No. 21-2603

In the United States Court of Appeals
for the Third Circuit

FEDERAL TRADE COMMISSION,
Plaintiff-Appellee,

v.

HACKENSACK MERIDIAN HEALTH INC;
ENGLEWOOD HEALTHCARE FOUNDATION,
Defendants-Appellants.

**On Appeal from the United States District Court for the
District of New Jersey, Case No. 2:20-cv-18140
The Honorable John Michael Vazquez**

**BRIEF OF *AMICI CURIAE* PROFESSORS, ECONOMISTS, AND
SCHOLARS IN SUPPORT OF APPELLEE AND AFFIRMANCE**

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INTEREST OF *AMICI CURIAE*

Amici curiae are 32 professors, economists, and scholars who teach and conduct research in the areas of economics and industrial organization, with a particular focus on antitrust and competition in healthcare markets. The Appendix lists the titles and affiliations of each individual. This brief applies what *amici* believe to be rigorous and current economic principles and research to the issues before the Court in this appeal. *Amici* have reviewed the district court's August 5, 2021 opinion preliminarily enjoining the proposed merger of Hackensack Meridian Health and Englewood Healthcare Foundation. Based on their expertise, the evidence before the district court, and other publicly available information discussed herein, *amici* have concluded that defining and evaluating geographic markets for hospital services based on the location of patients is consistent with both the *Horizontal Merger Guidelines* and the economic research into how competition and market forces influence hospital prices. *Amici* submit this brief to aid the Court's consideration of this important issue.[1]

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[1] *Amici* file solely in their capacity as individuals and not on behalf of any institutions with which they are affiliated. *Amici* have not been retained by any party to this action. This brief was not authored in whole or in part by counsel for any party. No person other than *amici* and its counsel made a monetary contribution that was intended for the preparation or submission of this brief. All parties have consented to the filing of this brief.

SUMMARY OF ARGUMENT

In its opinion granting a preliminary injunction in this matter, the district court accepted a geographic market based on the location of patients—commercially insured patients in Bergen County, New Jersey—as a relevant geographic market. The merging parties challenge this decision because, they claim, "[e]conomic literature, case law, and even the FTC's own Horizontal Merger Guidelines unanimously agree that a market can be defined by customer location *only if* suppliers can price discriminate based on customer location."[2] As the argument goes, because hospitals generally do not charge different prices to patients based on where they reside, patients in Bergen County are protected from price increases by patients outside of Bergen County—in the absence of patient-level price discrimination, any price increase applied to Bergen County patients would apply to all patients, and hence limiting the market to Bergen County patients is improper.

This argument critically relies on a flawed and superficial understanding of how prices are determined in the hospital industry. Hospitals negotiate prices with *insurers*, who act as buying agents on behalf of their enrollees (*i.e.*, patients).[3] As

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[2] *See* Opening Brief of Appellants, ECF 31, at 26 (hereinafter "Opening Brief").

[3] As the district court observed, "The healthcare industry is unique in antitrust cases because patients, the direct users of inpatient [general acute care] services, do

the merging parties acknowledge, patients at the point of care are generally insulated from hospital prices because of insurance.[4] In evaluating the FTC's patient-based market, therefore, the key question is whether market power can be exercised specifically over *insurers* that cater to customers in Bergen County. The public documents available in this matter, as well as decades of economic research, provide ample evidence that the answer to that question is yes. In this respect, hospitals effectively can engage in a form of price discrimination—not at the point of service but rather through their negotiations with insurers.

Although the merging parties' arguments about patient-based geographic markets are flawed, it is further worth emphasizing that, in this case, the market share and market concentration metrics under the hospital-based approach favored by the merging parties appear to yield *even stronger* evidence of anticompetitive effects. Moreover, the district court cited its consideration of numerous forms of evidence beyond market shares and market concentration in its decision granting

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not pay hospitals for the services [patients consume] (with the exception of co-pays or other similar charges)." Opinion with Findings of Fact & Conclusions of Law, *FTC v. Hackensack Meridian Health, Inc.*, No. 20-cv-18140, ECF 368, at 34 (Aug. 4, 2021) (hereinafter "District Court Opinion").

