



## ***Hospital Mergers, Competition, and Health Care Costs***

***By David G. Anderson, PhD***

***May, 2024***

### ***Executive Summary***

Antitrust enforcement of hospital mergers by regulators has become much more assertive under the leadership of Lina Khan at the FTC, Jonathan Kanter at the Department of Justice, and some states' attorneys general. This paper reviews research and microeconomic theory related to hospital mergers, concluding that this change in enforcement philosophy will likely be detrimental to the nation's hospital care for three reasons:

1. Mergers are important strategies hospital systems use to achieve economies of scale. While they don't always reduce costs and/or improve quality, it is difficult to imagine achieving these goals with a fragmented delivery system.
2. While most hospital mergers do result in higher prices for insurers and employers, the application of "consumer welfare" standards and a "rule of reason" approach to regulation has been effective at curbing post-merger price increases, with the result that most are modest (5-10%), and their collective impact on overall health care costs is small.
3. Hospitals face substantial buyer power from price-controlled government programs and concentrated health insurers. In this context, economic efficiency is best achieved when hospitals can exert countervailing market power to balance the buyer power of insurers.

### ***Background***

Public opinion is notoriously fickle. Hospitals and health systems that were praised for their responsiveness and resilience fighting COVID-19 are now being widely condemned for high costs, opaque pricing, and mediocre quality.<sup>1</sup> Hospital mergers are a particular focus of concern. Many economists and health policy experts blame hospital mergers for contributing significantly to America's high health care costs, arguing that:

- Hospital costs are the largest component of US health care costs and are rising faster than most other components.<sup>2</sup>

- The pace of hospital mergers in the US has accelerated over the past three decades.<sup>3</sup>
- Hospital mergers raise prices for private insurers,<sup>4</sup> and concentrated hospital markets have higher prices than unconcentrated markets.<sup>5</sup>
- Evidence that hospital mergers improve quality of care is equivocal.<sup>6</sup>

Hospital mergers are unpopular with the public because they sometimes result in hospital closures, conversions into sub-acute facilities, or other cuts in service. And since hospitals in low-income urban and rural areas are less profitable than hospitals in higher-income areas, these underserved communities suffer more closures and conversions, potentially increasing health care disparities.

Since the 1970s, the Federal Trade Commission (FTC) and Department of Justice (DOJ) have been applying a “consumer welfare” standard and “rule of reason” approach to regulating mergers, guided by court decisions and the opinions of influential jurists like Judge Robert Bork.<sup>7,8</sup> Using this approach, the FTC evaluates mergers on a case-by-case basis to determine whether their economic consequences are likely to harm consumers. In general, if consumers are not expected to be harmed, antitrust agencies do not act.<sup>9</sup>

During the 1990s and early 2000s, the FTC contested a number of hospital mergers but had relatively little success convincing courts to declare them anticompetitive.<sup>10</sup> By 2010 or so, however, as evidence of post-merger price increases mounted and new methodologies were developed to measure bargaining leverage (e.g., “willingness to pay – WTP” metrics),<sup>11</sup> this pattern changed, and the FTC’s success rate improved, with the FTC winning six of eight merger challenges between 2008 and 2016.<sup>12</sup>

Antitrust actions against hospital mergers declined during the Trump administration, but the Biden administration’s appointments of Lina Khan as FTC Chair and Jonathan Kanter as Assistant Attorney General for DOJ’s Antitrust Division have reinvigorated enforcement. The Khan / Kanter regime has also changed the nature of antitrust enforcement, downplaying the consumer welfare / rule of reason approach and reviving the early twentieth-century progressive-era view that “great industrial consolidations are inherently undesirable, regardless of their economic results.”<sup>13,14,15</sup>

It is unclear how this aggressive regulatory stance will play out in the courts, but it has caused many hospitals that invested substantial time and money planning the integration of their businesses to abandon their efforts. Examples of hospital merger discussions terminated since 2020 because of challenges from the FTC / DOJ or state attorneys general are shown in Table 1.

Table 1. Hospital Mergers Abandoned since 2020 (partial list)

Year	State	Party A	Party B
2020	NJ	Hackensack-Meridian Health	Englewood Health
2020	TN	Methodist Le Bonheur	Saint Francis Health
2019-22	NH	Dartmouth Health	GraniteOne Health
2022	NJ	RWJ Barnabas	St. Peter's Healthcare
2022	UT	HCA	Steward Healthcare
2022	RI	Lifespan	Care New England
2021-23	NY	SUNY Upstate	Crouse Hospital
2022-23	MN/SD	Fairview Health System	Sanford Health
2023	CA	John Muir Health	San Ramon MC – Tenet
2023	CA	Trinity Health	Madera Community Hospital
2024	NC	Novant Health	Community Health Systems

Aggressive antitrust enforcement by regulators has undoubtedly discouraged many other hospitals from pursuing mergers.

### ***A Different Perspective***

This paper argues that regulators' efforts to apply progressive-era antitrust regulations to hospital mergers are misguided. The idea that hospitals are monopoly "trusts" that can reduce output and earn monopoly rents is a one-sided view of competition that ignores the realities of most hospital markets.

Most hospitals today are "caught between a rock and a hard place": They face daunting buyer power, with government-funded programs like Medicare, Medicaid, CHIP, and public exchanges accounting for nearly half their revenue. For rural hospitals, government programs' share of revenue can approach 70%. Government reimbursement rarely covers the full cost of services, and, as a result, hospitals are forced to either cross-subsidize government patients by raising prices to private insurers or cut services, for example by closing money-losing hospitals.<sup>i,16</sup> In addition, private insurers ride on government coattails

---

<sup>i</sup> The difference in reimbursement between government and private employers is substantial. A 2016 Rand Corporation study commissioned by the Employers' Forum of Indiana found that on average employers paid hospitals 2.7 times the amount Medicare would have paid for the same services. And privatization of government reimbursement through Medicare Advantage or managed Medicaid doesn't help. Reimbursement to hospitals from these plans is similar to government reimbursement. So far, employers in most metro markets have been willing to pay higher rates in order to

by administering government programs directly (Medicare Advantage and managed Medicaid), using CMS pricing methodologies, regulations, etc.

In addition to formidable buyer power, hospitals also face concentrated factor markets controlled by monopoly unions, large pharmaceutical, medical device, and equipment manufacturers, and consolidated physician groups who compete for their most attractive business. It's not a fair fight, as the relative profitability of insurers and hospitals illustrates.<sup>ii</sup>

### ***Business Goals of Mergers***

Mergers are important business strategies for hospitals to achieve economies of scale, enhance clinical care, further the interests of their business partners, transform their business models, counter buyer and factor market power, and improve their financial performance. And mergers are especially important when top-line revenue growth is stagnant, which, with the brief exception of COVID relief funds, has been the case for hospitals in recent years.<sup>17,18</sup>

Hospital system executives pursue mergers to achieve important business goals:<sup>19,20</sup>

- *Improving operating efficiency* by reducing overhead costs, standardizing clinical and administrative processes, negotiating lower rates from suppliers, and improving patient access. In one study by Charles River Associates (CRA), hospital system executives reported merger-related savings of 3-5% of total operating costs, with some mergers saving considerably more.<sup>21</sup> Several other studies have found significant cost savings following mergers. Schmitt (2017), for example, found cost savings of 4-7% in a sample of hospital mergers from 2000-10.<sup>22</sup> While these cost savings are not automatically passed on to insurers or patients, over time, where competition exists, lower costs generally result in lower prices.

As detailed in Appendix A, the potential benefits of mergers are greatest for hospitals that are geographically proximate. In 2023, the FTC contested a proposed merger between Crouse Hospital and SUNY Upstate Medical Center in Syracuse, NY, causing the parties to withdraw their application for a "Certificate of Public Advantage (COPA)", which would have permitted the State of New York to protect the merger from federal antitrust action.<sup>23,24</sup> (As a federal agency, the FTC generally doesn't like COPAs.<sup>25</sup>) The two hospitals are so physically close that they share some walls, and this was their second attempt to merge. One goal of the merger was to finance the replacement of two different EMRs with a single, integrated EMR, which would have helped both hospitals deliver more efficient patient care. Given their proximity, many other benefits could undoubtedly have been realized.

