

MEASURING HOSPITAL POST-MERGER EFFECTS: DEVELOPING A STANDARD FOR ANTITRUST ANALYSIS

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INTRODUCTION

Mergers and acquisitions have been common occurrences in health care for years now because they provide organizations with the opportunity to join forces and leverage their newfound scale. Hospital mergers and acquisitions, specifically, are becoming increasingly common throughout the United States.¹ The Patient Protection and Af-

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1. Jacqueline LaPointe, *How Hospital Merger and Acquisition Activity is Changing Healthcare*, REVCYCLE INTELLIGENCE (July 20, 2018), <https://revcycleintelligence.com/features/how-hospital-merger-and-acquisition-activity-is-changing-healthcare> (“Hospital mergers and acquisitions are increasing at a rapid rate. Healthcare organizations announced 115 merger and acquisition transactions in 2017, the highest number in recent history.”).

fordable Care Act (“ACA”), a 2010 federal statute expanding coverage of the U.S. health care system,² promotes both Accountable Care Organizations (“ACOs”), which encourage practitioner accountability for the quality and costs of care, and “the bundling of payments across providers.”³ These two features of the ACA encourage consolidation among hospitals.

The ACA primarily reformed insurance markets, but it also changed how health care providers are compensated.⁴ More specifically, the ACA’s new reimbursement models reward providers for developing coordinated patient care models to replace the fragmented, fee-for-service reimbursement model that has been the hallmark of Medicare since its inception.⁵ Integrated delivery systems, which can be created by merging organizations, are one way of achieving the coordinated patient care model rewarded by the ACA. Thus, hospitals often claim that they merge with other hospitals to comply with the goals and incentives of the ACA.⁶ Theoretically, health care providers look to coordinate health care services to provide better service at lower cost. However, there is tension between the goals of health care reform and the goals of antitrust laws.

By the mid-1990s, hospital merger and acquisition activity was nine times what it was at the start of the decade.⁷ As a result of the wave of mergers, market concentration dramatically increased as measured by the Herfindahl Hirschman Index (“HHI”).⁸ Specifically, in

2. Pub. L. No. 111-148, 124 Stat. 119 (2010) (codified as amended in scattered sections of 26 and 42 U.S.C.), *amended by* Health Care and Education Reconciliation Act of 2010, Pub. L. No. 111-152, 124 Stat. 1029 (2010).

3. MARTIN GAYNOR & ROBERT TOWN, ROBERT WOOD JOHNSON FOUND., *THE IMPACT OF HOSPITAL CONSOLIDATION—UPDATE 1* (2012).

4. Joanne Kenen, *Getting the Facts on Hospital Mergers and Acquisitions*, ASS’N OF HEALTH CARE JOURNALISTS, <https://healthjournalism.org/resources-tips-details.php?id=828#.XIWvJRNKhTY> (last visited Mar. 25, 2019).

5. Susan A. Channick, *The ACA, Provider Mergers and Hospital Pricing: Experimenting with Smart, Lower-Cost Health Insurance Options*, 6 WM. & MARY POL’Y REV. 1, 2 (2015) (“Both Medicare and commercial payers are reimbursing providers for integrated care providing an impetus for horizontal health care provider integration in order to achieve economies of scope and scale.”).

6. Robert Pear, *F.T.C. Wary of Mergers by Hospitals*, N.Y. TIMES (Sept. 17, 2014), <https://www.nytimes.com/2014/09/18/business/ftc-wary-of-mergers-by-hospitals-.html>.

7. WILLIAM B. VOGT & ROBERT TOWN, ROBERT WOOD JOHNSON FOUND., *How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?*, in RESEARCH SYNTHESIS REPORT NO. 9, THE SYNTHESIS PROJECT 1 (2006).

8. The term “HHI” means the Herfindahl-Hirschman Index, a commonly accepted measure of market concentration. The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of

1990, a person living in a metropolitan statistical area (“MSA”) faced a concentrated hospital market with an HHI of 1,576.⁹ Yet by 2003, the typical MSA resident faced a hospital market with an HHI of 2,323.¹⁰ This change translates to a reduction from six to four competing local hospital systems for the typical MSA resident. In parallel, however, the success rate of the Federal Trade Commission (“FTC”) at blocking anti-competitive mergers has changed dramatically since 2006. In particular, the health care industry has seen a flurry of merger activity in 2009, along with increased FTC victories for preventing anti-competitive mergers of health care organizations.¹¹ Since the 1990s, the FTC has sharpened its approach in challenging these transactions and has created the Merger Litigation Task Force in an effort to increase its likelihood of success.¹² In spite of refined methodologies, hospital consolidations are increasingly successful. In 2014

four firms with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ($30^2 + 30^2 + 20^2 + 20^2 = 2,600$).

The HHI takes into account the relative size distribution of the firms in a market. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 10,000 points when a market is controlled by a single firm. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases.

The agencies generally consider markets in which the HHI is between 1,500 and 2,500 points to be moderately concentrated, and consider markets in which the HHI is in excess of 2,500 points to be highly concentrated. Transactions that increase the HHI by more than 200 points in highly concentrated markets are presumed likely to enhance market power under the *Horizontal Merger Guidelines* issued by the Department of Justice and the Federal Trade Commission.

Herfindahl-Hirschman Index, U.S. DEP’T OF JUSTICE (citation omitted), <https://www.justice.gov/atr/herfindahl-hirschman-index> (last updated July 31, 2018).

9. *Id.*

10. *Id.*

11. Inova Health Sys. Found., No. 9326, 2008 WL 2556051, at *1 (F.T.C. June 17, 2008) (order dismissing complaint); Carilion Clinic, No. 9338, 2009 WL 3328245, at *2 (F.T.C. Oct. 7, 2009) (consent order granted); Evanston Nw. Healthcare Corp., No. 9315, 2004 WL 3312781, at *8–10 (F.T.C. Feb. 10, 2004) (administrative agency action representing the FTC’s first successful challenge to a hospital merger in recent history). Within two months, the U.S. Court of Appeals for the Third Circuit in *FTC v. Penn State Hershey Medical Center*, 838 F.3d 327 (3d Cir. 2016), and the Seventh Circuit in *FTC v. Advocate Health Care Network*, 841 F.3d 460 (7th Cir. 2016), reversed district court decisions denying FTC-filed motions for preliminary injunctions, effectively blocking mergers between providers that, according to those courts, would have a significant impact on the price and availability of health care services in those markets.

12. Michael B. Bernstein, *Diagnosing the FTC’s Merger Enforcement in the Healthcare Industry*, ANTITRUST HEALTH CARE CHRON. 2 (2009), <https://pdfs.semanticscholar.org/4e48/eaf0e23ee48df74380b10dc9eba7e3de2c22.pdf>.

alone, there were ninety-five mergers, acquisitions, and joint ventures among hospitals in the United States.¹³ In 2017, there were 115 merger and acquisition transactions—“the highest number in recent history.”¹⁴ During this time, the FTC, the Department of Justice (“DOJ”), and the California Attorney General challenged seven hospital mergers and lost all seven cases.¹⁵

Despite retrospective studies, extensive adjudication and various econometric models, it is difficult to draw broad conclusions across hospital mergers. Mergers usually result in both potentially anticompetitive harms and benefits in very fact-specific and highly variable cases. While there are a handful of reasonably conclusive studies on hospital mergers *ex post*, these studies consistently fail to address potential quality improvements or increased efficiencies resulting from the merger or acquisition.¹⁶ When evaluating alleged quality improvements from a hospital merger, administrative law judges evaluate evidence about improved quality of care without any specific codified guidance about what to look for or how to weigh resultant improvements or efficiencies.¹⁷ To be clear, the evaluation of hospital merger improvements that administrative law judges conduct is unstructured because the only source of guidance they have is similarly unstructured and unspecific. There is very limited literature on measuring quality improvements and efficiencies stemming from hospital mergers, much less official guidance for agencies or judges on how to interpret or weigh any improvements against anticompetitive effects in either *ex ante* or in *ex post* contexts.

This Note investigates the importance and challenges of understanding and measuring the full spectrum of the consequences of hospital mergers. It also offers policy recommendations for increased guidance for the FTC and the DOJ (“the Agencies”) on methods of interpreting, considering, and weighing these consequences. Part I of this Note provides background on unique aspects of hospital mergers. Part II discusses the potential benefits and harms of hospital mergers

13. Gregory Curfman, *Everywhere, Hospitals Are Merging—but Why Should You Care?*, HARV. HEALTH PUB.: HARV. HEALTH BLOG (Apr. 1, 2015, 5:00 PM), <https://www.health.harvard.edu/blog/everywhere-hospitals-are-merging-but-why-should-you-care-201504017844>.

14. KAUFMAN HALL, 2017 IN REVIEW: THE YEAR M&A SHOOK THE HEALTHCARE LANDSCAPE 1 (2018).

15. *Id.*

16. *See* Curfman, *supra* note 13.

17. Kristin Madison, *Hospital Mergers in an Era of Quality Improvement*, 7 Hous. J. HEALTH L. & POL'Y 265, 300 (2007) (discussing how the confusion around weighing quality improvements has played out in past litigations).

for consumers. Part III analyzes lessons learned from hospital post-merger analyses, as well as potential areas for refining future retrospective studies. Part IV considers the improvement of the analysis of merger effects with a focus on evaluating post-merger quality improvements. Part V describes the agency approach and existing guidance on merger-specific quality improvements and efficiencies. Part VI provides policy recommendations that could benefit the FTC and the DOJ, such as amending the *Horizontal Merger Guidelines* and potentially the *Statements of Antitrust Enforcement Policy in Health Care* to provide more elaborate guidance on how to address merger-specific quality improvements in post-merger price increase contexts. Part VII concludes.

I.

BACKGROUND

For over 100 years, “the antitrust laws have had the same basic objective: to protect the process of competition for the benefit of consumers, making sure there are strong incentives for businesses to operate efficiently, keep prices down, and keep quality up.”¹⁸ Congress passed the first antitrust law, the Sherman Act, in 1890 as a “comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade.”¹⁹ In 1914, Congress passed two additional antitrust laws: the Federal Trade Commission Act (“FTC Act”), which created the FTC, and the Clayton Act.²⁰ With some revisions, these are the three core federal antitrust laws still in effect today. Antitrust laws govern unlawful merger practices generally, leaving courts to embark on fact-based inquiries.

The Sherman Act outlaws unreasonable “contract[s], combination[s], or conspirac[ies] in restraint of trade, [and any] monopolization, attempted monopolization, or conspiracy or combination to monopolize.”²¹ “The Federal Trade Commission Act bans ‘unfair methods of competition’ and ‘unfair or deceptive acts or practices.’”²² Only the FTC can bring cases under the FTC Act. “The Clayton Act addresses specific practices that the Sherman Act does not clearly prohibit, such as mergers . . . Section 7 of the Clayton Act prohibits mergers and acquisitions where the effect ‘may be substantially to lessen

18. *The Antitrust Laws*, FED. TRADE COMMISSION, <https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/antitrust-laws> (last visited Mar. 26, 2019).