[4] Opening Brief at 3 (noting that patient preferences "are largely divorced from price because of insurance"). Although patients may generally be insulated from hospital prices at the point of care, higher hospital prices are likely to harm consumers through higher insurance premiums and lower wages.

the preliminary injunction.[5] The merging parties' argument obfuscates the consistent evidence—based on market shares, market concentration, *and* on direct evidence presented by the FTC and its economic expert—cited in the district court's decision to grant the FTC's request for a preliminary injunction.

ARGUMENT

I. THE PURPOSE OF DEFINING THE MARKET AND MEASURING MARKET SHARES IS TO ILLUMINATE THE EVALUATION OF COMPETITIVE EFFECTS.

In evaluating any horizontal merger, the ultimate goal of the analysis is to determine whether the merger will substantially lessen competition and lead to adverse effects like higher prices. The *Horizontal Merger Guidelines* describe numerous tools for assisting in this determination, such as retrospective examination of past mergers, calculating market shares and market concentration, estimating the extent of head-to-head competition between the merging parties, and merger simulation.[6]

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[5] District Court Opinion at 46-54.

[6] *See Horizontal Merger Guidelines* § 2.1, Dep't of Justice and Fed. Trade Comm'n (Aug. 19, 2010) (hereinafter "*Guidelines*").

Given the disputed issues before the court, our primary focus in this brief is on methods for defining geographic markets for hospital services.[7] As the *Guidelines* make clear, the purpose of market definition in evaluating horizontal mergers is "to illuminate the evaluation of competitive effects."[8] By identifying the relevant product and geography in which a merger may lessen competition, market definition pinpoints the most significant competitors to the merging parties, and further permits the measurement of market shares and market concentration.[9]

Because the exact nature of competition varies from industry to industry, it is essential that the way a market is defined aligns with the way that competition in the industry actually works. With that in mind, properly evaluating the district court's analysis in this matter requires an understanding of how competition and negotiations in the hospital industry influence hospital prices.

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[7] This focus does not imply that, as a general matter, market definition and market shares should be elevated above other means of analysis.

[8] *Guidelines* § 4.1.1.

[9] *Guidelines* § 4 ("[M]arket definition allows the Agencies to identify market participants and measure market shares and market concentration. . . .").

A. Hospital prices are determined by bargaining between hospitals and insurers.

As the district court correctly recognized, hospitals compete in two interrelated stages.[10] In the first stage, hospitals compete for inclusion in insurers' provider networks. In the second stage, hospitals compete to attract insurers' enrollees who require hospital care. Because the out-of-pocket cost to enrollees of receiving care at in-network hospitals is generally much lower than at out-of-network hospitals, a hospital's ability to attract patients in the second stage of competition is strongly influenced by whether the hospital is included in insurers' networks in the first stage.[11] Likewise, because an insurer's prospective enrollees value the ability to receive care at the hospitals they prefer with limited out-of-pocket cost, an insurer's ability to attract enrollees is strongly influenced by the number and quality of hospitals in the insurer's provider network.

These dynamics—hospitals' desire to be included in insurers' networks, and insurers' desire to have hospitals in their networks—have implications for the prices that hospitals and insurers negotiate (*i.e.*, the price that an insurer pays to a

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[10] *See* District Court Opinion at 34.

[11] Moreover, economic research suggests that patients display limited price sensitivity when choosing among in-network hospitals. *See, e.g.*, Gautam Gowrisankaran, Aviv Nevo, & Robert Town, *Mergers When Prices Are Negotiated: Evidence from the Hospital Industry*, Am. Econ. Rev., vol. 105, no. 1 (2015).

contracted hospital when the insurer's enrollees receive care at that hospital). If a hospital is extremely desirable to patients in a given area, for instance, an insurer may find it difficult to profitably sell an insurance plan in that area without the hospital in-network. In such a circumstance, the hospital will have greater bargaining leverage when negotiating with insurers, and therefore will generally be able to attain a higher price. By contrast, if an insurer can credibly exclude a hospital from the insurer's provider network—*e.g.*, if there are other area hospitals that patients view as close substitutes—then the insurer will have greater bargaining leverage, generally resulting in a lower price. This conceptual framework for understanding how hospital prices are determined, and the two-stage model of hospital competition more generally, is firmly established both in the economics literature[12] and in courts' past analyses of hospital competition.[13]