- *Improving quality of care*. While quality is often cited as a merger goal, research on the effect of mergers on clinical quality is equivocal, partly because of the variety of

---

maintain acceptable service levels, but the continued growth of government funding is beginning to upend this.

<sup>ii</sup> See profitability analysis below.

metrics used in different studies, and partly because of weak effects. A study by Deloitte found that while most quality metrics didn't change following acquisition, % of patients given beta-blockers increased and readmission rates for hip and knee replacement patients decreased in acquired hospitals.<sup>26</sup> On the other hand, self-reported patient experience ratings decreased. A similar decline in patient experience (HCAHPS measures) was reported by Beaulieu et al. (2020), which found no significant change in mortality or readmission rate.<sup>27</sup> A follow-up study by CRA with two additional years of data (May et al, 2021) found small improvements in readmission rates and a composite readmission / mortality outcome measure following mergers.<sup>28</sup> Kessler & McClellan (1999), however, found that cardiac patients treated by hospitals in the highest quartile of market concentration had higher mortality than patients treated by hospitals in the lowest quartile.<sup>29</sup>

One indisputable aspect of quality of care is access, and maintaining convenient access to facilities is important to reducing racial and ethnic disparities in underserved urban and rural communities. Mergers can sometimes prevent hospital closures, and in a recent case, a “failing firm” argument was used by a district court judge to deny the FTC’s motion to enjoin a proposed acquisition of two rural medical centers from Community Health Systems by Novant Health.<sup>30</sup> This case, however, was reversed on appeal, causing the principals to abandon the deal, which will likely result in the closure of one or two hospitals.<sup>31</sup>

- Accessing capital and utilizing it more efficiently. Larger hospital systems, like any business, can access capital at lower cost than smaller hospital systems. In the current “negative outlook” financial environment, multi-hospital systems are less likely than stand-alone hospitals to have their debt downgraded.<sup>32</sup> Mergers also enable hospital systems to avoid duplicative capital expenditures they would normally make to compete with each other.
- Enhancing marketing. Building a brand that attracts consumers is expensive. Mergers provide a three-fold benefit to brand-building: (1) an expanded “footprint,” including the ability to attract patients from further away to larger, consolidated centers of excellence; (2) economies of scale in marketing activities (staff, promotion costs, etc.); and (3) publicity generated by the merger itself.
- Enabling transformation. Today’s hospitals are transforming themselves in many ways. One important example is automating their operations by installing electronic health records (EHRs) across the enterprise, now a national requirement. Installing an EHR or converting from one EHR to another is extraordinarily expensive, and many stand-alone hospitals can’t afford to invest in the EHR systems they need to continue providing high quality care. Many mergers and acquisitions are motivated in part by the financial burden of installing EHRs – e.g., the Crouse / SUNY Upstate merger discussed above or the recent acquisition of Yakima Valley Memorial Hospital by MultiCare, where MultiCare committed \$11.5 million to install a new EHR.<sup>33</sup>

Another dimension of hospital system transformation is participating in “value-based care,” as envisioned in the Affordable Care Act and promoted by CMS’ Innovation Center. Taking financial risk for defined populations is a fundamental change to hospital business models, requiring hospitals to invest in new care management infrastructure, extend relationships with patients beyond their “four walls,” and restructure relations with their medical staffs, which are increasingly organized. Furthermore, it puts them in competition with large regional and national insurers. Stand-alone hospitals and even small hospital systems are challenged to transform themselves on their own. Mergers can provide the resources and scale hospitals need to make these changes.<sup>34</sup>

In the future, hospitals will need to transform their organizations once again to implement artificial intelligence (AI). While AI may ultimately enable cost savings, they will likely require initial capital outlays similar to EHRs, that hospitals will need to fund.

Of course, hospital executives may have other goals in mind when they initiate merger discussions. They may want to build a stronger competitive position to enable them to raise prices. In the Evanston Northwestern – Highland Park Hospital merger, for example, executives talked about “strengthening negotiating capability” and “building negotiating strength with payers.”<sup>35</sup> They may also want to boost their personal compensation, since executive compensation is usually related to the size of the entities they are leading.

Executives may also be wrong about the benefits and costs of a merger. The economies they envision may not be realized. Their ability to attract incremental patients to consolidated clinical services may be illusory. Key executives and/or physicians may leave for better opportunities. The uncertainties and challenges of post-merger integration are well documented.<sup>36</sup>

None of these arguments, however, refutes the potential for mergers to create economic value. The FTC and some courts have argued that hospitals should be able to achieve business goals without merging, and they routinely ask hospitals to demonstrate why a merger is essential to achieving them. This is inherently difficult, since it requires ruling out many other alternative paths to these goals. But mergers are expensive, disruptive, and politically risky for hospital system executives, and it seems unlikely they would pursue them without believing they would achieve these business objectives.

### ***Price Effects of Hospital Mergers***

The research on hospital mergers by economists and health policy researchers is vast, much of it aimed at assessing their effect on consumer welfare.<sup>37</sup> Because the evidence that mergers improve quality of care is weak, consumer welfare is usually defined by the cost of hospital services – i.e., hospital prices.

Research on the effect of hospital mergers on price is extensive, and some key themes are summarized in Appendix A. In general, hospital mergers result in about 5% higher hospital prices, although the variation is substantial.<sup>38</sup> An example of an anti-competitive merger is



the merger between Evanston Northwestern and Highland Park Hospital.<sup>39</sup> In that case, a detailed *ex post* assessment by the FTC revealed that hospital prices rose substantially following this merger. Unfortunately, by the time the court ruled, the merger had already been consummated, and the remedy was a consent decree curtailing joint contracting, a remedy that has since been largely discredited. This case clearly illustrates the potential for some mergers to harm consumers.

The aggregate effect of mergers on health care costs, however, is “modest, but not trivial,” in the words of one group of researchers.<sup>40</sup> This is because: (1) the number of hospital mergers is small relative to the large base of hospitals in the US; and (2) antitrust regulators have disallowed most mergers with great potential to raise prices.

On the first point: The US has more than 5000 short-term acute care hospitals, over 1000 of which are critical access hospitals in rural areas (i.e., government-sanctioned monopolies).<sup>iii,41</sup> The average number of short-term acute care hospital mergers from 1990 to 2003 was 42 per year,<sup>42</sup> and the average number of mergers from 2007-11 was 73 per year.<sup>43</sup> More recently, pre-COVID, the number of mergers averaged about 100 per year.<sup>44</sup>

Excluding critical access hospitals and assuming 100 mergers per year, if the average merger increased prices by 10% over a decade for three times as many hospitals as are directly involved, to account for indirect market effects, mergers would have increased the overall cost of the hospital sector by 0.8% per year. Since hospitals make up about 1/3 of total health care costs, this would increase health care costs by 0.27% per year or 2.7% per decade, other things equal. From 2011 to 2021, per capita health care costs rose by 50%, so hospital mergers would have accounted for about 5% of this growth. This is slightly higher than Town, et al.’s finding that HMO premiums were 3.2% higher in the 1990s than they would have been absent any hospital merger activity.<sup>45</sup>

The other reason hospital mergers have modest effects on health care costs is the efforts regulators have made to contest anti-competitive mergers that clearly reduce consumer welfare. The FTC / DOJ Horizontal Merger Guidelines (2010) state that every merger in moderately or highly concentrated markets that increases HHI by 200 points or more is subject to review.<sup>46</sup> While most mergers that hit this screen are unlikely to harm consumers, some are, and these are the ones the FTC has frequently contested, and in some cases disallowed.<sup>47</sup>

### ***Hospital Concentration Effects***

A related issue is the effect of hospital concentration on health care costs, whether caused by mergers or not. This involves two distinct questions: (1) how consolidated are hospital markets? and (2) what is the relationship between hospital concentration and prices?

As detailed in Appendix A, the literature on hospital concentration – which Town et al. (2006) call “structure-conduct-performance research” – is extensive, conducted by many of

---

<sup>iii</sup> 3,876 short-term acute care hospitals + 1,357 critical access hospitals as of 1/1/23, according to Definitive Healthcare.

the same researchers. As with hospital mergers, this research generally shows that hospital prices are higher in more concentrated hospital markets.<sup>48</sup> However, as with hospital mergers, the magnitude of this price effect on health care costs is modest: 1-2% of total costs. And while hospital consolidation is increasing, the trend is gradual. There is considerable stability in market concentration over time, and dramatic market movements are infrequent. Furthermore, most increases are at low levels of concentration, where it is likely to have less impact on hospital prices than in highly concentrated markets.