19. *Id.*

20. *Id.*

21. *Id.*

22. *Id.*

competition, or to tend to create a monopoly.’”²³ The Clayton Act was amended in 1976 by the Hart-Scott-Rodino Antitrust Improvements Act “to require companies planning large mergers or acquisitions to notify the government of their plans.”²⁴

In 2010, the U.S. Department of Justice and the Federal Trade Commission issued the latest version of the *Horizontal Merger Guidelines*, and in 1996 the Agencies issued the *Statements of Antitrust Enforcement Policy in Health Care*.²⁵ The *Horizontal Merger Guidelines* address horizontal mergers and give guidance to the Agencies for factors to consider generally when evaluating a merger, but do not provide industry specific guidance. The *Statements of Antitrust Enforcement Policy in Health Care* similarly provide guidance while also addressing hospital mergers in particular and providing a more industry-specific approach to combinations.²⁶

Economic theory and our current antitrust laws do not give general guidance to appropriate antitrust policy in markets with significant product differentiation such as the health care market. The hospital market is a binary system of competition which makes it difficult to draw broad conclusions about the effects of hospital mergers. A binary system of competition involves competition on two fronts or stages. Specifically, “insurance . . . splits hospital competition into two stages: one in which hospitals compete to be included in insurers’ networks, and another in which hospitals compete to attract patients.”²⁷ Ultimately, an inquiry by the FTC, the DOJ, or a court on whether a rise in prices for patients could result in actual profits for hospitals from a potential hospital market necessarily considers whether both patients and insurers would be willing and able to purchase health care services outside of the proposed market.²⁸

23. *Id.*

24. *Id.*

25. U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, HORIZONTAL MERGER GUIDELINES (2010), <https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf> [hereinafter HORIZONTAL MERGER GUIDELINES]; U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, STATEMENTS OF ANTITRUST ENFORCEMENT POLICY IN HEALTH CARE (1996), <https://www.justice.gov/sites/default/files/atr/legacy/2007/08/15/1791.pdf> [hereinafter HEALTH CARE STATEMENTS].

26. HEALTH CARE STATEMENTS, *supra* note 25.

27. Carl Hittinger & Tyson Herrold, *FTC Takes Action to Block Hospital Mergers*, ANTITRUST ADVOCATE (Nov. 16, 2016), <https://www.antitrustadvocate.com/2016/11/16/ftc-takes-action-to-block-hospital-mergers/> (citing *FTC v. Advocate Health Care Network*, 841 F.3d 460, 470–71 (7th Cir. 2016)).

28. “The purpose of defining a market is to help frame the analysis of competitive interaction, gauge a firm’s power over price and output, as well as measure market concentration.” Serge Moresi, Steven C. Salop & John R. Woodbury, *Market Definition and Multi-Product Firms in Merger Analysis*, in ANTITRUST ECONOMICS FOR

Further, insurers and patients place value on different aspects of care. This further complicates relevant geographic market determination²⁹ and the measurement of general hospital merger consequences. For example, insurers are usually very price sensitive, so they are of primary consideration when testing and determining proposed relevant geographic markets. However, patients are also a relevant consideration. Patients often value location, quality of care, and hospital reputation over the ability to cure their health problems.³⁰ For example, while an insurer might not be a willing consumer of a hospital at a higher price point because they are notably price sensitive, thus rendering that hypothetical merger unprofitable, a patient might succumb to a price increase resulting from the merger because they are willing to pay more for better quality, hospital reputation, location, facilities, etc. Yet when delineating a proposed market, *both* insurers and patients must be considered.

Another unique feature of the health care market is the heterogeneous nature of health care providers. One example is the distinction between local hospitals, which usually offer a wide range of basic care, and destination hospitals, which frequently offer complex services and tertiary care.³¹ Local hospitals typically serve their sur-

LAWYERS § 1.01 (2017), <https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2966&context=facpub>.

29. The competitive market is comprised of both the product and geographic markets. The relevant *product market* consists of all the goods and/or services that buyers view as close substitutes to the merging parties' goods and/or services. With regard to hospitals, the core services and specialties provided at the given hospitals often define the overall competitive market. Further, the product market is often closely tied to the *geographic market*, which is the area of effected competition in which the merging parties operate and to which customers can practicably turn for goods or services in the event of a merger. When hospitals merge, whether a patient would be able to find those core services and specialties at other hospitals or healthcare providers within a reasonable geographic area becomes a key inquiry. For example – a renowned oncology hospital may not compete with the neighboring general acute care hospital located five miles down the road simply because the two attract different patients and service different medical needs. Under the market analysis, the FTC likely would not view these hospitals as competitors, and therefore, not likely substitutes in the event of a price increase.

Amy D. Paul, *The Complexities of Hospital Merger Review*, A.B.A., <https://perma.cc/Y24P-B9FM?type=image> (last visited Sept. 23, 2019).

30. Michael E. Porter & Thomas H. Lee, *The Strategy That Will Fix Health Care*, HARV. BUS. REV., Oct. 2013, at 51.

31. See generally Emma Pitchforth et al., *Community Hospitals and Their Services in the NHS: Identifying Transferable Learning from International Developments—Scoping Review, Systematic Review, Country Reports and Case Studies*, 5 HEALTH SERVS. & DELIVERY RES., no. 19, June 2017.

rounding areas, while destination hospitals' expertise may draw patients from a much larger geographic area because of the cutting-edge procedures or a specialization in a specific medical field.³² This issue is particularly relevant when it comes to courts deciding whether or not to include destination hospitals outside the geographic region in its definition of the relevant market. Some courts express skepticism that patients who travel long distances for specialized care would be likely to switch hospitals if rates were raised.³³

Similarly, antitrust analyses must also consider the heterogeneous nature of patient needs and preferences. Treatment and care can range significantly, from basic to primary care to specialized care. How far patients are willing to travel outside of their proximate geographic region is also a relevant consideration in determining the relevant geographic market, while at the same time complicating its delineation.³⁴ For example, some patients will prefer extensive explanation and discussion of their case, while others will prefer treatment that simply meets a reasonable standard of care. In other words, some will prefer the "Cadillac" treatment,³⁵ whereas others would prefer paying only for what is adequate or necessary. That being said, these needs and preferences largely hinge on the health the patient has to start. For example, most people will not travel long distances for a specialized care center to receive the "Cadillac" treatment if they are relatively healthy and simply need basic primary care. However, if an individual is facing critical conditions, death or disability, no matter her socioeconomic status, she is more likely than her otherwise healthy counterpart to go out of her way to seek out more specialized care.

II.

POTENTIAL BENEFITS AND HARMS OF MERGERS FOR CONSUMERS

As I detail below, the advantages and drawbacks of hospital mergers bear on both the quality and the price of services, and the

32. See generally Emily R. Carrier, Marisa Dowling & Robert A. Bernson, *Hospitals' Geographic Expansion in Quest of Well-Insured Patients: Will the Outcome Be Better Care, More Cost, or Both?*, 31 HEALTH AFF. 827 (2012) (documenting the rise of destination hospitals and their effects on hospital markets).

33. *Id.*

34. *Id.*

35. A Cadillac plan refers to any unusually expensive health insurance plan. Christopher Beam, *Do I Have a "Cadillac Plan"?*, SLATE (Oct. 14, 2009), <https://slate.com/news-and-politics/2009/10/do-i-have-a-cadillac-plan-and-other-frequently-asked-health-care-questions.html> (defining a Cadillac plan as one with premiums over \$8,000 for individuals and \$21,000 for families).

causes of these changes can be difficult to isolate. On the positive side, hospital mergers allow better coordination of care across different practitioners and sites of care. Uncoordinated delivery of care has long been regarded as a key failure of American health care,³⁶ and consolidated health systems have the capacity to address the quality deficiencies resulting from lack of coordination. Other potential benefits for patients include the “standardization of clinical protocols,” the “deployment or recruitment of additional medical staff to the acquired hospitals,” and the concentration of complex services such as tertiary care at a limited number of system hospitals.³⁷ However, these positive outcomes can often be offset by a hospital’s increased market power, because insurers are now forced to meet the demands of concentrated hospital buyers. As hospital market power increases, there is a potential for higher prices.³⁸ Therefore, it is crucial for antitrust authorities to examine the benefits and disadvantages of hospital mergers closely.

Consolidation can increase patient volume for specialized services and thus improve quality on multiple fronts. Many studies show a clear relationship between volume—that is, the number of patients treated for a particular procedure—and positive outcome.³⁹ To improve quality and positive outcome more generally, therefore, scale can be very important.

To accommodate increased patient volumes, hospitals must make substantial investments in the clinical and administrative information technology (“IT”) infrastructure necessary to provide high quality care.⁴⁰ For example, “different practitioners and health centers with a shared medical record may find it easier to reduce duplication and plan across settings.”⁴¹ Some evidence indicates that hospital consolidation produces some cost savings and that these cost savings can be

36. COMM. ON QUALITY OF HEALTH CARE IN AM., INST. OF MED., *CROSSING THE QUALITY CHASM: A NEW HEALTH SYSTEM FOR THE 21ST CENTURY* 29 (2001) (noting the lack of mechanisms to coordinate care for serious illnesses in the American medical system).

37. MONICA NOETHER & SEAN MAY, *HOSPITAL MERGER BENEFITS: VIEWS FROM HOSPITAL LEADERS AND ECONOMETRIC ANALYSIS 2* (2017), <https://www.wsha.org/wp-content/uploads/January-25-2017-Study-on-Mergers-1.pdf>.

38. David M. Cutler & Fiona Scott Morton, *Hospitals, Market Share, and Consolidation*, 310 JAMA 1964, 1964 (2013).

39. John D. Birkmeyer et al., *Hospital Volume and Surgical Mortality in the United States*, 346 NEW ENG. J. MED. 1128, 1128 (2002) (analyzing the effect of volume on fourteen cardiovascular and cancer procedures).

40. NOETHER & MAY, *supra* note 37, at 3.

41. Cutler & Morton, *supra* note 38, at 1967.

significant.⁴² Notably, infrastructure investments, such as the construction of a robust IT system, benefit from substantial economies of scale because they are expensive to develop and operate but very scalable.⁴³ These systems require more than just the installation of an electronic health record (“EHR”) system, which is expensive;⁴⁴ they also require linkage of the EHR system with financial data from a sophisticated cost accounting system, training of staff to input data, development and production of reports from the data to measure and monitor performance, usage of the reports to provide feedback to participants, and development of reward systems that hold participants accountable to certain standards.⁴⁵ Large systems, therefore, are better able to spread the financial burden of high-cost investments such as sophisticated equipment or electronic medical records across their hospital members.

