patients still face difficulty understanding pricing due to complex formats and language. Regulatory compliance alone doesn't guarantee true price clarity or informed decision-making. Overall, the findings call for reforms to standardize pricing, align physician pay with patient outcomes, and improve the usability of transparency tools. Future research should explore how these financial structures affect patient care and provider behavior, guiding policy toward a fairer, more sustainable healthcare system.

## References

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