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[12] *See, e.g.*, Gregory Vistnes, *Hospitals, Mergers, and Two-Stage Competition*, 67 Antitrust L.J. 671 (2000); Robert Town & Gregory Vistnes, *Hospital Competition in HMO Networks*, J. of Health Econ., vol. 20, no. 5 (2001); Cory Capps, David Dranove, & Mark Satterthwaite, *Competition and Market Power in Option Demand Markets*, RAND J. of Econ., vol. 34, no. 4 (2003); Martin Gaynor, Kate Ho, & Robert Town, *The Industrial Organization of Health Care Markets*, J. of Econ. Literature, vol. 53, no. 2 (2015); Matthew Lewis & Kevin Pflum, *Diagnosing Hospital System Bargaining Power in Managed Care Networks*, Am. Econ. J.: Microeconomics, vol. 7, no. 1 (2015); Gowrisankaran *et al.* (2015) *supra* n.11.

[13] *See, e.g.*, *In the Matter of Evanston Nw. Healthcare Corp., Respondent*, ¶ 107, Initial FTC Decision (Oct. 20, 2005) ("[First stage competition] between hospitals and managed care organizations is particularly important because it is through this

In this framework, mergers between hospitals affect prices by changing the relative bargaining leverage of the merged entity in negotiations with insurers. It is instructive to consider two polar cases. In the first case, suppose that two merging hospitals are not viewed as substitutable for one another by any patient. Then, the merged entity's ability to threaten an insurer with the loss of both hospitals does not pack any additional punch compared to the pre-merger situation, because for no patient is it the case that both hospitals being out-of-network forces the patient to choose his or her third-choice hospital.[14] In the second case, suppose that two merging hospitals are viewed as each other's closest substitute by every patient.

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relationship that hospital prices are determined."); *see also St. Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775, 784 n.10 (9th Cir. 2015) ("This 'two-stage model' of health care competition is 'the accepted model.'" (citation omitted)); *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327, 342 (3rd Cir. 2016) ("As the FTC and several courts have recognized, the healthcare market is represented by a two-stage model of competition…"); *FTC v. Advocate Health Care*, 841 F.3d 460, 465 (7th Cir. 2016) ("[M]ost hospital care is bought in two stages. . . . Concerns about potential misuse of market power resulting from a merger must take into account this two-stage process." (internal citations omitted)); *FTC v. Thomas Jefferson Univ.*, 505 F. Supp. 3d 522, 528 (E.D. Pa. 2020) ("The healthcare industry's market is represented by a 'two-stage model of competition.'").

[14] This explanation is focused on the typical theory of harm raised in cases involving horizontal mergers between hospitals. Recent academic literature identifies circumstances under which mergers may affect bargaining even if the merging hospitals are not viewed as substitutes by patients. *See generally* Keith Brand & Ted Rosenbaum, *A Review of the Economic Literature on Cross-Market Health Care Mergers*, 82 Antitrust L.J. 533 (2019) (collecting research).

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Then, if the merged entity falls out of an insurer's network, every one of the insurer's enrollees requiring hospital care will be forced to his or her third-choice hospital. This deterioration in the quality of the insurer's provider network in the event of an impasse with the merged entity increases the merged hospitals' bargaining leverage, thereby leading to higher prices for the merged hospitals (all else equal).[15]

The key takeaway from this discussion is that the closeness of substitution between hospitals in the eyes of patients has direct implications for whether the merger of those hospitals can be expected to yield post-merger price increases. All else equal, as the merging hospitals are more closely substitutable, the increase in their bargaining leverage in negotiations with insurers will be greater and, consequently, the upward pressure on prices will be greater. The empirical literature in economics strongly confirms this prediction; more often than not,

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[15] Similar logic applies even if the two merging hospitals continue to negotiate separately post-merger. If hospital A falls out of an insurer's network, some of its patients instead choose hospital B. Prior to the merger, these patients constitute lost business for hospital A. After the merger, because hospital A and hospital B are jointly owned, these patients are no longer lost business for the merged entity. The more closely substitutable two hospitals are, the greater the extent of this patient "recapture," and hence the greater the upward pressure on prices.

mergers between competing hospitals in concentrated markets lead to higher post-merger prices (and/or lower quality).[16]

B.   The location of insurers' prospective enrollees and those enrollees' preferences over hospitals are critical inputs in determining the outcome of bargaining.

