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MORE EVIDENCE OF THE ASSOCIATION BETWEEN HOSPITAL MARKET CONCENTRATION AND HIGHER PRICES AND PROFITS

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After a swell of hospital mergers and acquisitions in the 1990s, the industry has again been experiencing significant consolidation as large hospital systems have bought up smaller systems and stand-alone hospitals left vulnerable by the recession.[1] The local and regional chains resulting from consolidation typically wield greater bargaining leverage than do stand-alone facilities. The evidence from several decades of research on this topic shows higher hospital prices following consolidation[2,3] and recent work documents how large hospital systems serving multiple markets are able to extract higher prices for all facilities in their chain, not just in markets where they are dominant.[4,5]

Two provisions of the 2010 Affordable Care Act (ACA) have brought new attention to the issue of hospital market power. First, because the ACA coverage expansions will be financed in part by slowing the rate of increase in Medicare payment updates, there is concern that hospitals with as yet unexploited pricing leverage will attempt to recoup some of the lost Medicare revenue by raising prices to private insurers. Staff from the Medicare Payment Advisory Commission have argued that the ability of hospitals to use their bargaining power to raise private prices undermines the cost reduction pressures that would otherwise exist with lower Medicare payment rates,[6] and my own recent work has shown that the ability to shift costs to private insurers rather than cutting costs for all patients is stronger in markets where hospital concentration is higher.[7] Second, the integration of hospitals and physicians into the accountable care organizations (ACOs) encouraged by the health reform legislation is expected to accelerate provider consolidation in local markets. Indeed, hospitals are already consolidating with physicians at a fast clip,[8] and many observers are asking whether this integration will give hospitals (and physicians) additional pricing power vis-à-vis private payers.

In this essay I present findings from a new study[9] that adds another piece of evidence to support concerns over hospital consolidation and market power. Specifically, using individual-level data from 61 hospitals for patients treated during 2008 for any of six high-cost inpatient cardiac or orthopedic procedures, I show that hospitals in concentrated markets charge significantly higher prices to private payers than do their peers in more competitive markets. Furthermore, these prices are significantly above their direct costs of providing care.

STUDY DESIGN

I assigned the study hospitals to 27 different markets spanning eight states based on the Dartmouth Atlas Hospital Referral Regions. I then used information on chain ownership to identify hospitals belonging to the same system and computed a modified Herfindahl-Hirschman Index (HHI) for each market capturing the extent of competition between hospital systems within the local market. Markets were then classified as "concentrated" or "competitive" according to whether the modified HHI was above or below the median for all study markets.

I examined two outcome variables: (1) the procedure price, defined as the revenues actually collected for the case from private insurers net of all contractual discounts, and (2) the contribution margin for the case, defined as the revenue received minus all direct costs of treating the patient. This contribution margin is a measure of the profitability of the individual case but excludes the indirect costs that would be allocated across all patients treated by the hospital when determining a hospital-wide profit margin.

HIGHER PRICES, HIGHER MARGINS

Results clearly showed that hospitals in concentrated markets, where there is less competition, are able to extract significantly higher payments from private insurers for each of the six procedures studied (Figure 1). For example, the average hospital in concentrated markets received $32,411 for each commercially insured patient undergoing coronary angioplasty, or one and a half times the $21,626 received in competitive markets. Similarly large price differentials are observed across markets for the other five procedures, with all differences statistically significant.

With strikingly similar costs per case across competitive and concentrated markets (not shown), these large price differences

mean that contribution margins are also higher in concentrated markets. For example, the average hospital in concentrated markets received commercial payments that were more than $20,000 above the direct costs of providing angioplasty, yielding a contribution margin that was 90 percent higher than the $10,612 margin earned by hospitals in competitive markets. Again, similar patterns hold for the other five procedures and all differences are statistically significant.

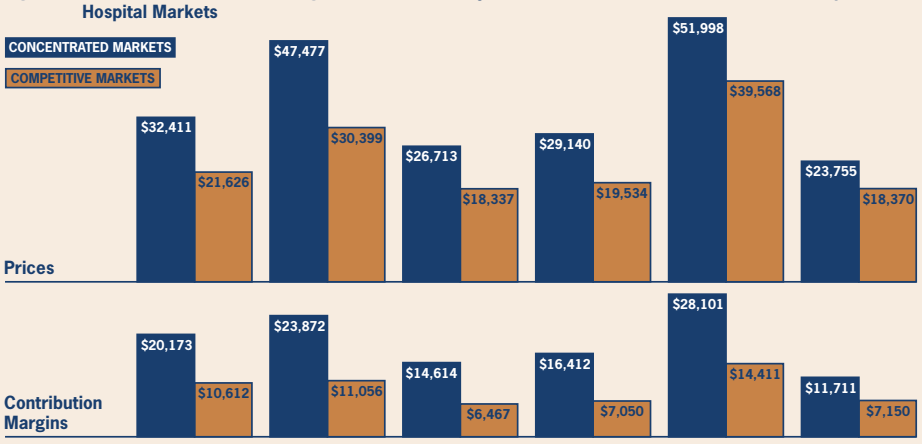
The percent contribution margins, computed as the margin divided by the price, indicate the extent to which the revenue received was not needed to cover direct costs. These percentages are uniformly high in the concentrated markets, ranging from a "low" of 49 percent for cervical fusion to a high of 62 percent for angioplasty. Of note, however, these six procedures also generate large contribution margins even in competitive markets, with margins ranging from about one-third to one-half of the price received.