In comparison, it can be more difficult for hospitals to achieve scale unilaterally, especially since demand for inpatient hospital services has been declining. Specifically, between 2004 and 2014, inpatient admissions at community hospitals fell by 5.8% (from 35.1 million to 33.1 million), while the number of inpatient days declined by 9.5% (from 197.6 to 180.5 million).⁴⁶ These trends are a significant part of the reason why larger hospitals are seeking to achieve economies of scale through merging.

In addition to cost savings from scaling IT infrastructure, clinical standardization reduces the costs associated with outlier patients by better identifying avoidable complications.⁴⁷ For example, clinical standardization can involve the data-driven and evidence-based development of uniform treatment and care protocols for different departments or specialties. In other words, the development of a care management system would use cost accounting and clinical information in order to identify and eliminate avoidable quality variation.

42. Kathleen Carey, *A Panel Data Design for the Estimation of Hospital Cost Functions*, 79 REV. ECON. & STAT. 443, 452 (1997) (studying hospital costs in relation to economies of scale); Martin Gaynor & Gerard F. Anderson, *Uncertain Demand, the Structure of Hospital Costs, and the Cost of Empty Hospital Beds*, 14 J. HEALTH ECON. 291, 309–10 (1995) (discussing hospital cost savings related to increased occupancy).

43. *Id.*

44. *Id.*

45. *Id.*

46. AM. HOSP. ASS'N, TRENDWATCH CHARTBOOK 2016: TRENDS AFFECTING HOSPITALS AND HEALTH SYSTEMS, at A-26 tbl.3.1 (2016), <https://www.aha.org/system/files/research/reports/tw/chartbook/2016/2016chartbook.pdf> (citing U.S. CENSUS BUREAU, NATIONAL AND STATE POPULATION ESTIMATES (2014)) .

47. NOETHER & MAY, *supra* note 37, at 6.

Noether and May demonstrate that standardization results in lower supply and equipment costs by concentrating volume among fewer suppliers, thereby enhancing the ability to negotiate for lower prices.⁴⁸ Similarly, staff training and maintenance costs are reduced.⁴⁹ In the same study, hospital leaders noted substantial reductions in average length of stay when uniform care protocols were adopted.⁵⁰ “[F]or example, when an acquirer’s protocols were adopted by an acquired hospital with a similar case mix but previously lacking a care management system, average length of stay at the acquired hospital fell by a day.”⁵¹ “One hospital system attributed annual savings of approximately \$50 million to implementation of a data-driven system that, using cost accounting and clinical information, identifies and eliminates avoidable quality variation.”⁵²

An important antitrust criterion when analyzing the level of benefits and harms resulting from a hospital merger is the size and characteristics of the affected community.⁵³ For example, in large metropolitan areas, economies of scale may be achievable by non-dominant hospital networks because the market is so large. In smaller communities, however, efficiency gains of the same type may require consolidation that includes hospitals and other health care organizations comprising a larger fraction of the market. If that level of consolidation happens in a smaller community, large price increases will likely result given the absence of substantial efficiencies of scale. In that case, the balancing test for the FTC and the DOJ would be more difficult due to the more abstract considerations at play. In other words, they would need to consider whether absent the merger, smaller communities would have access to similar efficiency gains as they did from the merger. This gets harder to measure in larger communities that might be able to achieve those economies of scale absent a merger because those markets are larger in nature to begin with, even absent the merger. Did those smaller communities really have a choice but to merge?

48. *Id.* at 6–7.

49. *Id.* at 6.

50. *Id.* at 7.

51. *Id.*

52. *Id.*

53. HEALTH CARE STATEMENTS, *supra* note 25, at 19 (discussing how technology and equipment purchases interact with community characteristics in evaluating the anticompetitive effects of a merger).

Ultimately, empirical studies on cost savings resulting from consolidation present mixed findings.⁵⁴ Some studies, for instance, show cost savings after a merger, yet such savings require “significant integration of different parts of the health system, which does not always occur.”⁵⁵ Moreover, when interpreting evidence on hospital costs, it is important to keep in mind that the phrase “cost savings,” which is often cited in retrospective analyses as resulting from a merger, refers to savings in cost to the hospital. It does not refer to savings in cost for payers.⁵⁶ Therefore, without empirical support, which is admittedly complex to obtain, this rationale for the benefits of hospital mergers is tentative.

Separate from cost savings, another benefit of hospital mergers is the provision of more specialized tertiary care to those who need it, along with more convenient provision of primary care services. A study that interviewed hospital leaders found that academic medical centers (“AMCs”) are frequently motivated to acquire local community hospitals to enable the triaging of patients across inpatient hospital settings according to their medical needs.⁵⁷ For instance, patients who need relatively simple inpatient care can be treated at a local community hospital close to their home rather than at more expensive, and oftentimes more distant, AMCs.⁵⁸ Ultimately, mergers between AMCs and community hospitals permit an efficient realignment of services that increases the primary and secondary services that are available at community hospitals and allows patients to be redirected to them. In turn, AMCs can focus more extensively on the sickest patients who need more complex and specialized tertiary care.⁵⁹ In other words, AMCs view the acquisition of lower cost community hospitals as critical to being able to steer patients to a community or academic setting based on the complexity of their health care needs.

54. Compare David Dranove & Richard Lindrooth, *Hospital Consolidation and Costs: Another Look at the Evidence*, 22 J. HEALTH & ECON. 983, 996 (2003) (“[S]ignificant, robust, and persistent savings for mergers 2, 3 and 4 years after consolidation . . . to some extent . . . reflect synergies achieved through merger.”), with Teresa D. Harrison, *Do Mergers Really Reduce Costs? Evidence from Hospitals*, 49 ECON. INQUIRY 1054, 1054 (2011) (“Our findings suggest that economies of scale are present for merging hospitals and they realize these cost savings immediately following a merger. However, we also show that over time, cost savings from the merger decrease and the proportion of hospitals experiencing positive cost savings declines.”).

55. Cutler & Morton, *supra* note 38, at 1967.

56. *Id.*

57. NOETHER & MAY, *supra* note 37, at 8.

58. *Id.*

59. *Id.*

To comply with the *Horizontal Merger Guidelines*, discussed in detail below, any touted benefits achieved through a hospital merger are encouraged to be “merger-specific,” which means that the benefits being weighed against potential anticompetitive effects cannot be achieved absent the merger.⁶⁰ For example, one argument is that the benefits of an AMC’s acquisition of a community hospital could occur in an arrangement short of a merger. However, the “capital investments necessary to upgrade services and facilities at the community hospitals might require the type of long-term commitment that can only be realistically achieved through a hospital merger.”⁶¹

Hospital leaders believe that it is not possible to achieve benefits as extensive or durable as those that can be accomplished through mergers for several reasons. For one, long-term commitment is needed in order to undertake the change in organization of care delivery in a way that results in cost effectiveness and an increase in quality. Absent mergers or acquisitions, hospital leaders have cited a concern with “[l]ack of accountability and long-term commitment”; an “[i]nability to align incentives sufficiently to make the difficult choices necessary to substantially improve the efficiency of care delivery”; “[a]cquirers’ unwillingness to invest substantial capital without commitment for the returns on the investment”; “[l]egal or regulatory prohibitions on sharing financial information as well as detailed clinical information”; a “[r]eluctance to share valuable intellectual property with a loose affiliate”; and the “failure to create a common culture.”⁶²

However, there are several noted disadvantages to hospital mergers related to price increases and disincentives to make product and process innovations. One of the notable disadvantages of hospital mergers is a concern about increasing prices. When hospitals merge and there are fewer hospital systems, it is more difficult for insurers to negotiate on behalf of their customers to keep prices down. In other words, because consumers may not want to purchase an insurance

60. HORIZONTAL MERGER GUIDELINES, *supra* note 25, at 21, 30.

61. NOETHER & MAY, *supra* note 37, at 9.

62. Lola Butcher, *3 Ways Hospitals Can Collaborate Without Merging*, HOSPS. & HEALTH NETWORKS (July 19, 2016), <http://www.hhnmag.com/articles/7315-ways-hospitals-can-collaborate-without-merging>. Similarly, the Health Care Advisory Board found that Regional Collaboratives suffer because a “lack of formal legal or financial integration limits [the] ability to hold partners accountable [and the] loose nature of affiliation enables partners to easily dissolve partnership.” HEALTH CARE ADVISORY Bd., ADVISORY Bd. Co., THE FIELD GUIDE TO HOSPITAL PARTNERSHIP AND AFFILIATION MODELS 1 (2014), https://www.advisory.com/-/media/Advisory-com/Research/H CAB/%20Resources/2014/29199_HCAB_Affiliations_IG.pdf.

plan that excludes a large part of the market, “if hospitals [in a given region] consolidate into only [three] large systems, insurers will find it difficult to exclude even [one] system from the plan because that would mean many hospitals would be excluded from the network.”⁶³ Therefore, with no system plausibly able to be excluded from an insurer’s network, each system can in turn charge a higher price, making it more difficult for insurers to negotiate lower prices for customers.

A vast majority of literature shows that hospital consolidation results in price increases.⁶⁴ These price increases adversely affect consumers directly, both in their out-of-pocket payments when they purchase insurance and when they pay taxes that fund public insurance programs.⁶⁵ Research suggests that hospital consolidation in the 1990s raised prices for both patients and insurers by at least five percent.⁶⁶ Those that analyze consolidation among hospitals that are geographically close to one another consistently find that consolidation leads to price increases of forty percent or more.⁶⁷ However, a few others reach the opposite conclusion.⁶⁸

Another potential disadvantage of hospital mergers is the lack of innovation in products and processes. Regarding product innovations, a study has found that investment in new technologies is positively

63. Cutler & Morton, *supra* note 38, at 1967.

64. Emmett B. Keeler, Glenn Melnick & Jack Zwanziger, *The Changing Effects of Competition on Non-Profit and For-Profit Hospital Pricing Behavior*, 18 J. HEALTH & ECON. 69, 79–80 (1999) (demonstrating the relationship between market concentration and price increase); Cory Capps & David Dranove, *Hospital Consolidation and Negotiated PPO Prices*, 23 HEALTH AFF. 175, 178–80 (2004) (using transaction prices from a PPO to analyze twelve hospitals involved in a market-power-enhancing consolidation between 1997 and 2001 to find large price increases among these hospitals relative to control; one hospital raised prices sixty-six percent relative to zero percent at the median control hospital).

65. *Id.*

66. VOGT & TOWN, *supra* note 7, at 4 (discussing how structure-conduct-performance studies tend to show smaller price increases as a result of the hospital consolidations of the 1990s).