### ***Hospital Market Structure***

Hospital services are sold to government agencies and private health insurance buyers. Nationally, private health insurance is not concentrated: The largest national health insurer, UnitedHealth Group, has about 24 million members, or 13% market share, and the top five insurers together have about 42% share of the national market.<sup>iv</sup> However, insurers have been consolidating rapidly, including many not-for-profit Blue Cross plans that have endowed multi-billion-dollar foundations in order to convert to for-profit entities and merge with each other. (A recent example is Blue Cross Blue Shield of Louisiana's on-again, off-again effort to merge with Elevance Health.<sup>49</sup>)

At the State level, however, insurers are quite concentrated. A recent study by the AAMC's Research and Action Institute found that on average the top three insurers have 82% share of members in states they studied, while the largest hospital systems have 43% share of inpatient discharges in these states.<sup>50</sup>

In any case, health insurance is bought locally, and most metro markets, except the very largest (Los Angeles, Chicago, New York), are **bilateral oligopolies**,<sup>51</sup> with a small number of health plan buyers purchasing health care services from a small number of hospital system sellers.<sup>52,53, 54,55,56,57,58</sup> High buyer and seller concentration is reflected in the intense negotiations that take place between hospital systems and health plans when hospital contracts come up for renewal.

### ***Microeconomic Foundations***

The analytical basis of antitrust regulation is microeconomic models of monopolies (a single seller facing multiple buyers) and monopsonies (a single buyer facing multiple sellers). In a monopoly, the monopolist (seller) restricts supply – of hospital beds in this case – below the competitive equilibrium, in order to raise prices and increase marginal revenue. In a monopsony, the monopsonist (buyer) reduces purchases of hospital beds below the competitive equilibrium, in order to keep costs down. In both cases, the volume of transactions is less than optimal: the economy suffers a “dead-weight loss,” and either the monopolist or monopsonist benefits, to the detriment of the other party and the economy as a whole.

---

<sup>iv</sup> These statistics include all lines – commercial, Medicare Advantage, Medicare Supplemental Insurance (i.e., “Medigap” plans), and Medicaid Managed Care



As described above, however, most hospital markets are neither monopolies nor monopsonies. They are bilateral oligopolies, which take on characteristics of bilateral monopolies, as implied by Michael Porter’s theory of “competitive advantage”<sup>59</sup> and Oliver Williamson’s “markets and hierarchies” framework.<sup>60,v</sup> In bilateral monopolies, both parties have an incentive to negotiate a “fair” price that enables each party to maintain the volume of services produced near the competitive equilibrium and recapture some portion of deadweight loss as consumer and/or producer surplus.<sup>61</sup> The outcome is indeterminate and dependent on negotiation between powerful buyers and powerful sellers. Appendix B illustrates this graphically.

Relatively few hospital mergers appear to cause a deadweight loss for the economy. Town et al. (2006) estimated that higher hospital prices reduced consumer surplus by \$42B from 1993-2003.<sup>62</sup> However, they also found that the deadweight loss was only \$95M, less than 1% of the total. Almost all the loss was transferred to producer surplus, where it was presumably used to fund hospital capital investment and/or operations, not enrich owners, since most hospitals are not-for-profit enterprises.

### **Buyer Power**

As Carstensen and others have observed, at any level of concentration buyers have inherent advantages over sellers.<sup>63</sup> Buyers decide what services to buy and whom to buy them from. As managed care replaced indemnity insurance in the 1980s and 1990s, health insurers developed tools to channel patients to lower cost providers, and this has proved to be their most effective way of controlling hospital prices.<sup>64</sup> The public exchanges created by the ACA have encouraged insurers to develop “narrow network” plans that exclude high-cost, high-quality hospitals like PPS-exempt cancer centers (e.g., MD Anderson Cancer Center). So far, most large employers have been unwilling to restrict provider networks for their employees, but many are offering narrow network options, and some employees are choosing them, especially if they qualify for public subsidies.

Sellers inherently have fewer choices than buyers. This is especially true of hospitals, relative to insurers. Because of their high fixed costs, hospitals can’t easily choose to exclude insurers, as long as revenue covers variable costs. Even though most hospitals lose money on Medicare and Medicaid patients, very few have been willing to stop accepting public insurance, and some of those that have tried have been badly burned.<sup>vi</sup>

---

<sup>v</sup> Both frameworks analyze the effects of small numbers of buyers or sellers on market dynamics, and both depict their effects as similar in some respects to monopolies or monopsonies. To simplify, Porter sees small numbers of firms relative to more numerous customers or suppliers as a source of competitive advantage for these firms, while Williamson sees small numbers as potential market failures where hierarchies may have a comparative advantage.

<sup>vi</sup> Hospitals without Medicare contracts are rare, but a growing number of physicians limit the number of taxpayer-funded Medicaid and Medicare patients they treat, and many no longer accept “Medicare assignment” – i.e., they are non-participating providers for original Medicare and can charge higher prices. Physicians have greater ability to turn away Medicaid and Medicare patients than hospitals because they have fewer economies of scale and are in short supply in many markets.

Insurer-buyers can easily integrate backward into care delivery, but hospital-sellers face significant obstacles integrating forward into health insurance. Insurers can use their substantial premium dollars to acquire hospitals and/or physician practices. While relatively few insurers have chosen to acquire hospitals – perhaps because of their low margins – many have been aggressively acquiring physician practices over the past few years. Insurers have a competitive advantage over hospitals in acquiring physician practices, since the prices hospitals can pay for them is limited by HHS’ “anti-kickback” statutes, which don’t apply to insurance companies. OptumCare, a division of United Healthcare, is now the largest employer of physicians in the country.

Hospitals, on the other hand, have difficulty integrating forward into health insurance. Starting up insurance plans requires building or buying expensive care management and claims processing infrastructure, developing contracts with employers, building relationships with regulators, and competing with existing insurers in concentrated markets. Insurers are also required to set aside substantial risk-based capital to ensure long-term financial solvency of the plans. All this takes substantial capital and management talent. Some hospital systems – e.g., Intermountain, Geisinger, Henry Ford, Providence, Sentara – have developed successful regional insurance plans. But even though CMS has aggressively promoted provider risk-sharing through their “value-based care” programs, most hospital-sponsored networks and health plans have had difficulty competing with large, national insurers.<sup>vii</sup>

Beyond insurers’ basic need for inpatient services, hospitals’ main leverage points are their relationships with physicians and their consumer brands. These assets, however, don’t help with Medicare and Medicaid and don’t take them far with large national and regional insurers, especially if these insurers own physician practices in their markets.

### ***Effects of Buyer Power***

Without a doubt, buyer power has been responsible for many health care innovations that have benefited consumers by reducing the cost of care. Pressure on inpatient rates has forced hospitals to reduce average length of stay and shift inpatient care to outpatient care. Less expensive forms of inpatient care have been developed – e.g., inpatient rehabilitation units and “distinct part” skilled nursing facilities. More recently, investors have developed “hospital at home” delivery models to treat serious conditions like COPD and CHF at home. Insurers are imposing “site of service” restrictions on outpatient treatments, directing patients away from hospital-owned outpatient centers to less expensive physician-owned centers. (Medicare has tried to do the same, but political pushback has slowed its progress.)

At some point, however, once buyer power has cut out the fat, it begins to eat into muscle, and this boundary has been crossed in many metro markets. Just as sellers with substantial market share can act like monopolists, buyers with substantial share can act like

---

<sup>vii</sup> Kaiser Permanente is the only large hospital system with a fully integrated health plan, but they started as a prepaid health plan that owned hospitals and a physician group practice.

monopsonists. And because most urban hospital markets are dominated by government buyers and one or two large private insurers, even if hospitals have significant market share, they are often price takers.