Because a key point of contention in this appeal is whether relevant geographic markets for hospital services can be defined based on the location of patients (rather than the location of hospitals), it is useful to underscore the relevance of patient location in the bargaining dynamics described above.

As explained above, an insurer's bargaining position vis-à-vis hospitals is influenced by how the insurer's prospective enrollees value the inclusion of different hospitals in the insurer's provider network. All else equal, hospitals without close substitutes will more likely command higher prices, whereas hospitals with multiple close substitutes will likely receive lower prices. Because people requiring hospital care generally prefer to receive care close to home, where

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[16] *See, e.g.*, Martin Gaynor & Robert Town, *The Impact of Hospital Consolidation—Update*, Robert Wood Johnson Found. Synthesis Project (2012); Leemore Dafny, *Estimation and Identification of Merger Effects: An Application to Hospital Mergers*, J. of L. and Econ., vol. 52, no. 3 (2009); Joseph Farrell, Paul Pautler, & Michael Vita, *Economics at the FTC: Retrospective Merger Analysis with a Focus on Hospitals*, Review of Industrial Organization, vol. 35, no. 4 (2009); Gaynor *et al.*, *supra* n.12; Zack Cooper, Stuart V. Craig, Martin Gaynor, and John Van Reenen, *The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured*, 134 Quarterly J. of Econ. 51 (2019).

an insurer's prospective enrollees live is often strongly predictive of their preferences over hospitals.[17]

For example, to adequately appeal to prospective enrollees in a given county, an insurer may require local hospitals in that county to be included in the insurer's provider network. If, instead, residents of the county were required to travel outside of the county to receive care from an in-network hospital, the insurer could find it difficult to sell such a plan to the county's residents (although that difficulty would be less if patients had a short commute to in-network hospitals in surrounding counties).

Of course, an insurer may market the same plan and provider network to a diverse group of prospective customers, not all of which are located in the same county. An insurer may market the same plan to employers whose employees are concentrated in a single zip code, as well as to employers whose employees are more geographically dispersed. When negotiating with a given hospital, the insurer

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[17] *See, e.g.*, Lawton Burns & Douglas Wholey, *The Impact of Physician Characteristics in Conditional Choice Models for Hospital Care*, J. of Health Econ., vol. 11, no. 1 (1992); Capps *et al.* (2003) *supra* n.12; Katherine Ho, *The Welfare Effects of Restricted Hospital Choice in the US Medical Care Market*, Journal of Applied Econometrics, vol. 21, no. 7 (2006); Farrell *et al.* (2009) supra n.16; Kate Ho & Ariel Pakes, *Hospital Choices, Hospital Prices, and Financial Incentives to Physicians*, Am. Econ. Rev., vol. 104, no. 12 (2014); and Gowrisankaran *et al.* (2015) *supra* n.11.

must consider the effects of that hospital falling out of network on the different populations served by the insurer.

As an example, consider an insurer that sells to employers based in cities X and Y, which are located some distance apart. Suppose further that there is a renowned hospital in city X. If that hospital is in-network, the insurer will make it available to all its customers (both in city X and in city Y). Now suppose that the renowned hospital in city X falls out of the insurer's network. This will likely affect the insurer's customers in city X much more than the insurer's customers in city Y, and therefore the insurer may have difficulty appealing to employers based in city X. Thus, even though the insurer makes the hospital in city X available to all the insurer's customers (including those who may be less affected by that hospital falling out of network), the hospital may nonetheless have bargaining leverage over the insurer if the insurer's customers in city X are an important component of the insurer's business.