67. Leemore S. Dafny, *Estimation and Identification of Merger Effects: An Application to Hospital Mergers* 25 (Nat’l Bureau of Econ. Research, Working Paper No. 11673, 2005), <http://www.nber.org/papers/w11673> (finding that consolidation raises prices by forty percent, based on data from hospital mergers between 1989 and 1996).

68. The evidence in these studies is weaker than those concluding that hospital mergers lead to price increases. See Robert A. Connor, Roger D. Feldman, Bryan E. Dowd & Tiffany A. Radcliffe, *Which Types of Hospital Mergers Save Consumers Money?*, 16 HEALTH AFF., 62, 66–72 (1997). One study, for example, examined 122 hospital mergers that occurred from 1986 through 1994 and compared price changes in areas with and without mergers. Unlike other studies, that one found that prices rose more slowly in merger than in non-merger areas except where concentration was high to begin with. MICHAEL A. MORRISEY, *MANAGED CARE & CHANGING HEALTH CARE MARKETS* 171 (1998).

correlated with profits.⁶⁹ In other words, the higher the hospital's profits, the more likely it will invest in new technologies. It would follow logically that post-merger price increases probably contribute to the hospital achieving higher profits, therefore we can expect to see a higher level of investment in new technologies. However, process improvements, which can often manifest as the technological synergies and consolidations discussed earlier, appear to decline with the rise of hospital mergers. Namely, organizations with increased levels of market power often lack the incentive to develop simple process improvements such as checklists and uniform protocols that deliver services in more efficient and innovative ways.⁷⁰ While such changes are easier to implement when economies of scale are achieved, managers of large, profitable organizations might reach the conclusion that they do not need to undertake them.

III.

LESSONS FROM POST-MERGER RETROSPECTIVE ANALYSES

This Part analyzes the strengths and weaknesses of the econometric tools at parties' disposal to evaluate mergers *ex ante*, looking specifically at studies of consummated hospital mergers, which yield several insights for antitrust enforcers and policymakers. Even though researchers have made numerous attempts at analyzing the relationship between competition and quality of health care,⁷¹ evidence on the actual competitive effects of horizontal mergers is scarce. When measured by antitrust standards, most mergers do not pose a serious risk of competitive harm. In turn, those that do usually will be blocked in their entirety or alternatively approved on the condition

69. See, e.g., Joseph A. Ladapo et al., *Adoption and Spread of New Imaging Technology: A Case Study*, 28 HEALTH AFF. w1122, w1128–29 (2009) (“Our results support the assertion that . . . hospitals’ adoption of the [64-slice CT scanner] is related to cardiac patient volume and hospital operating margins. . . . [T]his finding is perhaps the most troubling of all, because it implies that adoption is independently driven by margins—behavior that is unlikely to yield optimal resource allocation.”).

70. CLAYTON M. CHRISTENSEN, JEROME H. GROSSMAN & JASON HWANG, *THE INNOVATOR’S PRESCRIPTION: A DISRUPTIVE SOLUTION FOR HEALTH CARE* 214–18 (2009).

71. See, e.g., Mark R. Chassin, *Assessing Strategies for Quality Improvement*, 16 HEALTH AFF. 151, 156–57 (1997) (voicing skepticism that increased competition is a practical solution to improve quality of health care); Alain C. Enthoven, *Why Managed Care Has Failed to Contain Health Costs*, 12 HEALTH AFF. 27, 40 (1993) (observing that better information about the quality of managed care plans may incentivize cost containment); Jack Zwanziger & Glenn A. Melnick, *Can Managed Care Plans Control Health Care Costs?*, 15 HEALTH AFF. 185 (1996) (discussing the growth of managed care plans in relation to quality and health care costs).

that a remedial action will be completed.⁷² Therefore, candidates for the study of potentially anticompetitive mergers arise only where, for example, “the enforcement agencies lose a merger challenge in court, obtaining no competitive relief, or when the enforcement agencies do not challenge a transaction for reasons unrelated to the transaction’s perceived competitive effects.”⁷³ This Note takes advantage of one of these rare retrospective studies in order to help policymakers better assess whether the enforcement decision rules embodied in the *Merger Guidelines* (“Guidelines”) accurately predict the competitive consequences of actual hospital mergers.

Retrospective merger analyses evaluate *ex post* how a merger affected the markets impacted by the transaction. In studies of hospital mergers, researchers use data from before and after mergers to assess the effect of consolidation on price. Specifically, the price changes at merging hospitals are compared with price changes at control—i.e. non-merging—hospitals in the same geographic market; the difference between these changes is interpreted to be the result of the merger.⁷⁴

First, to capture the effects of mergers within the same market—the ones most likely to have implications for competition—one must identify merging firms in the same market, which necessitates finding a market definition. Second, price is measured.⁷⁵ Third, a suitable control group must be identified, one not affected by any other hospital’s merger.⁷⁶ Even though hospital mergers can affect both price and non-price (e.g., quality of care) aspects of competition—and the litigation of these transactions would address all of these aspects—the main studies discussed in this Note center on whether mergers result in inpatient price increases to private payers.⁷⁷

72. Michael G. Vita & Seth Sacher, *The Competitive Effects of Not-for-Profit Hospital Mergers: A Case Study*, 49 J. INDUS. ECON. 63, 63 (2001). Antitrust standards refer to the Guidelines set forth by the FTC and the DOJ, which are the Agencies that challenge mergers with potentially anticompetitive results, along with the Clayton Act and the Federal Trade Commission Act, which delineate the administrative process for merger challenges. *The Antitrust Laws*, *supra* note 18.

73. Vita & Sacher, *supra* note 72, at 63.

74. VOGT & TOWN, *supra* note 7, at 6.

75. *Id.*

76. *Id.*

77. Joseph Farrell, Paul A. Pautler & Michael G. Vita, *Economics at the FTC: Retrospective Merger Analysis with a Focus on Hospitals*, 35 REV. INDUS. ORG. 369, 375 (2009).

A. *Importance of the New Hanover Study and Hospital Mergers Involving Not-for-Profit Firms*

In response to the hospital industry's notable consolidation during the 1990s, and the failed challenges by the FTC, DOJ, and the California Attorney General of seven hospital mergers,⁷⁸ the FTC initiated a Hospital Merger Retrospective Project in 2002 to analyze the effects of consummated mergers.⁷⁹ In 2009, the FTC's Bureau of Economics analyzed consummated hospital mergers, including the 1998 acquisition by New Hanover Regional Medical Center ("New Hanover") of Columbia Cape Fear Memorial Hospital ("Cape Fear") in Wilmington, North Carolina (hereafter referred to as the "New Hanover study").⁸⁰ The two hospitals were located about six miles apart in Wilmington, North Carolina, and the next closest hospital was about twenty miles away.⁸¹ New Hanover was a large (546-bed) public non-profit hospital that offered a wide range of primary, secondary, and tertiary services. By contrast, Cape Fear was a small (109-bed) community hospital that offered only general acute care services.⁸²

Because it helps underscore how even *ex post* event studies can be inconclusive, the New Hanover study is particularly useful to analyze in depth both because it involves a hospital merger between not-for-profit ("NFP") firms,⁸³ and because it helps address a significant issue in antitrust policy: whether hospitals organized as NFP entities can have anticompetitive effects.⁸⁴

78. See, e.g., *California v. Sutter Health Sys.*, 130 F. Supp. 2d 1109 (N.D. Cal. 2001); *FTC v. Tenet Healthcare Corp.*, 17 F. Supp. 2d 937 (E.D. Mo. 1998); *FTC v. Butterworth Health Corp.*, 946 F. Supp. 1285 (W.D. Mich. 1996); *FTC v. Freeman Hosp.*, 911 F. Supp. 1213 (W.D. Mo. 1995); see *United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121 (E.D.N.Y. 1997); *United States v. Mercy Health Servs.*, 902 F. Supp. 968 (N.D. Iowa 1995), *vacated as moot*, 107 F.3d 632 (8th Cir. 1997).

79. Aileen Thompson, *The Effect of Hospital Mergers on Inpatient Prices: A Case Study of the New Hanover-Cape Fear Transaction*, 18 INT'L J. ECON. BUS. 91, 91 (2011).

80. Farrell, Pautler & Vita, *supra* note 77, at 378.

81. *Id.* at 386.

82. *Id.*

83. "Non-profit hospitals were the acquirer in 75% of deals in 2018, remaining in line with the numbers from 2015 and 2016 (75%) and 2017 (76%). Non-profit hospitals acquired a for-profit organization in 23% of deals in 2018, up from 16% the previous year." Jacqueline LaPointe, *Hospital Merger and Acquisition Deals Got Bigger in 2018*, REVCYCLE INTELLIGENCE (Jan. 14, 2019), <https://revcycleintelligence.com/news/hospital-merger-and-acquisition-deals-got-bigger-in-2018>.

84. See generally Erwin A. Blackstone & Joseph P. Fuhr, *An Antitrust Analysis of Non-Profit Hospital Mergers*, 8 REV. OF INDUS. ORG. 473 (1993) (concluding that mergers of not-for-profit and for-profit hospitals should be examined in the same way by antitrust authorities); David Dranove & Richard Ludwick, *Competition and Pricing by Nonprofit Hospitals: A Reassessment of Lynk's Analysis*, 18 J. HEALTH ECON.

As Professor Philipson and Judge Posner observed, “[t]he fact that NFP firms cannot distribute profits to their ‘owners’ has persuaded some judges and scholars that such firms are not as interested in exploiting market power as [for-profit] firms are.”⁸⁵ It has also been posited that not-for-profit hospitals aim to serve the community instead of maximizing profits.⁸⁶ This argument has been interpreted by courts as a rationale for finding that mergers involving not-for-profit hospitals are not likely to result in anticompetitive effects.⁸⁷ On the other hand, both judges and scholars have concluded that there are no notable differences in effects for for-profit and not-for-profit hospitals that would justify a difference in antitrust treatment.⁸⁸ For example, in an FTC-challenged merger, Judge Posner was skeptical about treating nonprofits differently from other hospitals: “We are aware of no evidence—and the defendants present none, only argument—that non-profit suppliers of goods or services are more likely to compete vigorously than profit-making suppliers. Most people do not like to compete, and will seek ways of avoiding competition by agreement tacit or explicit.”⁸⁹ While this rationale intends to subject nonprofits to

87 (1999) (using an empirical model to challenge the finding that nonprofit hospital mergers lead to lower prices for consumers); Keeler, Melnick & Zwanziger, *supra* note 64, at 80 (showing a seven percent price increase for non-profit hospitals in a concentrated market); Gary J. Young, Kamal R. Desai & Fred J. Hellinger, *Community Control and Pricing Patterns of Nonprofit Hospitals: An Antitrust Analysis*, 25 J. HEALTH POL., POL’Y & L. 1051 (2000) (analyzing the exercise of market power by multiple types of not-for-profit hospitals).