Multivariate analyses confirmed these results, showing significantly higher prices and contribution margins in concentrated markets for all six of the study procedures even after controlling for market size and for hospital and patient characteristics. These same analyses also indicated that, regardless of market structure, hospitals performing higher volumes of any of the four orthopedic procedures charged significantly higher prices to private insurers and earned significantly higher contribution margins. It is possible that high-volume hospitals are viewed as more experienced with these procedures and thus considered to be "must have" facilities for private insurers' networks, enabling them to command higher prices whether their market is concentrated or not.

CONCLUSION

Hospitals need revenues to finance their operating expenses, invest in new capacity, and provide charity care to the uninsured, yet typically receive payments from public payers that fall short of the full cost of these necessary activities. Traditionally, hospitals have sought to cover shortfalls from public payers by charging higher prices to private payers. Seen against the average total margin of 2.8 percent earned by U.S. hospitals in 2008, the double-digit contribution margins documented above suggest the extent to which high profits on select orthopedic and cardiac procedures for privately insured patients are available to subsidize less lucrative procedures and patient groups as well as support indirect costs.

Figure 1. Prices and Contribution Margins for Commercially-Insured Patients in Concentrated and Competitive Hospital Markets



Percent Contribution Margins:	Angioplasty	Pacemaker Insertion	Knee Replacement	Hip Replacement	Lumbar Fusion	Cervical Fusion
Concentrated Markets	62%	50%	55%	56%	54%	49%
Competitive Markets	49%	36%	35%	36%	36%	39%

The work reported here confirms earlier studies showing that hospitals are able to extract higher private payments when they hold more market power. Public policy has been ambivalent with respect to the ongoing consolidation within hospital markets. While antitrust regulatory agencies have challenged a number of hospital mergers in the past few decades, these challenges rarely culminated in decisions to disallow a merger. Now provisions of the ACA are encouraging further consolidation of hospitals and physicians, and the final antitrust review regulations from the Department of Justice and the Federal Trade Commission have eliminated the proposed mandatory review of certain prospective ACOs.[10]

It will take some time to see what types of ACOs are allowed to form and how they will affect the competitive structure within their markets. It is clear, however, that the ongoing consolidation of local hospital markets is already frustrating the efforts of employers and private insurers to moderate the growth of health care costs. While the use of administered pricing systems largely insulates public payers from the effects of provider market power, the higher reimbursement rates that dominant providers can extract from private payers during rate negotiations put significant upward pressure on private premiums. In response, employers and other purchasers of private coverage have begun demonstrating a new willingness to accept limits on their health plan's provider network, and private insurers are developing new products using tiered networks that exclude or disadvantage providers judged to not deliver value commensurate with their higher prices. Other products give patients incentives to go beyond their immediate local market to utilize higher-value providers when receiving elective procedures and could mitigate the market power of local providers. Ultimately, though, if ever-strengthening provider market power continues to push private premiums upward and erode private coverage, hospitals may find themselves in the ironic position of serving a larger share of patients covered by forms of public insurance that pay the lowest rates. They may also face demands in some states for government regulation of the prices they charge.

1 Moody's Investor Service. Special Comment. "For-Profit Investment in Not-for-Profit Hospitals Signals More Consolidation Ahead." April 2010.

2 Vogt WB, Town R. "How Has Hospital Consolidation Affected the Prices and Quality of Hospital Care?" *The Synthesis Project*, 9, Robert Wood Johnson Foundation, Princeton 2006.

3 Moriya A, Vogt W, Gaynor M. "Hospital Prices and Market Structure in the Hospital and Insurance Industries." *Health Economics, Policy and Law*, 5(4):459-79, 2010.

4 Melnick G, Keeler E. "The Effects of Multi-Hospital Systems on Hospital Prices." *Journal of Health Economics*, 26(2):400-13, 2007.

5 Berenson RA, Ginsburg PB, Kemper N. "Unchecked Provider Clout in California Foreshadows Challenges to Health Reform." *Health Affairs*, 29(4):699-705, 2010.

6 Stensland J, Gaumer ZR, Miller ME. "Private-Payer Profits Can Induce Negative Medicare Margins." *Health Affairs*, 29(5):1045-51, 2010.

7 Robinson JC. "Hospitals Respond to Medicare Payment Shortfalls by Both Shifting Costs and Cutting Them, Based on Market Concentration." *Health Affairs*, 30(7):1265-71, 2011.

8 O'Malley AS, Bond AM, Berenson RA. "Rising Hospital Employment of Physicians: Better Quality, Higher Costs?" Center for Studying Health System Change, Issue Brief No. 136. August 2011.

9 Robinson JC. "Hospital Market Concentration, Pricing, and Profitability in Orthopedic Surgery and Interventional Cardiology." *The American Journal of Managed Care*, 17(6):e241-8, 2011.

10 U.S. Federal Trade Commission and Antitrust Division of the Department of Justice. "Statement of Antitrust Enforcement Policy Regarding Accountable Care Organizations Participating in the Medicare Shared Savings Program." Washington, DC: Federal Trade Commission and Department of Justice, October 2011.