(a)   The change in willingness-to-pay

There are well-established metrics in the economics literature for quantifying a healthcare provider's likely market power. A leading such metric is known as "willingness-to-pay" ("WTP").[18] The WTP metric, which is defined over

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[18] *See* Capps *et al.* (2003) *supra* n.12.

a given patient population (*e.g.*, all patients residing in city X), measures the importance of a hospital or group of hospitals to that patient population. Because it is defined over a given patient population, by construction WTP therefore depends in significant part on the location of those patients.

WTP has been validated in the empirical economics literature as a predictor of hospital prices and of hospital merger price effects, with higher values of WTP being associated with higher prices.[19] WTP has also frequently been used by economic experts in matters involving hospital competition before the courts.[20] For a given patient population, the WTP of a hospital is a quantitative measure of the value that hospital adds to an insurer's provider network. The *change* in WTP is a quantitative measure of how a merger of hospitals affects that value, relative to the pre-merger situation with those hospitals as independent entities. The closer substitutes two hospitals are for one another, the greater the change in WTP from

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[19] *See, e.g.*, *id.*; David Dranove & Christopher Ody, *Evolving Measures of Provider Market Power*, Am. J. of Health Econ., vol. 2, no. 2 (2016); Christopher Garmon, *The Accuracy of Hospital Merger Screening Methods*, RAND J. of Econ., vol. 48, no. 4 (2017).

[20] *See* Joseph Farrell *et al.*, *Economics at the FTC: Hospital Mergers, Authorized Generic Drugs, and Consumer Credit Markets*, Review of Industrial Org., vol. 39, no. 4 (2011). *See also* Garmon (2017) *supra* n.19 ("In the FTC's challenge of Promedica's acquisition of St. Luke's, a projected 13.5% change in WTP was cited by the FTC in its public decision. In the FTC's challenge of the proposed merger between OSF Healthcare and Rockford Health, a WTP change of 19% was cited by FTC staff in its pre-trial brief to the court." (internal citations omitted)).

their merger, and hence the more that the patient population under examination would be harmed if both hospitals fell out of network.

To be informative about likely hospital merger price effects, the change in WTP should be defined over a patient population that insurers care about, meaning an area that is economically significant to insurers. For example, if the increase in WTP from a merger is large among patients in a single small zip code, but otherwise minimal, an insurer may be able to resist a significant post-merger price increase because the potential loss of the insurer's business in the single small zip code is not large enough to give the merged hospitals greater bargaining leverage (*i.e.*, the insurer could choose to simply sacrifice the demand from customers in that zip code). By contrast, if the increase in WTP is large for a broader patient population that insurers care about, then such a change indicates that the merged hospitals will more likely be able to command higher prices post-merger.[21]

The FTC's economic expert measured the change in WTP over a four-county area (including Bergen County).[22] As noted below, the district court found that this area is certainly large enough to be considered economically meaningful

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[21] To be clear, the WTP measure does not rely on a predetermined market definition and the patient population over which WTP is estimated is not necessarily the relevant geographic market.

[22] District Court Opinion at 36.

by market participants. Measured over this area, the FTC's economic expert calculated that the Hackensack-Englewood merger would generate a 10.1 percent increase in WTP for the merged entity.[23] In a retrospective analysis of consummated hospital mergers, Garmon (2017) finds that, on average, a one percentage point increase in the change in WTP from a merger is associated with a 0.57 percentage point increase in the post-merger price increase caused by that merger.[24] We understand that the FTC's expert used Garmon's estimate to convert the 10.1 percent increase in WTP into an approximately 5.7 percent post-merger increase in Hackensack-Englewood's prices.[25] (This 5.7 percent represents the FTC's expert's predicted price increase from the merger itself; as we discuss below, the expert estimated that a hypothetical monopolist of all Bergen County hospitals could likely impose a substantially larger price increase.)

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[23] District Court Opinion at 48 n.26. Before addressing the WTP analysis, the district court also stated that its conclusions on competitive effects rested on multiple bases: "Accordingly, while Dafny's diversion ratio analysis alone would not establish an anticompetitive effect, when viewed in combination with the HHI and direct evidence, the quantitative analysis further supports the FTC." *Id*. at 48.