85. Tomas J. Philipson & Richard A. Posner, *Antitrust in the Not-for-Profit Sector*, 52 J.L. & ECON. 1, 3 (2009).

86. William J. Lynk, *Nonprofit Hospital Mergers and the Exercise of Market Power*, 38 J.L. & ECON. 437, 441 (1995) (arguing that merged not-for-profit hospitals will not exercise their monopoly power to raise profits).

87. *United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121, 149 (E.D.N.Y. 1997); *Evanston Nw. Healthcare Corp.*, No. 9315, 2005 WL 2845790, at *104 (F.T.C. Oct. 20, 2005) (Initial Decision) (collecting cases).

88. *See, e.g.*, *United States v. Mercy Health Servs.*, 902 F. Supp. 968, 989 (N.D. Iowa 1995), *vacated as moot*, 107 F.3d 632 (8th Cir. 1997); Blackstone & Fuhr, *supra* note 84 (arguing that not-for-profit hospital mergers can result in concentrations of market power just like mergers among for-profit hospitals); Martin Gaynor & William B. Vogt, *Competition Among Hospitals*, 34 RAND J. ECON. 764 (2003) (modeling price increases associated with monopoly power for non-profit hospitals); Melanie K. Nelson, *The Anticompetitive Effects of Anti-Abortion Protest*, 2000 U. CHI. LEGAL F. 327 (2000) (arguing that recognition of the commercial effects of non-profit activity serves as a basis for regulation when these commercial effects impact interstate commerce).

89. *United States v. Rockford Mem’l Corp.*, 898 F.2d 1278, 1285 (7th Cir. 1990).

Judge Posner also reiterated that nonprofits are likely to pose greater danger to competition than for profits, adding, “The ideology of nonprofit enterprise is cooperative rather than competitive. If the managers of nonprofit enterprises are less likely to strain after that last penny of profit,

the same antitrust standards of for-profit hospitals, it also raises the question of whether there are differences between their competitive strategies. This narrow inquiry basically boils down to whether non-profits, especially those with market power, show pricing behavior that is statistically different from that of for-profit hospitals.

While defendants often argue that the fact that they are an NFP entitles them to a more permissive standard of liability,⁹⁰ these arguments ultimately fail because “[t]he main efficiency rationale for applying antitrust law to for-profit firms—that it reduces or eliminates the deadweight loss associated with market power—is equally applicable to NFP firms.”⁹¹ Additionally, recent hospital merger retrospective studies have provided evidence of price increases resulting from mergers involving nonprofit hospitals.⁹² The New Hanover study helps further demonstrate why hospitals with NFP status are not entitled to distinct antitrust scrutiny from for-profit hospitals.⁹³

B. Results and Considerations from the New Hanover Study

As explained in the New Hanover study, New Hanover “[was] a large county-owned, non-profit, public hospital that offer[ed] a wide range of services, including cardiac surgery,”⁹⁴ while Cape Fear was a small, private, non-profit, community hospital, only six miles away.⁹⁵ Since both hospitals were so close to each other, patients “may have viewed the two hospitals as very close substitutes for general acute care services.”⁹⁶ It is possible that the acquisition permitted the

they may be less prone to engage in profit-maximizing collusion but by the same token less prone to engage in profit-maximizing competition.” Judge Frank Easterbrook similarly presumed that nonprofits would exploit market power if presented with the opportunity.

Barak D. Richman, *Antitrust and Nonprofit Hospital Mergers: A Return to Basics*, 156 U. PENN. L. REV. 121, 127 n.20 (2007) (first quoting *Rockford Mem’l Corp.*, 898 F.2d at 1285; then quoting *Ball Mem’l Hosp. v. Mut. Hosp. Ins.*, 784 F.2d 1325, 1340-41 (7th Cir. 1986)).

90. Philipson & Posner, *supra* note 85, at 2.

91. *Id.*

92. See Deborah Haas-Wilson & Christopher Garmon, *Hospital Mergers and Competitive Effects: Two Retrospective Analyses*, 18 INT’L J. ECON. BUS. 17 (2011) (analyzing the Evanston and Highland Park hospital mergers); Steven Tenn, *The Price Effects of Hospital Mergers: A Case Study of the Sutter-Summit Transaction*, 18 INT’L J. ECON. BUS. 65 (2011) (using empirical price data to analyze price increases following the Sutter-Summit merger); Vita & Sacher, *supra* note 72, at 66 (“Studies using data from the mid-1980s and after typically found a positive relationship between concentration and price.”).

93. Philipson & Posner, *supra* note 85, at 2.

94. Thompson, *supra* note 79, at 92.

95. *Id.*

96. *Id.*

merged parties to increase prices.⁹⁷ Another possibility is that competition from hospitals within sixty miles of New Hanover controlled potential increases in price.⁹⁸ In fact, the closest hospitals to New Hanover that are of comparable size to Cape Fear are forty-five miles away.⁹⁹

The merger led to a number of efficiencies that could potentially have affected, or, alternatively, offset anticompetitive effects. Following the merger, New Hanover opened an orthopedic specialty center at Cape Fear and consolidated orthopedic surgery at that location.¹⁰⁰ The merger also helped improve access to radiology services with new equipment such as a 16-slice CT scanner, a dual-headed nuclear medicine camera, and a multipurpose room geared to orthopedic procedures at Cape Fear.¹⁰¹ If these consolidations resulted in cost savings that were passed on to consumers, it is possible that, despite numerical indications that the merger led to price increases, prices may have actually fallen for consumers due to the heightened quality of services they received, or because they had access to different medical resources unavailable before the merger took place.

The New Hanover study estimated the impact of the New Hanover-Cape Fear merger on inpatient prices.¹⁰² It made calculations based on patient-level claims data from New Hanover, as well as from four large managed care insurers.¹⁰³ Moreover, in order to control for extrinsic changes experienced by other hospitals, the New Hanover study, in what is known as a difference-in-differences (“DID”) approach, estimated price changes at New Hanover relative to price

97. *Id.*

98. *Id.* (Table 1 listing hospitals located within sixty miles of New Hanover); the two closest hospitals located within approximately thirty miles of New Hanover are approximately one-half of the size of Cape Fear at the time of the acquisition. Specifically, “Pender Memorial, located 32 miles from New Hanover, is somewhat larger but it has been operated by New Hanover since 1999. Thus, it is not an independent competitor.” *See id.* at 99, n.2.

99. *Id.* at 92.

100. Press Release, New Hanover Reg’l Med. Ctr., Wilmington’s Hospitals Come Together to Provide Better Care and Access (July 9, 2007), <https://www.nhrmc.org/about/news/2007/07/wilmington-s-hospitals-come-together-to-provide-better-care-and-access>.

101. *Id.*

102. Thompson, *supra* note 79, at 93. (“Our analysis is based on patient-level claims data from New Hanover and four large managed care insurers. These data contain detailed information about the diagnosis, procedures, and payments relating to the claim, as well as demographic information about the patient. We perform econometric analysis to control for factors, such as the types of illnesses treated, that are unrelated to the merger that may affect hospital prices.”).

103. *Id.* at 94.

changes at a control group of similar hospitals.¹⁰⁴ The control group included eleven urban hospitals in North Carolina that were similar in size to New Hanover.¹⁰⁵

In the end, the unadjusted average price per admission charged by New Hanover/Cape Fear increased post-merger for three of the four insurers analyzed. These increases ranged from 24% for Insurer 3 to 106% for Insurer 1.¹⁰⁶ Prices decreased by 18% for Insurer 4.¹⁰⁷ When compared to the control group of hospitals, two of the insurers experienced substantial post-merger price increases. Specifically, Insurers 1 and 2 experienced a 131% and 49.5% difference, respectively.¹⁰⁸ The post-merger price changes for Insurer 3 were comparable to those for the control group, i.e., a 2.7% increase, while the Insurer 4 actually experienced a significant post-merger price decrease of 29%.¹⁰⁹ These types of mixed results are not uncommon—varied results across insurers such as these were also found by Haas-Wilson and Garmon in their study of two hospital mergers in Chicago.¹¹⁰

While the New Hanover study concluded that its results provided “mixed evidence regarding the effect of the New Hanover-Cape Fear transaction on inpatient prices” and that it was therefore “difficult to draw conclusions about the impact” of the merger,¹¹¹ the empirical results suggest that the New Hanover merger enhanced the merged hospitals’ market power for at least two of the insurers. Specifically, the Guidelines state that “[a] merger enhances market power if it is likely to encourage one or more firms to raise price. . . .”¹¹² However, because of the undeniably mixed results presented by the four insurers analyzed in the New Hanover study, the study would be strengthened by an analysis of possible explanations for such variations amongst insurers as well as ways that future retrospective studies could conduct

104. *Id.*

105. *Id.* at 95, n.17 (“These hospitals are: Carolinas Medical Center, Duke University Hospital, Forsyth Medical Center, Moses Cone Health System, Pitt County Memorial Hospital, Presbyterian Healthcare, North Carolina Baptist Hospital, Northeast Medical Center, Rex Healthcare, University of North Carolina Hospitals, and WakeMed.”) In particular, this group includes hospitals that have over 400 beds. *Id.* at 95.

106. *Id.* at 96.

107. *Id.*

108. *Id.* at 98.

109. *Id.*

110. Haas-Wilson & Garmon, *supra* note 92, at 27–28 (showing an uneven increase in market power following the Evanston merger).

111. Thompson, *supra* note 79, at 99.

112. HORIZONTAL MERGER GUIDELINES, *supra* note 25, at 2.

more robust analyses that more conclusively measure the consequences of hospital mergers.

C. Possible Explanations for Inconclusive Results

There are a few possible reasons for these inconclusive results. As for the four large managed care insurers studied, possible explanations include the insurers' bargaining abilities resulting from their size, the types of plans that they offer, and the services they provide. This result is also consistent with the literature showing variation in health insurers' abilities to negotiate price discounts with hospitals.¹¹³ More specifically, in the New Hanover study, it could be that Insurer 4's price decrease, and Insurer 2's control group-comparable price changes were the result of dynamic interactions between insurers and the hospital(s) over time. It is also possible that price decreases and potential discounts experienced by Insurer 4 may only be temporary because of managed care predatory pricing.¹¹⁴ Furthermore, it could be that lower prices paid by one plan may lead to "more-than-offsetting higher prices paid by other insurers"¹¹⁵—which may very well be what happened with the four managed care insurers in the New Hanover study. In other words, that one insurer's price saw a decrease could result from either bargaining abilities or cost offsetting and is not necessarily because of increased efficiencies resulting from the merger. While many retrospective studies do not disclose the identity of the insurers, future studies could benefit from somehow measuring or addressing whether any of the aforementioned potential explanations for insurer price changes were relevant in that case. If these explanations can be ruled out, then the results of the study are that much stronger and indicate what was demonstrated by the data compared to control groups. However, if these questions are not asked or addressed by retrospective studies, the validity of their results is undercut, or alternatively, as in the New Hanover study, the inconclusive nature of their conclusions remains.