The effects of excessive buyer power are similar to the effects of price controls:

- Lower hospital margins, which can force cutbacks in capital investment and services. Where factor markets are concentrated, as with nursing unions, hospital margins are most at risk.
- Closures of marginal hospitals. Inner city and rural hospitals feel the greatest pricing pressure because they are more dependent on Medicare and Medicaid and have more uninsured indigent patients. As a result, many inner city and rural hospitals have closed or been converted into subacute facilities or outpatient clinics over the past two decades.<sup>65</sup>
- Service shortages relative to what an efficient market would provide. Over-crowded emergency rooms, shortages of hospital beds, patients in hallways, difficulties in getting physician appointments, and the like are becoming more common, especially for hospitals with large numbers of taxpayer-funded Medicare and Medicaid patients.
- Below-market rates for factors of production, including labor. Once hospital efficiencies are exhausted, buyer power propagates pricing pressure across the hospital value chain, forcing factors of production (doctors, nurses, device manufacturers, drug companies, etc.) to accept lower prices than they would normally be paid in a competitive market. This in turn creates incentives for suppliers to consolidate and employees to unionize to protect their share of health care dollars.

In addition, buyer power enriches buyers and impoverishes sellers, which is evident in the financial performance of insurers and hospitals. Large health insurers have performed exceptionally well over the last decade.<sup>66</sup> From 2012 to 2022, total earned premiums for US health insurers grew 231% to \$1.0T, and average return on equity over the decade was 12.4%.<sup>67</sup> For the five largest publicly traded health insurers<sup>viii</sup>, total earned premiums exceeded \$600B in 2022. From 2018-2022, total revenue for these five insurers grew 166% to \$1.0T, net income grew 192% to \$34B, and the annual rate of return on a capitalization-weighted investment in these five stocks over this period exceeded 13%. As of July 2023, the aggregate market capitalization for these five companies was \$770B.

This stellar performance contrasts sharply with the mediocre financial performance of the largest hospital systems. Excluding Kaiser Permanente, which combines a health insurer and a provider system, total revenue for the five largest hospital systems<sup>ix</sup> in 2022 was \$176B, about 17% of total revenue for the five largest health insurers. Four of the five

---

<sup>viii</sup> UnitedHealth Group, Elevance Health (formerly Anthem), CVS / Aetna, Humana & Centene Corporation.

<sup>ix</sup> HCA Healthcare, CommonSpirit Health, Advocate Health (including Atrium Health), Ascension, and Providence St. Joseph Health

largest hospital systems had operating losses in 2022, and aggregate operating income for all five was \$5B. Total net income in 2022, including investment losses, was a loss of \$6B.

### ***Countering Buyer Power***

Mergers enable hospitals to employ countervailing market power to create a competitive balance with private insurers. Without this, hospitals in metro markets will not earn enough producer surplus to compensate for low price-controlled government rates. They will limp along with low margins, as most do now, or they will close, as both St. Vincent's and Beth Israel hospitals in downtown New York City and many other hospitals have in recent years.

In their 2004 report promoting competition in health care markets, the FTC and DOJ dismiss the idea that health insurer buyer power reduces consumer welfare because “the available evidence does not indicate that there is a monopsony power problem in most health care markets” and “even if it were assumed that providers confront monopsony health plans, the Agencies do not believe that allowing providers to exercise countervailing power is likely to serve consumers' interests.”<sup>68</sup>

Though consistent with antitrust doctrine, this position is inconsistent with the reality hospitals face in most metro markets. Markets with concentrated insurers do in fact constrain hospital prices.<sup>69,70,71</sup> These researchers interpret their findings as showing that concentrated insurers reduce the ability of hospitals to realize above-market rents, dismissing the idea that high payer concentration may force hospitals to accept below-market prices. A few studies support this argument by showing that increases in insurer concentration stimulate more, not fewer hospital services.<sup>72,73</sup> These effects, however, are weak.<sup>x</sup>

### ***Antitrust Policy Implications***

Hospital mergers call into question the basic tenets of antitrust law and regulation. The purpose of the two century-old laws that US antitrust regulation is based on – the Sherman Act of 1890 and the Clayton Act of 1914 – is to protect and promote competition, a worthy policy goal. But promoting competition is not always achieved by a strict application of consumer welfare principles, defined by price effects, especially where government is a

---

<sup>x</sup> Both studies (Bates & Sancerre, 2008 and McKellar, et al., 2014) are cross-sectional regression analyses, making it impossible to rule out alternative factors the authors might have missed. The output effects found in both studies were relatively weak. Of Bates & Sancerre's four output measures, only two showed statistically significant positive effects (one in each of two regressions). Furthermore, the magnitude of increases was small: A 10% increase in HMO concentration was associated with an increase of 3 patients per day, and a 10% increase in PPO concentration was associated with an increase of 9 outpatient visits per day. McKellar et al.'s study found that a 50% increase in payer concentration (from 3 to 2 insurers) was associated with 1.2% higher utilization. Hospitals facing powerful pricing pressure from government payers for nearly half of their business are heavily dependent on business from any private insurer, even a relatively low-priced one. It is unlikely that increased buyer concentration would cause them to turn away profitable private business even if margins were lower.

major buyer that controls prices. At a minimum, we should return to the consumer welfare standard and rule of reason approach to regulating hospital mergers. As Judge Bork has observed, preventing large companies with scale economies from displacing smaller companies often reduces consumer welfare.<sup>74</sup>

Some observers, including one former FTC commissioner (Christine Wilson), have gone further, suggesting that “total welfare” – the inverse of deadweight loss – should be considered an alternative to consumer welfare in judging mergers,<sup>75</sup> although this isn’t supported by current antitrust law.

For hospitals, with such a large government presence and strong buyer power, there is certainly reason to consider producer welfare as well as consumer welfare. Consumers will benefit if antitrust efforts are aimed at enhancing the competitive balance between hospitals and buyers in ways that allow hospitals to maintain quality services. In some cases, mergers that clearly reduce consumer welfare should be proscribed. In other cases, however, mergers should be allowed even if they enable hospitals to raise prices modestly. In the short run, flexible application of rules of reason, such as the “failing or flailing firm” exemption, can avoid decisions that reduce seller concentration but harm competition. In the long run, antitrust law needs to be replaced by pro-competition law for this sector.

## ***Appendix A: Research on Hospital Mergers & Concentration***

### ***Price Effects of Hospital Mergers***

A survey by Town, et al. (2006) summarized results of merger studies conducted in the 1990s as follows: “Research suggests that hospital consolidation in the 1990s raised prices by at least five percent and likely by significantly more.”<sup>76</sup> A variety of merger case studies – what Vogt & Town called “event studies” – such as the Evanston Northwestern – Highland Park merger have documented long-term price effects.<sup>77</sup> Capps & Dranove studied 12 hospital mergers between 1998 and 2000, and found a wide range of price increases – from zero or negative effects to an excess price change effect of 66% for one merger.<sup>78</sup> The average price increase over the nine mergers they studied, however, was 5%. And this study had selection bias since the authors excluded mergers in markets whose Hirschman-Herfindahl Index (HHI) increased less than 0.1 (1,000 points).

A novel study by Dafny studied the effects of mergers on rival hospitals’ prices and found a long-term effect of 35-46%.<sup>79</sup> This study, however, used estimates of inpatient prices obtained from Medicare data and adjusted for Medicare case-mix index, which is not a very accurate control for patient acuity. (For example, it excludes obstetric service volume, which can have a significant effect on revenue per discharge.)

A meta-analysis of ten merger studies in the early 2000s by Gaynor & Town (2012), like Capps & Dranove’s study, also found a wide range of merger effects.<sup>80</sup> A survey of 26 hospital mergers conducted by Christopher Garmon when he was at the FTC found that post-merger price increases relative to a control set of peer hospitals varied widely, but the overall average increase was 4.7%.<sup>81</sup>

A more recent article by Cooper, Craig, Gaynor & Van Reenen (2019), using a more up-to-date database of payer-provider contract prices, showed a 6% impact on price for mergers of hospitals within five miles and a 2% impact for mergers outside the 5-mile radius but within twenty-five miles.<sup>82</sup> This reinforces Dafny (2009)’s finding about the importance of proximity, although Dafny’s study implied larger price effects.<sup>83</sup>

### ***Effects of Concentration on Hospital Prices***

Another stream of research – Vogt & Town (2006)’s “structure-conduct-performance (SCP)” research – attempts to relate hospital market concentration to hospital pricing. As they note, this research has also documented effects, but these are smaller than the effects found in event studies. As they say, “According to the strongest SCP literature, inpatient prices increased five percent in the 1990s due to hospital consolidation.”<sup>84</sup> Factors that influence price increases include:

- The base level of hospital concentration – higher base levels of concentration have greater price effects<sup>85</sup>
- Proximity of the merging hospitals – closer hospitals have greater price effects<sup>86</sup>
- Buyer concentration in the health insurance market – more concentrated insurance markets mitigate hospital price increases<sup>87, 88, 89, 90, 91, 92</sup>



More recent research suggests that by the 2010s, the effect of mergers on prices may have moderated, perhaps because of regulatory pressure. The Health Care Cost Institute (HCCI) has assembled two different databases of commercial payments to hospitals from private insurers over the past decade that are useful in estimating changes in hospital market concentration over the last decade:

- Database #1 reports data from Aetna and several other insurers in 112 MSAs from 2012-16. This database was used by Cooper, et al. (2019).
- Database #2 reports data from United HealthCare in 186 MSAs from 2016-20.