113. See Vivian Y. Wu, *Managed Care's Price Bargaining with Hospitals*, 28 J. HEALTH ECON. 350, 351 (2009).

114. *Id.* at 358 (describing how managed care predatory pricing is one of the factors not considered by the article's data). Managed care predatory pricing means the hospital can set a different rate for each patient, instead of managed care providers publishing actual prices; and all patients, insured and uninsured, are not billed the same published rate for the same service. See generally Mark A. Hall & Carl E. Schneider, *Patients as Consumers: Courts, Contracts, and the New Medical Marketplace*, 106 MICH. L. REV. 643 (2008).

115. Wu, *supra* note 113, at 358.

IV.

IMPROVING THE ANALYSIS OF MERGER EFFECTS:
FOCUS ON QUALITY

In addition to failure of the New Hanover study to assess the impacts of quality improvements on price, Vita and Sacher's study of the Dominican Santa Cruz Hospital acquisition and the litigation around the Evanston Northwestern and Highland Park merger all show the need for adjudicators to develop a clear framework for evaluating quality improvements. An important antitrust principle is that all the effects of a transaction must be analyzed and balanced to determine the net effect on consumers while maintaining a strong incentive for competitive business.¹¹⁶ In a case in which consumers are helped by some aspects of a hospital merger and hurt by others, the decision about whether the merger should be allowed should be based on whether the benefits significantly outweigh the harms. Measuring various benefits across the spectrum, however, can often prove to be a challenge. The fact that these benefits vary greatly in value and magnitude exacerbates the need for the development of apt guidelines for the authorities to measure these benefits.

An aspect that may render the consequences of hospital mergers generally inconclusive or inaccurate is the fact that there is no standardized or remotely consistent method for evaluating health care quality improvements for consumers vis-a-vis post-merger price increases. For example, as previously mentioned, the New Hanover hospital merger resulted in numerous benefits conferred upon patients. Specifically, the merger resulted in the development of an orthopedic specialty center at Cape Fear, increased access to operating rooms and recovery rooms at Cape Fear, standardized procedures, forms and equipment, and improved access to radiology services.¹¹⁷ However, the retrospective study did not measure, analyze, quantify, nor determine whether quality improvements of this sort outweighed the price increases seen by three of the four insurers.¹¹⁸ Other retrospective studies, such as Tenn's case study of the Sutter-Summit Transaction in the Bay Area, also did not perform this kind of balancing; the Sutter-Summit Transaction study acknowledged that "[a] full determination of whether antitrust enforcement was appropriate in this matter re-

116. *The Antitrust Laws*, *supra* note 18 ("Yet for over 100 years, the antitrust laws have had the same basic objective: to protect the process of competition for the benefit of consumers, making sure there are strong incentives for businesses to operate efficiently, keep prices down, and keep quality up.").

117. Press Release, New Hanover Reg'l Med. Ctr., *supra* note 100.

118. Thompson, *supra* note 79, at 93.

quires an analysis of two additional issues that are beyond the scope of this study,” one of which was “the merger’s impact on hospital quality.”¹¹⁹

However, in Vita & Sacher’s retrospective analysis of Dominican Santa Cruz Hospital’s acquisition of its sole rival in the city of Santa Cruz, California, AMI-Community Hospital, potential post-merger quality improvement measurements were used as a potential explanation for the price increases.¹²⁰ Before the merger, the only other hospital in Santa Cruz County was Watsonville Community Hospital.¹²¹ This possible explanation received some support from the expense regressions reported, which show that Dominican’s expenses per admission increased by about \$263 after the merger.¹²² The study admits that their “inability to observe and measure quality perfectly means that [they] cannot rule out the possibility that the price increases reflect improvements in quality, rather than increased price-cost mark-ups with unchanged (or even diminished) quality levels.”¹²³

In response to these conjectures, the Vita and Sacher study examines post-merger improvements in quality. These improvements in quality could consist of volume-related quality increases (namely efficiencies, synergies, or better record-keeping methodologies only possible with volume-increases). They could also be manifested in greater resource use per patient. These quality improvements could manifest as post-merger increases in expenses per admission or expenses per day at both hospitals.¹²⁴ In order to test for these potential explanations, the study carries out two tests of hypothesis, first by examining data on patient flow and second by constructing dependent variables equal to the difference in per-admission expenses between Dominican and the peer group.¹²⁵ The study then regresses this difference against the same variables used in the regressions. Both tests ultimately fail to support the possible explanation that price increases were the result of quality improvements.¹²⁶

Similarly, the merger of Evanston Northwestern Healthcare Corporation (“ENH”) with Highland Park Hospital provides another example of why adjudicators should develop a clear framework for

119. Tenn, *supra* note 92, at 79 n.3.

120. Vita & Sacher, *supra* note 72, at 80 (using expense per-admission as a proxy for quality improvement).

121. *Id.* at 65.

122. *Id.* at 80.

123. *Id.*

124. *Id.* at 81.

125. *Id.* at 81–82.

126. *Id.*

evaluating quality improvements. The FTC challenged the ENH-Highland Park merger, and the Commission held that Evanston's acquisition of Highland Park violated Section 7 of the Clayton Act.¹²⁷ The complaint counsel and respondent "each presented the testimony of a health care quality expert, who identified three widely recognized measures of quality": structure (facilities and staffing), process (surgical procedures or medication regimens), and outcome (mortality).¹²⁸ The hospital's evidence "focused principally on structural changes (as well as some process changes) made by ENH," which its expert, Dr. Mark Chassin, testified "increased the likelihood of desired health outcomes."¹²⁹

However, ENH generally speaking did not show that the claimed improvements actually improved health care outcomes nor did it provide quantifiable evidence to that effect.¹³⁰ Importantly, the Federal Trade Commission found that "the large majority of the quality improvements asserted by ENH [were possible] without the merger."¹³¹ Additionally, the record shows that "a number of the changes that ENH made at Highland Park after the merger reflect emerging trends in the industry, rather than benefits unique to the merger."¹³² The only merger-specific improvement the Commission found was "the medical staff integration and affiliation with a teaching hospital."¹³³ Even so, there is no literature that demonstrates that being owned by a teaching hospital results in an improvement in quality of care, nor does the provision of greater opportunities for physicians to upgrade their skills necessarily constitute verifiable evidence that this improvement suffi-

127. Evanston Nw. Healthcare Corp., No. 9315, 2007 WL 2286195, at *85 (F.T.C. Aug. 6, 2007).

128. *Id.* at *39.

129. *Id.* citing TR 5141 (Chassin).

130. *Id.*; "The ALJ found that ENH did not present any quantifiable evidence that improvements at Highland Park enhanced competition, ID 177, and that ENH failed to show that quality improved across the combined ENH system (not just at Highland Park) and relative to other hospitals. ID 179-81. The ALJ found that Highland Park could have achieved the vast majority of the claimed improvements without the merger. ID 182-92." *Id.*

131. *Id.* The FTC found that the quality improvements cited were not merger-specific and could be achieved in other ways outside the merger. This implies that had the quality improvements been merger-specific, they would have been weighed differently and taken into account.

132. *Id.* at *40 citing IDF ¶ 895 (discussing quality assurance program); IDF ¶ 950 (decentralized dispensation of medication); IDF ¶973 (use of intensivists); IDF ¶(electronic medical records systems); TR 3840-41 (Silver) (in-house physician coverage in obstetrics departments).

133. *Id.* at *41.

ciently offsets the competitive harm that resulted from this specific merger.¹³⁴

The trial court judge found “no evidence of improvement in overall quality of care relative to other hospitals.”¹³⁵ Furthermore, the FTC concluded that Evanston “failed to show that quality improvements across the combined ENC system and relative to other hospitals.”¹³⁶ This is also illustrated in a 2010 study by the Massachusetts Attorney General titled *Examination of Health Care Cost Trends and Cost Drivers*, which found that wide variations in hospitals’ prices “are unexplained by differences in quality of care as measured by the insurers themselves.”¹³⁷ In that case, any evidence of potential quality improvements that may have resulted post-merger was not found. A commonality between the measurement of post-merger quality improvements measured either during a retrospective study or in court is that there is no consistency in the way that varying types of evidence of potential post-merger quality improvements is presented or evaluated.

V.

AGENCY APPROACH TO MERGER-SPECIFIC QUALITY IMPROVEMENTS

When hospital merger quality improvements are measured either during litigation, retrospective studies, or in *ex ante* calculations, neither the *Merger Guidelines*—authored by the DOJ and the FTC—nor the *Statements of Antitrust Enforcement Policy in Health Care* provides a standardized method for evaluating post-merger quality improvements. This Part first discusses these two controlling sources of guidance for merging hospitals. It then suggests places where the Agencies and merging parties might benefit from more specific guidance when it comes to addressing post-merger quality improvements.

As previously discussed, some studies devise equations with numerous variables or coefficients, while others employ expert testimony or unquantifiable observations in court. One of the primary benefits of mergers is their ability to create significant efficiencies which may result in improved quality, better service, or new products. The Guidelines state that the Agencies only credit efficiencies unlikely to be accomplished without the proposed merger or through another

134. *Id.*

135. Haas-Wilson & Garmon, *supra* note 92, at 22.

136. *Id.* at 23.

137. *Id.*

means.¹³⁸ The Guidelines admit that efficiencies are difficult to verify and quantify in part because a lot of the information is in the possession of the merging firms and may not be produced.¹³⁹

Without much specificity, the Guidelines call for merging firms to substantiate efficiency claims so that Agencies can then verify through the use of “reasonable means” how and when each efficiency claim would be achieved, how the results would enhance the merged firm’s ability and incentive to compete, and why each result would be merger-specific.¹⁴⁰ In addition to requiring verification that the merger-specific efficiencies did not arise from anticompetitive results, the Guidelines state that “efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means.”¹⁴¹ In summary, efficiencies are cognizable when they are (1) merger-specific, (2) have been verified, and (3) do not arise from anticompetitive reductions in output or service.

Moreover, the Guidelines underscore that “the greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market.”¹⁴² The Guidelines helpfully give more guidance as to the weight of factors in this case by specifying that the burden of evidencing efficiencies and improvements in quality is higher in potential mergers that could have anticompetitive consequences.¹⁴³ However, we don’t really know how much greater the efficiencies ought to be for various levels of potential anticompetitive effects. As for research and development that might result from horizontal mergers—a possible and frequent result addressed in the guidelines—the Agencies consider the ability of the merged firm to conduct research or development more effectively along with the ability of the merged firm to appropriate the benefits of its innovation.¹⁴⁴

While the Guidelines provide broad strokes of various factors the Agencies should take into account, with limited mention of how much weight to ascribe to each factor contextually, the *Statements of Anti-trust Enforcement Policy in Health Care* (“Health Care Statements”)

138. HORIZONTAL MERGER GUIDELINES, *supra* note 25, at 30.

139. *Id.*

140. *Id.*

141. *Id.*

142. *Id.* at 31.