In database #1, 67% of MSAs were highly or very highly concentrated in 2012 and 73% were highly or very highly concentrated in 2016.<sup>xi</sup> In database #2, 62% of MSAs were highly or very highly concentrated in 2016 and 68% were highly or very highly concentrated in 2020. The average concentrations in both these databases are lower than Fulton's, probably because the number of MSAs is smaller, the average size of the MSAs is larger, and larger MSAs are less concentrated than smaller MSAs.

Gaynor, Ho & Town (2015) found that 65% of Metropolitan Statistical Areas (MSAs) were highly concentrated in 1990, and this share had increased to 77% by 2006.<sup>93</sup> Using a more complete database that included all 382 MSAs containing 86% of the U.S. population, Fulton reported that 87% of markets were highly concentrated in 2010, and this grew to 90% by 2016.<sup>94</sup> These %s sound high, but a "highly concentrated" market with an HHI of 2500 would be produced by four hospitals with equal market shares. Cooper, et al. (2006) has shown that this level of market concentration is unlikely to produce anti-competitive effects.<sup>95</sup> [See below.]

How often do markets move into higher concentration categories? The answer is not very often. Only 4% of highly concentrated markets in the 2012-16 HCCI database became very highly concentrated over these four years, and only 2% of highly concentrated markets in the 2016-20 HCCI database became very highly concentrated. Furthermore, these upward shifts were more than balanced by downward shifts in both databases. 16% of very highly concentrated markets became highly concentrated in the 2012-16 database, and 10% of very highly concentrated markets became highly concentrated in the 2016-20 database.

At lower levels of concentration, this pattern shifted. 15% of moderately concentrated markets became highly concentrated in the 2012-16 database, and 13% of moderately concentrated markets became highly concentrated in the 2016-20 database. The % of moderately concentrated markets that shifted down into unconcentrated markets in both databases was only 2-3%.

---

<sup>xi</sup> In their 2010 merger guidelines, DOJ/FTC considered markets with HHIs > 2500 to be highly concentrated, and markets with HHIs > 5000 to be very highly concentrated. In their recently published 2023 merger guidelines, DOJ/FTC reduced the HHI threshold for highly concentrated markets to > 1800 and now considers markets with HHI > 2500 to be very highly concentrated. The text here refers to the 2010 definitions.

Combining these studies, the average annual increase in the number of highly concentrated markets is about 1.1% per year, with some evidence this trend may be accelerating, as shown in Table 1.

*Table 1. Hospital Concentration Trends*

Database	Beginning of Period		End of Period		% Increase / Yr
	Year	% HC Markets	Year	% HC Markets	
Gaynor, Ho & Town (2015)	1990	65%	2006	77%	0.8%
Fulton (2017)	2010	87%	2016	90%	0.5%
HCCI – Database #1	2012	67%	2016	73%	1.5%
HCCI – Database #2	2016	62%	2020	68%	1.5%
				Average	1.1%

Of course, increases in concentration can occur *within* categories as well as across categories. In both HCCI databases, concentration within categories does increase, but at a gradual average rate of 11 HHI points per year. As in the across-category analysis, increases were slightly greater at lower levels of concentration.

How important is the trend toward higher concentration in explaining increases in hospital prices? Recall that the boundary between moderately concentrated and highly concentrated markets is an HHI of 2500, which would be produced by four hospitals with equal market shares, and the boundary between highly concentrated and very highly concentrated is an HHI of 5000, which would be produced by two hospitals with equal market share – i.e., a duopoly with two similarly sized hospitals. A highly concentrated market with HHI between 2500 and 5000 is therefore less concentrated than a duopoly.

Using Health Care Cost Institute (HCCI) data from 2012 to 2016, Cooper, et al. (2019) found that hospital prices in monopoly markets were 12.5% higher and prices in duopoly markets were 7.6% higher than prices in markets with four or more competitors. (Markets with three competitors had prices that were 3.7% higher, but this difference was not statistically significant.) Weighting these price effects with the distribution of markets in Cooper et al.'s sample implies an overall concentration price effect of 4.0% across all markets.<sup>xii</sup> Since hospital costs make up about  $\frac{1}{3}$  of total health care costs, this implies that 1.3% of total health care costs can be attributed to hospital concentration. This likely overstates the effect of concentration on consumers, since the markets with the largest populations (New York, Los Angeles, etc.) are also among the least concentrated.

Overall, it seems unlikely that hospital markets that shift from moderately concentrated to highly concentrated – i.e., those that cross over the 2500 line – have significant effects on hospital prices. Markets that move from highly concentrated to very highly concentrated –

---

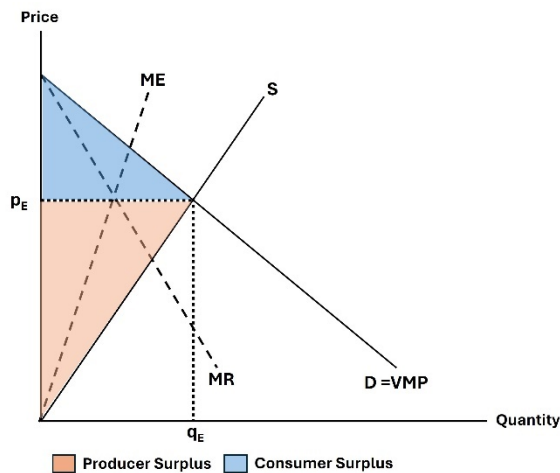
<sup>xii</sup> Cooper, et al report that 16.3% of their inpatient sample are in monopoly markets, 19.4% are in duopoly markets, and 12.3% are in triopoly markets, leaving 52.0% in markets with 4 or more competitors.

crossing over the 5000 line – are much more likely to generate uncompetitive price increases than shifts in the middle range of market concentration.<sup>96</sup>

## Appendix B: Bilateral Monopolies<sup>xiii,97</sup>

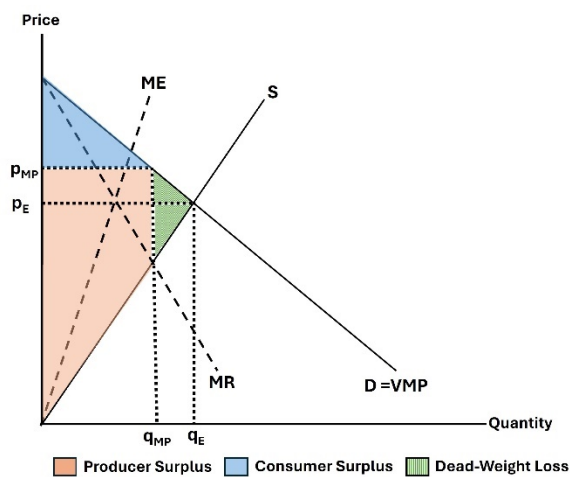
Basic microeconomic theory predicts that monopsonists will reduce prices paid to their “factors of production” to the point where marginal expenditures equal the value of their marginal product, which is less than they would have to pay in competitive equilibrium. This has a similar effect on output as the actions of a monopolist, who has an incentive to reduce the quantity of product supplied to the point where marginal cost equals marginal revenue. Both monopolists and monopsonists, for different reasons, reduce the quantity of inputs used and outputs produced below the competitive equilibrium, and in either case, total consumer and producer surplus is reduced, causing a dead-weight loss to the economy. The following charts illustrate this:

### Case 1. Perfect Competition



Under perfect competition, producers and consumers are forced to agree on a market price where the marginal cost of producing an item – say, a hospital bed-day – is equal to the value of its marginal product to consumers. The market price is  $p_E$ , the quantity produced is  $q_E$ , and there is no dead-weight loss to the economy. The distribution of producer and consumer surplus depends on the elasticity of supply and demand – i.e., the slope of the supply and demand curves.

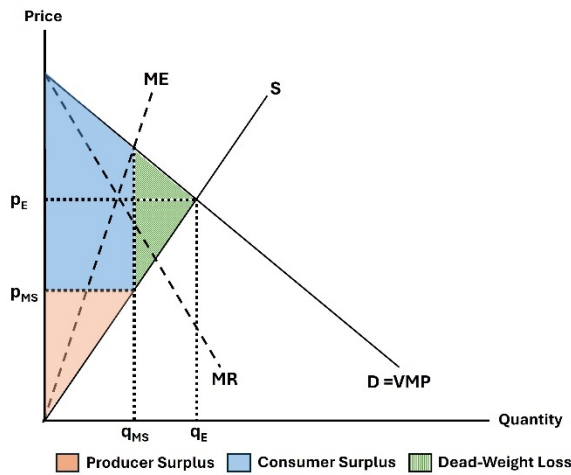
### Case 2. Monopoly



In a monopoly, the producer has an incentive to reduce the quantity of items produced to the point where his marginal revenue equals his marginal cost ( $q_{MP}$ ). As a result, consumers are forced to pay more for the item ( $p_{MP}$ ). Consumer surplus is reduced, producer surplus is increased, and the economy suffers a dead-weight efficiency loss.

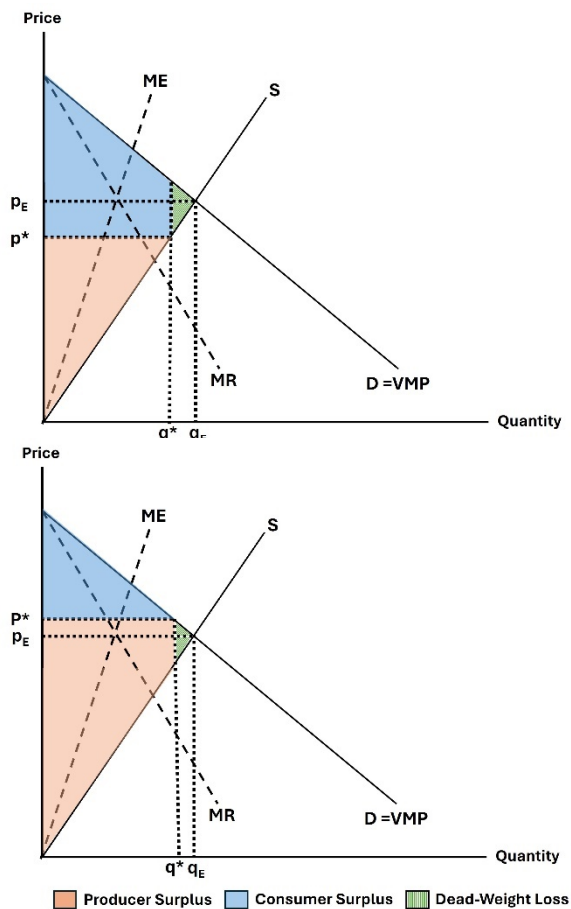
<sup>xiii</sup> This discussion was significantly aided by Blair & Wang’s discussion in their University of Miami Law Review article, 2015, previously referenced.

### Case 3. Monopsony



In a monopsony, the buyer has an incentive to reduce the quantity of items he buys from the producer ( $q_{MS}$ ) to the point where his marginal expenditure on these items equals his value their marginal product. This reduces the price he must pay the producer ( $p_{MS}$ ), forcing the producer to shut down higher cost capacity. Producer surplus is reduced, consumer surplus is increased, and the economy suffers a dead-weight efficiency loss.

### Cases 4 & 5. Bilateral Monopoly with Countervailing Market Power



In a bilateral monopoly, both the monopolist and the monopsonist have an incentive to bargain to find a price / quantity combination that increases their surplus. The outcome of this negotiation is indeterminate, and the result could be a price below the competitive equilibrium price, if the buyer is more powerful ( $p^*$  in the top chart), or above the competitive equilibrium if the seller is more powerful ( $p^*$  in the bottom chart). In either case, the market-clearing quantity ( $q^*$ ) is increased from the pure monopoly or monopsony case, and the dead-weight efficiency loss is reduced. The distribution of consumer and producer surplus depends on the relative bargaining power of the parties.

## References

- 
- <sup>1</sup> Emerson J, “Hospital Purgatory’: Confidence in healthcare plunges as criticism grows louder and larger,” *Becker’s Hospital Review*, February 6, 2023, [https://www.beckershospitalreview.com/?view=article&id=218056:hospital-purgatory-confidence-in-healthcare-plunges-as-criticism-grows-louder-and-larger&catid=31&origin=BHRE&utm\\_source=BHRE&utm\\_medium=email&utm\\_content=newsletter&oly\\_enc\\_id=3069H8047334E3B](https://www.beckershospitalreview.com/?view=article&id=218056:hospital-purgatory-confidence-in-healthcare-plunges-as-criticism-grows-louder-and-larger&catid=31&origin=BHRE&utm_source=BHRE&utm_medium=email&utm_content=newsletter&oly_enc_id=3069H8047334E3B)
  - <sup>2</sup> Hayes TO & Dixon K, “Hospital markets and the effect of concentration,” *American Action Forum* Research Report, October 8, 2019.
  - <sup>3</sup> NIHCM Foundation, “Hospital consolidation: Trends, impacts, and outlook,” <https://www.nihcm.org/categories/hospital-consolidation-trends-impacts-outlooks/>, 2020  
Kruse T, Dickinson B, Weylandt W & Trimakis A, “New IDS merger aims to improve value and access for its communities,” *HFM Magazine*, October, 2022.
  - <sup>4</sup> Vogt WB & Town RJ, “How has hospital consolidation affected the price and quality of hospital care?” Research Synthesis Report No. 9, Princeton, NJ: Robert Wood Johnson Foundation, 2006.  
Gaynor M & Town RJ, “The impact of hospital consolidation: Update,” The Synthesis Project, Princeton, NJ: Robert Wood Johnson Foundation, June, 2012.  
Campbell, T, “Defending hospital mergers after the FTCs Unorthodox Challenge to the Evanston Northwestern - Highland Park transaction,” *16 Annals Health Law*, 213, 2007, Available at: <http://lawecommons.luc.edu/annals/vol16/iss2/3> .  
Brand K, Garmon C & Rosenbaum T, “In the shadow of antitrust enforcement: Price effects of hospital mergers from 2009-2016,” National Bureau of Economic Research Working Paper, 2022.
  - <sup>5</sup> Gaynor & Town, 2012, *op cit*.  
Cooper Z, Craig S, Gaynor M, & Van Reenen J. “The price ain’t right? Hospital prices and health spending on the privately insured,” *Quarterly Journal of Economics*, 134 (1 – February), pp. 51-107, 2019.
  - <sup>6</sup> Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I, McWilliams JM. “Changes in quality of care after hospital mergers and acquisitions,” *N Engl J Med*, 382 (1), 2020:51-59.  
Casalino, LJ, “Health systems: The present and future,” *JAMA*, 329 (4 – Jan 24/31), 2023.  
Tsai TC & Jha AK, “Hospital consolidation, competition, and quality: Is bigger necessarily better?” *JAMA*, 312 (1), 2014: 29-30.
  - <sup>7</sup> Bork RH, *The antitrust paradox: A policy at war with itself*. New York: Basic Books, 1978.  
Reprinted in 2021 by Bork Publishing.
  - <sup>8</sup> US Department of Justice and Federal Trade Commission, “Horizontal Merger Guidelines,” *FTC / DOJ*, August 19, 2010. Available at: <https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf>
  - <sup>9</sup> Wilson C, “Welfare Standards Underlying Antitrust Enforcement: What You Measure is What You Get,” Address at George Mason Law Review 22<sup>nd</sup> Annual Antitrust Symposium, February 15, 2019, Available at: [https://www.ftc.gov/system/files/documents/public\\_statements/1455663/welfare\\_standard\\_speech\\_-\\_cmr-wilson.pdf](https://www.ftc.gov/system/files/documents/public_statements/1455663/welfare_standard_speech_-_cmr-wilson.pdf)
  - <sup>10</sup> Brand K, Garmon C & Rosenbaum T, “In the shadow of antitrust enforcement: Price effects of hospital mergers from 2009-2016,” *Journal of Law and Economics*, 66 (4), 2023.
  - <sup>11</sup> Gowrisankaran G, Nevo A & Town R, “Mergers when prices are negotiated: Evidence from the hospital industry,” *American Economic Review*, 105 (1 – January), 2015.
  - <sup>12</sup> Garmon, C, “The accuracy of hospital merger screening methods,” Working paper N. 326, *Federal Trade Commission*, 2016.