143. *Id.*

144. *Id.*

provide useful industry-specific guidance on hospital mergers.¹⁴⁵ In 1993, the Department of Justice and the Federal Trade Commission issued six statements of their antitrust enforcement policies for mergers in various areas of health care, one of which was the area of hospital mergers.¹⁴⁶ These statements were revised several times between 1993 and 1996, but have not been revised since.¹⁴⁷

The Health Care Statements section on hospital mergers does not directly address how to factor in quality in antitrust analyses. However, section three of the Health Care Statements, which addresses the enforcement policy on hospital joint ventures involving high-technology or other expensive health care equipment, might provide some guidance on how the Agencies interpret merger-specific quality improvement in hospitals. Specifically, step three of the analysis calls for an examination of the endeavor's potential to create pro-competitive efficiencies.¹⁴⁸

The Health Care Statements provide the examples of "improvement in quality to occur as providers gain experience and skill from performing a larger number of procedures."¹⁴⁹ For example, these improvements transpire in certain specialized clinical services contexts, such as open heart surgery, where a combination may permit the hospital to generate a greater patient volume to meet well-accepted minimum standards for assuring quality.¹⁵⁰ Additionally, the Health Care Statements also explain that a joint venture could increase the quality of care by allowing for better utilization and scheduling of the equipment, by increasing the hospital's capacity, or by giving patients access to more sophisticated equipment that can perform quicker.¹⁵¹ All in all, the Health Care Statements provide some useful examples of quality improvements that can result from the consolidation of services often seen in hospital mergers, but it is still difficult to glean how the Agencies regard the wide gamut of touted benefits, efficiencies, and quality improvements that can result from a hospital

145. HEALTH CARE STATEMENTS, *supra* note 25.

146. *Id.* at 2. The healthcare areas involved are (1) hospital mergers, (2) hospital joint ventures involving high-technology or other expensive medical equipment, (3) physicians' provision of information to purchasers of health care services; (4) hospital participation in exchange of price and cost information, (5) health care providers' joint purchasing agreements; and (6) physician network joint ventures. *Id.* at 1.

147. *Id.* at 2.

148. *Id.* at 18.

149. *Id.* at 35.

150. *Id.*

151. *Id.* at 28.

merger—especially when weighed against anticompetitive consequences such as price increases.

In summary, between the Guidelines and the Health Care Statements, the Agencies are advised to only credit (1) benefits of mergers that are merger-specific, that is, those that are unlikely to happen absent the merger; (2) benefits that are not vague and can be verified through “reasonable means” (specifically, benefits where it can be shown how and when each would be achieved, and how the results would enhance the merged firm’s ability and incentive to compete); and (3) benefits that outweigh any potential anticompetitive effects (“the greater the potential adverse competitive effects of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers”¹⁵²). The Agencies also consider (4) the ability of the merged firm to conduct research or development more effectively along with the ability of the merged firm to appropriate benefits of its innovation. Furthermore, the Agencies can consider (5) improvements in quality to occur from gaining experience and skill from performing a large number of procedures, (6) better utilization and scheduling of equipment by increasing hospital capacity, and (7) access for patients to quicker and more sophisticated equipment.

VI.

POLICY RECOMMENDATIONS

Evaluating merger-specific quality improvements is a challenge for a variety of reasons. As previously mentioned, it is difficult to obtain the information necessary because data on results are usually in the possession of the merging parties.¹⁵³ Additionally, obtaining information becomes even more of a challenge when *potential* quality improvements or efficiencies are analyzed *ex ante* because of the added layer of uncertainty as to how or whether the touted improvements will actually happen and when they will come into effect. And even if estimates that answer these questions are obtained, adjudicators must still determine how soon after the merger these improvements must take effect to be credited by the Agencies, in addition to facing the inherent challenge in discerning what verification through “reasonable means” entails, or what kind of evidence can be considered. Furthermore, one of the main challenges undoubtedly involves weighing anticompetitive effects and quality improvements. Which quality improvements are most important, and at what magnitude do they out-

152. HORIZONTAL MERGER GUIDELINES, *supra* note 25, at 31.

153. *Id.* at 30.

weigh anticompetitive effects like price increases? Because of all of these difficulties, increased guidance when it comes to merger-specific quality improvements would increase consistency in the evaluations of anticompetitive effects for hospital mergers for both the Agencies and for the parties involved.

Given the many challenges that face the evaluation of post-merger quality increases, the FTC and the DOJ would benefit from a greater degree of specificity in the Guidelines and/or the Health Care Statements when reviewing mergers through their designated administrative processes and challenging those that threaten anti-competitive effects. Admittedly, quantifying some of these factors or creating any quality-related safe harbors would be unrealistic and impracticable. Yet, a more comprehensive enumeration of factors, elaborate descriptions, and examples, along with a hierarchy of sorts for the Agencies' consideration, would be useful.

For example, more specificity would be helpful for guidance regarding the post-merger increase of access to specialized, sophisticated equipment. This is an exception in that it is probably one of the few quality-related factors that can be more realistically quantified. The value and price of the service provided (e.g., scans, x-rays), the increased number of patients who can use the equipment because it is faster, and the increased number of patients who can access equipment they wouldn't otherwise be able to are all realistically quantifiable aspects that could be calculated and measured against potential post-merger price increases. Additionally, the Guidelines and/or the Health Care Statements could also elaborate on how and to what extent the FTC and the DOJ should consider the creation of a new specialty center acquired through the merger.

Unlike post-merger increased access to more sophisticated equipment, other post-merger effects can be harder to quantify. Mergers may also result in integration and affiliation with teaching hospitals.¹⁵⁴ This involves physicians participating in teaching activities by

154. Merger activity among academic medical centers (AMCs, i.e. teaching hospitals) spiked sharply in the 1990s. Alison Evans Cuellar & Paul J. Gertler, *Trends in Hospital Consolidation: The Formation of Local Systems*, 22 HEALTH AFF. 77, 77, 80 (2003). Some suggest that trustees' concerns over market viability were sufficiently high to engage in the outright sale of their teaching hospitals. See, e.g., David Blumenthal & Nigel Edwards, *A Tale of Two Systems: The Changing Academic Health Center*, 19 HEALTH AFF. 86, 87 (2000); David Blumenthal & Joel S. Weissman, *Selling Teaching Hospitals to Investor-Owned Hospital Chains: Three Case Studies*, 19 HEALTH AFF. 158, 158, 163 (2000). This was in part fueled by a desire for larger, more diversified systems supporting the full spectrum of care, and capacity that would sustain financial support for the academic mission in the face of declining payer reim-

giving didactic lectures to medical students receiving their training at the hospital. However, there is a difference between the transformation of a post-merger hospital into a teaching hospital on the one hand, and medical staff integration and affiliation with a teaching hospital on the other hand. According to the ENH merger opinion, studies have apparently shown that teaching hospitals have lower risk-adjusted mortality rates in certain clinical areas.¹⁵⁵ Therefore, numerous stakeholders would benefit from more streamlined guidance as to how merger-specific effects regarding teaching hospitals ought to be interpreted.

Moreover, merging parties and adjudicating entities could benefit from receiving more elaborate guidance on how to address potential merger-specific quality improvements in the face of post-merger price increases. To address the difficulties of weighing improvements against price increases, specifically, a listing or elaboration of which factors ought to be considered would be helpful. Additionally, a listing elucidating what magnitude of a particular benefit or timeline of implementation would be required or weighed favorably in this analysis would provide helpful guidance. Lastly, various stakeholders would benefit from guidelines outlining which combination of the above factors or metrics would suffice to outweigh anticompetitive effects such as price increases.

Alternatively, the Agencies might benefit from examples of what kinds of predicted quality improvements *would not* suffice to outweigh anticompetitive effects such as price increases. Should timelines factor into this calculation? Would a predicted reduction in risk-adjusted mortality for a particular condition or procedure be a dispositive measurement? How about a predicted reduction in average length of stay? At a fundamental level, more standardized guidance on what kinds of evidence would be considered under various quality categories would be helpful.

bursement. William N. Kelley, *Academic Medicine and Real Health Care Reform*, 119 J. CLIN. INVEST. 2852, 2852 (2009).

Additionally, mergers can happen with teaching hospitals in part when there is an understanding that specialized areas of research, as teaching hospitals provide, can contribute to patient outcomes. Mergers with academic institutions are not without their challenges. Post-merger, teaching faculty and researchers can feel “underappreciated, overly corporatized, and cut out of governance structures . . . Staff at teaching hospitals also may face similar issues after combining with a nonteaching hospital.” Stacy Weiner, *Why Mergers Should Matter to Everyone in Academic Medicine*, AAMC (Dec. 19, 2017), <https://news.aamc.org/patient-care/article/why-mergers-should-matter-everyone-academic-medi/>.

155. Evanston Nw. Healthcare Corp., No. 9315, 2007 WL 2286195, at *41 (F.T.C. Aug. 6, 2007).

Since the Guidelines and Health Care Statements are primary sources of reliance for Agencies when they are evaluating mergers,¹⁵⁶ this Note calls for amending the Guidelines and Health Care Statements in a way that would provide the Agencies with more guidance when they evaluate quality improvements and efficiencies resulting from hospital mergers. However, it is important to note that the process necessary to amend either of these sources of guidance is elaborate, complicated, and requires a large institutional commitment. The process is time intensive, expensive, and requires a significant amount of intra-agency cooperation and input from outside lawyers, economists, and businesspeople.¹⁵⁷ The process involves receiving comments from the various stakeholders and making further adjustments to the draft before issuing the final revised guidelines.¹⁵⁸ This process was no less elaborate when the Horizontal Merger Guidelines were updated in 2010.¹⁵⁹ It began in 2009, when the DOJ and the FTC announced a process for reviewing the Horizontal Merger Guidelines and assessing whether they should be revised in the first place in order to better reflect actual practice.¹⁶⁰ “The process included significant reflection within the Department, public workshops, and opportunities for public comment, including an opportunity to comment on a draft revision.”¹⁶¹

While it is clear that courts, to one extent or another, take into consideration post-merger quality improvements or efficiencies,¹⁶²

156. HEALTH CARE STATEMENTS, *supra* note 25; HORIZONTAL MERGER GUIDELINES, *supra* note 25; Christine A. Varney, *The 2010 Horizontal Merger Guidelines: Evolution, Not Revolution*, 77 ANTITRUST L.J., 651, 652 (2011) (“Courts, too, accept the basic Guidelines structure. For instance, the Fifth Circuit Court of Appeals recently described the Guidelines as ‘persuasive authority when deciding if a particular acquisition violates antitrust laws.’”) (citing *Chi. Bridge & Iron Co. N.V. v. FTC*, 534 F.3d 410, 431 n.11 (5th Cir. 2008)).