- 
- <sup>13</sup> *United States vs. Aluminum Corporation of America*, 148F.2d 416, 428, 429 (2d Cir. 1945).
- <sup>14</sup> Muris TJ, “Lina Khan and the FTC go back to the antitrust future,” *Wall Street Journal*, January 30, 2023, <https://www.wsj.com/articles/lina-khan-goes-back-to-the-antitrust-future-consumer-benefit-economy-courts-precedent-company-merger-acquisition-11675089139>.
- Muris TJ, “Neo-Brandeisian antitrust: Repeating history’s mistakes,” AEI Working Paper 2023-2, *American Enterprise Institute*, January, 2023
- <sup>15</sup> Ashton, F, “How to think about horizontal mergers: What’s next for FTC & DOJ Guidelines,” *American Action Forum Insight*, Nov. 22, 2022.
- <sup>16</sup> White C., “Hospital prices in Indiana: Findings from an employer-led transparency initiative,” Santa Monica: RAND Corporation, 2017, [https://www.rand.org/pubs/research\\_reports/RR2106.html](https://www.rand.org/pubs/research_reports/RR2106.html) .
- <sup>17</sup> Moody’s Investors Service, “Not-for-Profit and Public Healthcare – US: Preliminary medians - Financial performance deteriorated in fiscal 2022,” April 13, 2023.
- <sup>18</sup> S&P Global, “U.S. Not-For-Profit Health Care Midyear Update 2023: Out Of Intensive Care And On The Path To Recovery Amid Ongoing Operating Challenges,” June 28, 2023. <https://www.spglobal.com/ratings/en/research/articles/230628-u-s-not-for-profit-health-care-midyear-update-2023-out-of-intensive-care-and-on-the-path-to-recovery-amid-on-12778269>
- <sup>19</sup> Kruse, et al., 2022, *op cit*.
- <sup>20</sup> Noether M & May S, “Hospital merger benefits: Views from hospital leaders and econometric analysis,” *Charles River Associates* report to the American Hospital Association, January, 2017.
- <sup>21</sup> Noether & May, 2017, *op cit*.
- <sup>22</sup> Schmitt M, “Do hospital mergers reduce costs?” *Journal of Health Economics*, 52, March, 2017, <https://www.sciencedirect.com/science/article/abs/pii/S0167629617300930>
- <sup>23</sup> Muoio D, “FTC celebrates after SUNY Upstate, Crouse Health System scrap merger plans,” *Fierce Healthcare*, 2/17/23, <https://www.fiercehealthcare.com/providers/ftc-celebrates-after-suny-upstate-crouse-health-system-scrap-merger-plans> .
- <sup>24</sup> Federal Trade Commission, “FTC Staff Submission to the New York State Health Department Regarding the Certificate of Public Advantage Application of SUNY Upstate Medical University and Crouse Health System, Inc. (Public version – redacted)”, October 7, 2022.
- <sup>25</sup> Federal Trade Commission, “FTC policy perspectives on Certificates of Public Advantage,” FTC Staff Paper, August 15, 2022, [https://www.ftc.gov/system/files/ftc\\_gov/pdf/COPA\\_Policy\\_Paper.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/COPA_Policy_Paper.pdf).
- <sup>26</sup> Knapp C, Peterson J, Gundling R, Mulvany C & Gerhardt W, “Hospital M&A: When done well, M&A can achieve valuable outcomes,” *Deloitte Development LLC*, 2017, <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-lshc-hospital-mergers-and-acquisitions.pdf> .
- <sup>27</sup> Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I & McWilliams JM, “Changes in quality of care after hospital mergers and acquisitions,” *New England Journal of Medicine*, 382 (1), January 2, 2020.
- <sup>28</sup> May S, Noether M & Stearns B, “Hospital merger benefits: An econometric analysis revisited,” *American Hospital Association*, August, 2021.
- <sup>29</sup> Kessler DP & McClellan, MB, “Is hospital competition socially wasteful?” NBER Working Paper No 7266, July, 1999.
- <sup>30</sup> Van Voorhis L, “FTC loss in hospital merger shows failing firm defense is alive and well,” *National Law Review*, 14 (165), June 13, 2024, <https://natlawreview.com/article/ftc-loss-hospital-merger-shows-failing-firm-defense-alive-and-well> .
- <sup>31</sup> Southwick R, “Health system drops \$320M plan to buy 2 North Carolina hospitals,” *Chief Healthcare Executive*, <https://www.chiefhealthcareexecutive.com/view/health-system-drops-320m-plan-to-buy-2-north-carolina-hospitals> .
- <sup>32</sup> S&P Global Ratings, “US not-for-profit acute health care providers 2024 outlook: Historical peak of negative outlooks signals ongoing challenges,” December, 2023,

- 
- <https://www.spglobal.com/ratings/en/research/articles/231206-historical-peak-of-negative-outlooks-signals-challenges-remain-for-u-s-not-for-profit-acute-health-care-provi-12927513> .
- <sup>33</sup> Goodell E, "MultiCare Yakima Memorial Hospital looks back at 2023, shares plans to expand," *Apple Valley News.com*, May 15, 2024, [https://www.applevalleynewsnow.com/news/multicare-yakima-memorial-hospital-looks-back-at-2023-shares-plans-to-expand/article\\_826ed0ce-b4d4-11ee-8726-ab4033926ff9.html](https://www.applevalleynewsnow.com/news/multicare-yakima-memorial-hospital-looks-back-at-2023-shares-plans-to-expand/article_826ed0ce-b4d4-11ee-8726-ab4033926ff9.html) .
- <sup>34</sup> Davis KL, "Hospital mergers can lower costs and improve medical care," *Wall Street Journal*, September 15, 2014, <https://www.wsj.com/articles/kenneth-l-davis-hospital-mergers-can-lower-costs-and-improve-medical-care-1410823048> .
- <sup>35</sup> Federal Trade Commission, 2007, *op cit*.
- <sup>36</sup> Daughen JR & Binzen P, *The Wreck of the Penn Central (2<sup>nd</sup> Edition)*, Philadelphia: Beard Books, 1999.
- <sup>37</sup> See, for example, Vogt & Towne, 2006, *op cit.*, Gaynor & Towne, 2012, *op cit.*, Brand, Garmon & Rosenbaum, 2022, *op cit*.
- <sup>38</sup> See, for example, NIHCM Foundation, *op cit.*, 2020; and Hayes, TO & Dixon K, "Hospital markets and the effects of consolidation," *American Action Forum*, October 8, 2019, <https://www.americanactionforum.org/research/hospital-markets-and-the-effects-of-consolidation/>
- <sup>39</sup> Campbell T, 2007 *op cit*.  
Federal Trade Commission, "In the matter of Evanston Northwestern Healthcare Corporation (Docket # 9315): Opinion of the Commission," 2007, available at <https://www.ftc.gov/sites/default/files/documents/cases/2007/08/070806opinion.pdf>.
- <sup>40</sup> Town R, Wholey D, Feldman R & Burns LR, "The welfare consequences of hospital mergers," NBER Working Paper No. 12244, May, 2006.
- <sup>41</sup> Definitive Healthcare web site <https://www.definitivehc.com/blog/how-many-hospitals-are-in-the-us>, accessed 5/21/23.
- <sup>42</sup> Vogt & Town, 2006, *op cit*.
- <sup>43</sup> Cooper, et al., 2019, *op cit*.
- <sup>44</sup> NIHCM Foundation, 2020, *op cit*.
- <sup>45</sup> Town, et al., 2006, *op cit*.
- <sup>46</sup> US Department of Justice and Federal Trade Commission, 2010, *op cit*.
- <sup>47</sup> Federal Trade Commission, 2007, *op cit*.
- <sup>48</sup> White C, Reschovsky JD & Bond AM, "Understanding differences between high- and low-price hospitals: Implications for efforts to rein in costs," *Health Affairs*, 33 (2 – February), 2014.
- <sup>49</sup> Tepper, N, "Elevance, Blue Cross of Louisiana revive \$2.5B acquisition bid," *Modern Healthcare*, December 15, 2023.
- <sup>50</sup> Grover A, Orgera K, Pincus L, Senn S & Redford G, "Why market power matters for patients, insurers, and hospitals, *AAMC Research and Action Institute* report, May 1, 2024, <https://www.aamcresearchinstitute.org/our-work/data-snapshot/why-market-power-matters>
- <sup>51</sup> Dickson A & Hartley R, "Bilateral oligopoly and quantity competition," *Economic Theory* 52, 2013.
- <sup>52</sup> Fulton BD, "Health care market concentration trends in the United States: Evidence and policy responses," *Health Affairs*, 36(9), 2017.
- <sup>53</sup> Scheffler RM & Arnold DR, *op. cit.*, 2017.
- <sup>54</sup> Barette E, Gowrisankaran G & Town R, "Countervailing Market Power and Hospital Competition," *NBER Working Paper No. 27005*, April 2020 (rev. Sept 2020).
- <sup>55</sup> Ho K & Lee RS, "Insurer competition in health care markets, *Econometrica*, 85 (2), 2017.
- <sup>56</sup> Fronsdal TL, Battacharya J & Tamang S, "Variation in health care prices across public and private payers," *NBER Working Paper No. 27490*, July, 2020
- <sup>57</sup> Trish EE & Herring BJ, 2015, *op. cit*.

- 
- <sup>58</sup> Federal Trade Commission and Department of Justice, "Improving Health Care: A Dose of Competition," A report, July 2004.
- <sup>59</sup> Porter, ME, *Competitive advantage: Creating and sustaining superior performance*, New York, Free Press, 1985.
- <sup>60</sup> Williamson O, *Markets and hierarchies: Analysis and antitrust implications: A study in the economics of internal organization*, New York: Free Press, 1975.
- <sup>61</sup> Blair RD & Wang W, "Bilateral monopoly, two-sided markets, and the e-Books conspiracy," *University of Miami Law Review*, 69 (7), 2015.
- <sup>62</sup> Town, et al., 2006, *op cit*.
- <sup>63</sup> Carstensen PC, *Competition Policy and the Control of Buyer Power*, Northampton, MA: Edward Elgar, 2017.
- <sup>64</sup> Sorensen AT, "Insurer-hospital bargaining: Negotiated discounts in post-deregulation Connecticut," *Journal of Industrial Economics*, 51 (4 – December), 2003.
- <sup>65</sup> Khawaja N, "Concerns arise after Mount Sinai Beth Israel fast-tracks closure," *New York 1 Spectrum News*, <https://ny1.com/nyc/manhattan/health/2023/12/02/concerns-arise-after-mount-sinai-beth-israel-fast-tracks-closure#:~:text=Mount%20Sinai%E2%80%94which%20bought%20the,for%20a%20July%202024%20shutdown>.
- <sup>66</sup> Blase B, "The ACA is making health insurers much richer," *Paragon Health Institute*, 2024, <https://mailchi.mp/paragoninstitute.org/the-aca-is-making-health-insurers-much-richer?e=6e0878b2f9>
- <sup>67</sup> National Association of Insurance Commissioners (NAIC), "U.S. health insurance industry analysis report: 2022 Annual results," <https://content.naic.org/sites/default/files/inline-files/Health%202022%20Annual%20Industry%20Report.pdf> .
- <sup>68</sup> FTC & DOJ, July 2004, "8<sup>th</sup> Observation on hospital-related issues," *op cit*.
- <sup>69</sup> Bates & Santerre, 2008, *op cit*.
- <sup>70</sup> Moriya, Vogt & Gaynor, 2010, *op cit*.
- <sup>71</sup> Melnick GA & Shen Y-C, Wu VY, 2011, *op. cit*.
- <sup>72</sup> Bates LJ & Santerre RE, 2008, *op cit*.
- <sup>73</sup> McKellar RM, Naimer S, Landrum MB, Gibson TB, Chandra A & Chernew M, "Insurer market structure and variation in commercial health spending," *Health Services Research*, 49 (3), June, 2014.
- <sup>74</sup> Bork RH, 1978, *op cit*.
- <sup>75</sup> Wilson, CS, "Welfare standards underlying antitrust enforcement: What you measure is what you get," Luncheon address at George Mason Law Review 22nd Annual Antitrust Symposium: Antitrust at the Crossroads?, February 15, 2019.
- <sup>76</sup> Town, et al., 2006, *op cit*.
- <sup>77</sup> Campbell T, 2007, *op cit*.
- Haas-Wilson D & Garmon C, "Hospital mergers and competitive effects: Two retrospective analyses," *International Journal of the Economics of Business*, 18 (1), February, 2011
- Vita MG & Sacher S. "The competitive effects of not-for-profit hospital mergers: A case study," *Journal of Industrial Economics*, 49 (1), 2001.
- Tenn S. "The price effects of hospital mergers: A case study of the Sutter-Summit transaction," *International Journal of the Economics of Business*, 18 (1), 2011.
- <sup>78</sup> Capps C & Dranove D, "Hospital consolidation and negotiated PPO prices," *Health Affairs*, 23 (2), March/April, 2004.
- <sup>79</sup> Dafny L, "Estimation and identification of merger effects: An application to hospital mergers," *Journal of Law & Economics*, 52, August, 2009.

- 
- <sup>80</sup> Gaynor & Town, 2012, *op cit.*
- <sup>81</sup> Garmon C, 2016, *op cit.*
- <sup>82</sup> Cooper Z, Craig SV, Gaynor M & Van Reenen J, "The price ain't right? Hospital prices and health spending on the privately insured," *Quarterly Journal of Economics*, 134 (1-February), 2019: 51-107.
- <sup>83</sup> Dafny, 2009, *op cit.*
- <sup>84</sup> Vogt & Town, 2006, *op cit.*
- <sup>85</sup> Trish EE & Herring BJ, "How do health insurer market concentration and bargaining power with hospitals affect health insurance premiums," *Journal of Health Economics*, 42 (July), 2015.
- <sup>86</sup> Gaynor & Town, 2012, *op cit.*
- <sup>87</sup> Melnick GA, Shen Y-C & Wu VY, "The increased concentration of health plan markets can benefit consumers through lower hospital prices," *Health Affairs*, 30 (9), 2011.
- <sup>88</sup> Scheffler RM & Arnold DR, "Insurer market power lowers prices in numerous concentrated provider markets," *Health Affairs*, 36 (9 – September), 2017.
- <sup>89</sup> Bates LJ & Santerre RE, "Do health insurers possess monopsony power in the hospital services industry," *International Journal of Health Care Finance Economics*, 8, 2008.
- <sup>90</sup> McKellar RM, Naimer S, Landrum MB, Gibson TB, Chandra A & Chernew M, "Insurer market structure and variation in commercial health spending," *Health Services Research*, 49 (3), June, 2014.
- <sup>91</sup> Moriya A, Vogt W & Gaynor M. "Hospital prices and market structure in the hospital and insurance industries," *Health Economics, Policy & Law*, 5 , 2010
- <sup>92</sup> Trish & Herring, 2015, *op cit.*
- <sup>93</sup> Gaynor M, Ho K & Town RJ, "The industrial organization of health care markets," *J Econ Lit*, 53 (2), 2015: 235-284
- <sup>94</sup> Fulton BD, "Health care market concentration trends in the United States: Evidence and policy responses," *Health Affairs* 36 (9- September), 2017.
- <sup>95</sup> Cooper, et al., 2019, *op cit.*
- <sup>96</sup> White, Reschovsky & Bond, 2014, *op.cit.*; Cooper, et al.,2019, *op cit.*
- <sup>97</sup> Blair RD & Wang W, 2015, *op cit.*