157. Gary Zanfagna, *Pandora’s Box Opened: The New Horizontal Merger Guidelines*, THE ANTITRUST SOURCE 1 (Oct. 2010), https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/Oct10_Zanfagna10_21f.pdf.

158. *Id.*

159. Varney, *supra* note 156, at 651.

160. *Id.*

161. *Id.*; see also *Horizontal Merger Guidelines Review Project*, U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N (Jan. 14, 2010), <https://www.ftc.gov/news-events/events-calendar/2010/01/horizontal-merger-guidelines-review-project-0> (materials include transcripts, public comments, and draft Guidelines).

162. For example, in *Cargill, Inc. v. Monfort of Colorado, Inc.*, the plaintiff claimed it would be injured because the merger would produce “multiplant efficiencies” that would enable the merged firm to lower prices in order to compete for market share. *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104, 114-16 (1986). The Supreme Court, quoting *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488, held that “it is inimical to the [the antitrust] laws” to enjoin a merger because plaintiff

they have been arriving at their conclusions—and weighing efficiencies and quality improvements—without specific, consistent guidance from the Guidelines or the Health Care Statements. Therefore, perhaps the Guidelines are not the best source to update because the text is not industry-specific to hospitals. To this end, given the continuing prevalence of hospital mergers,¹⁶³ courts and adjudicators could greatly benefit from increased guidance and consistency from the Agencies in analyzing hospital mergers. However, some of the above suggestions are sufficiently transferable between industries to the extent that it

would have to compete on price with a more efficient competitor. *Cargill, Inc.* 479 U.S. at 104, 110–11.

[T]o hold that the antitrust laws protect competitors from the loss of profits due to such price competition would, in effect, render illegal any decision by a firm to cut prices in order to increase market share. The antitrust laws require no such perverse result, for “[i]t is in the interest of competition to permit dominant firms to engage in vigorous price competition, including price competition.”

Id. at 116 (quoting *Arthur S. Langenderfer, Inc. v. S.E. Johnson Co.*, 729 F.2d 1050, 1057 (CA6), *cert. denied*, 469 U.S. 1036 (1984)). In *FTC v. University Health, Inc.*, the Eleventh Circuit was the first to hold squarely that efficiencies may be used to rebut a prima facie showing of anticompetitive effect: “[w]e conclude that in certain circumstances, a defendant may rebut the government’s prima facie case with evidence showing that the intended merger would create significant efficiencies in the relevant market.” *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1222 (11th Cir. 1991). In *FTC v. Tenet Health Care Corp.*, the Eighth Circuit reversed a preliminary injunction blocking the merger of the only two general care hospitals in Poplar Bluff, Missouri. *FTC v. Tenet Health Care Corp.* 186 F.3d 1045, 1053 (8th Cir. 1999). The court held that the district court had committed legal error in refusing to consider “evidence of enhanced efficiency in the context of the competitive merger.” *Id.* at 1054. The court described that evidence as showing that combining the two hospitals would create a larger and more efficient hospital capable of delivering better medical care and that this would “enhance competition” in the broader Southeastern Missouri area. *Id.* at 1055. However, while in *FTC v. H.J. Heinz Co.* the D.C. Circuit did not squarely hold that efficiencies could be used to rebut a prima facie showing that a merger is anticompetitive, the court noted that “the trend among lower courts is to recognize the defense.” *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 720 (D.C. Cir. 2001). The court held, however, that the parties had failed to produce sufficient evidence to rebut the inference of anticompetitive effect and that the district court’s finding to the contrary in denying a preliminary injunction was clearly erroneous. *Id.* at 725.

163. “Healthcare mergers and acquisitions are increasing at a rapid rate. Healthcare organizations announced 115 merger and acquisition transactions . . . in 2017, the highest number in recent history. 2018 is likely met or even exceeded the number of hospital merger and acquisition deals made in 2017.” Jacqueline Lapointe, *How Hospital Merger and Acquisition Activity Is Changing Healthcare*, REVCYCLE INTELLIGENCE (July 20, 2018), <https://revcycleintelligence.com/features/how-hospital-merger-and-acquisition-activity-is-changing-healthcare>; see also KAUFMAN HALL, 2017 IN REVIEW: THE YEAR M&A SHOOK THE HEALTHCARE LANDSCAPE 1 (2018) (finding the same). Additionally, in 2018, “the average size in revenue of the sellers in hospital merger and acquisition deals has grown at a compound annual growth rate (CAGR) of 13.8 percent since 2008.” KAUFMAN HALL, 2018 M&A IN REVIEW: A NEW HEALTHCARE LANDSCAPE TAKES SHAPE 1 (2019).

would be helpful for the Guidelines to include them. As for the Health Care Statements, they have not been updated since 1996.¹⁶⁴ In addition to other severely outdated aspects of the statements such as the antitrust safe harbors, the Health Care Statements would be greatly improved by more robustly detailing how the Agency would regard the various facets of merger-specific efficiencies and quality improvement effects.

One of the other factors which obviate the need for the development of more explicit guidelines to help evaluate post-merger benefits is the fact that tools to measure the anti-competitive effects of hospital mergers have improved recently. Over the past few years, the FTC has certainly seen a marked improvement in their ability to challenge hospital mergers.¹⁶⁵ A possible reason for this is the fact that the methodologies for measuring the price effects of hospital mergers are constantly being improved. For example, in one of his studies, David Dranove explains the various ways that he has improved on past researchers' econometric methods. For instance, when compared to Alexander, Halpern and Lee's 1996 hospital merger study, Dranove's 2003 hospital consolidation evidence study departs from previous ways of econometric analysis by using a difference-in-difference specification of a multi-product cost function, using propensity-score-matched hospitals as a comparison group as opposed to the univariate difference-in-difference comparison of mergers used by Alexander, Halpern, and Lee.¹⁶⁶ Generally, older econometric studies in the 90s did not employ propensity score matching for hospitals in this arena, which provide a standardized, readily intelligible form of comparison when conducting antitrust analyses.¹⁶⁷

Other departures from Connor, Feldman, and Dowd's studies, discussed earlier,¹⁶⁸ include taking difference data over an entire nine-year period, regardless of when the actual mergers occurred, as opposed to just controlling for mean regression. This is because "many unobserved factors that are potentially correlated with the merger decision and costs may change within this period of 9 years, potentially biasing the estimate of the effect of the merger, despite the use of differences."¹⁶⁹ In response to this potential discrepancy, Dranove uses a panel design using consistent and identical time windows for all

164. HEALTH CARE STATEMENTS, *supra* note 25.

165. *See* cases cited in *supra* note 11.

166. David Dranove & Richard Lindrooth, *supra* note 54, at 984.

167. *Id.* at 985.

168. *Id.*

169. *Id.*

mergers.¹⁷⁰ Another key difference is that the Dranove study, unlike previous similar econometric approaches, studies not just the period of the mergers when they were consummated—in this case, 1989-1996—but also the period from 1988-2000, on the assumption that a four-year follow-up stage ought to be enough time for the disruptions caused by a merger to level out.¹⁷¹ However, while there have been improvements in measuring the price effects of hospital mergers, researchers and the Agencies have not yet managed to consistently or adequately measure quality effects of hospital mergers. So, to get a more accurate and balanced picture of what happens when hospitals merge, econometric tools and the guidelines that govern the merger challenge process should both be continually improved.

CONCLUSION

While hospital mergers of all kinds often result in anti-competitive consequences such as price increases, the fact that quality improvements are not consistently measured renders these conclusions about the overall antitrust effects of hospital mergers limited because they are not telling the full story. Hospital mergers can lead to various benefits and drawbacks. For example, they can result in more coordinated care which can increase volume for specialized services and improve quality through efficiencies and even lead to cost savings. This can happen through infrastructure improvements and the establishment of robust IT systems and electronic medical records across hospitals. Empirical studies, however, present mixed findings about post hospital merger cost savings. Hospital mergers can also result in increased accessibility to specialized tertiary care and primary care services. On the other hand, hospital mergers can also result in price increases and a decrease in innovation for products and processes, as well as the inability to achieve economies of scale in smaller communities.

Additionally, retrospective studies can certainly illuminate how some of these hospital merger effects play out while analyzing a specific hospital merger *ex post*. Not unlike many *ex post* hospital merger analyses, the New Hanover study does not weigh the anti-competitive effects against the quality improvements that resulted from the merger in the form of specialized care and improved technology.¹⁷² For example, in the New Hanover study, the hospital merger led to price in-

170. *Id.*

171. *Id.*

172. Thompson, *supra* note 79, at 117.

creases for most of the insurers measured, and a price decrease for one. It also resulted in an increase in specialized equipment and orthopedic specialization.¹⁷³ In addition to demonstrating that non-profit hospitals can result in anticompetitive effects such as price increases, analyzing the New Hanover merger also left a significant aspect of the analysis unexplored.

Neither retrospective analyses nor litigated hospital merger cases demonstrate a consistent method of analyzing, measuring, or discussing quality improvement effects or efficiencies resulting from hospital mergers. The Horizontal Merger Guidelines provide generalized cross-industry guidance for the Agencies on how to analyze anticompetitive effects of a transaction. However, the Guidelines are extremely limited and do not specifically illuminate how the weighing mechanism would operate in the case of hospital mergers evaluating alleged quality improvements or increased efficiencies. The Health Care Statements, while industry specific, do not resolve these shortcomings either. While there are admittedly many challenges in measuring these improvements, this Note argues that the Agencies could greatly benefit from increased guidance in the hope of a modicum of consistency in the fairly idiosyncratic arena of analyzing hospital mergers. This increased consistency would benefit both the Agencies and the parties considering undertaking a hospital merger. Those parties would have a better idea of what aspects the Agencies would consider when measuring the potentially anticompetitive results of hospital mergers.

Some of the recommendations include amending the Guidelines to include a more complete enumeration of factors along with a more elaborate detailing of examples that would satisfy these factors. Additionally, further guidance as to the relative importance that the Agencies place on these factors, the relevant timelines for touted quality improvements, the consideration of teaching hospitals and academic institutions, mechanisms for weighing against anticompetitive effects, and a general update to existing sources of guidance would greatly benefit many relevant stakeholders. While it is hard to imagine ever determining bright line safe harbors for quality improvements resulting from hospital mergers, the many challenges presented in analyzing these consequences are not insurmountable and could result in increased consistency in both the adjudication and analysis of proposed hospital mergers.

173. *Id.*