[24] Garmon (2017) *supra* n.19, at Table 5 (showing an estimate of 0.57 excluding mergers with variable cost savings). *See also* Cory Capps, *From Rockford to Joplin and Back Again: The Impact of Economics on Hospital Merger Enforcement*, The Antitrust Bulletin, vol. 59, no. 3 (2014) ("[W]hen economists have mapped WTP increases into predicted price increases, they have found that the predicted price increase is between roughly 50% and 125% of the estimated change in WTP.").

[25] District Court Opinion at 48-49.

II. DEFINING GEOGRAPHIC MARKETS FOR HOSPITAL SERVICES BASED ON THE LOCATION OF PATIENTS IS CONSISTENT WITH THE *HORIZONTAL MERGER GUIDELINES*.

A. Implementing the hypothetical monopolist test.

To ensure that a candidate geographic market is not too narrow, the *Guidelines* propose implementing the "hypothetical monopolist test."[26] Within the context of the two-stage model of hospital competition, in which prices are determined by bargaining between hospitals and insurers in the first stage, the hypothetical monopolist test for a geographic market defined based on patient locations can be formulated as follows. In the present matter, the FTC alleged that Bergen County is a relevant geographic market. Consequently, the hypothetical monopolist test requires that a hypothetical profit-maximizing firm that was the only present or future seller of hospital services to insurers selling to enrollees (*i.e.*, patients) in Bergen County would be able to achieve at least a small but significant and non-transitory increase in price ("SSNIP") in negotiations with those insurers.

Satisfying the hypothetical monopolist test in this way does *not* require the ability of hospitals to price discriminate based on patient location at the point of service.[27] Rather, it requires that Bergen County is economically significant

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[26] *Guidelines* § 4.1.1.

[27] Underscoring the limited relevance of the presence or absence of price discrimination based on patient locations, patients generally do not select among

enough to insurers that they would accept a SSNIP for at least one of the hospitals providing services to Bergen County residents, including at least one of the merging parties' hospitals.[28] Indeed, the district court's opinion states that "the evidence reflects that commercial insurers treat Bergen County as a significant target within the larger New Jersey market," and that "insurers testified that they could not offer a marketable plan to Bergen County residents that did not include a Bergen County hospital."[29]

As explained previously, rigorous economic methods exist for making statements about how, for a given patient population (like the residents of Bergen County), a merger of two or more hospitals affects the importance of those hospitals to insurers' provider networks. These methods naturally lend themselves to informing the hypothetical monopolist test, which here can be thought of as analyzing the effects of a merger between all hospitals providing services to Bergen County residents. As the district court noted, the FTC's economic expert

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in-network hospitals on the basis of price. Instead, as the merging parties state, patient preferences "are largely divorced from price because of insurance." Opening Brief at 3.

[28] *Guidelines* § 4.1.1 ("Specifically, the test requires that a hypothetical profit-maximizing firm . . . likely would impose at least a small but significant and non-transitory increase in price ('SSNIP') on at least one product in the market, including at least one product sold by one of the merging firms.").

[29] District Court Opinion at 38.

implemented a WTP analysis that indicated a 65 percent increase in WTP from a

merger of all Bergen County hospitals (measured over Bergen County patients).[30]

An increase of this magnitude is strongly consistent with the ability of the

hypothetical monopolist to achieve a SSNIP in negotiations with insurers.[31]

The argument that defining a geographic market based on patient locations

requires price discrimination at the point of service overlooks the two-stage nature

of hospital competition, and the fact that bargaining markets do yield a form of

price discrimination. The fundamental attribute of price discrimination—different

customers paying different prices—*is* present in hospital markets.[32] However,

because of the two-stage nature of hospital competition, this form of price

discrimination occurs not with respect to patients at the point of service but rather

through negotiations with insurers.[33] Indeed, the *Guidelines* make clear that

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[30] *Id.* at 36.

[31] *See* Garmon (2017) *supra* n.19; *see also* Capps (2014) *supra* n.24.

[32] Our observation that this form of price discrimination is present in hospital markets is *not* an endorsement of the proposition that it is economically necessary to establish the feasibility of price discrimination in order to rely on patient-based market shares. On the contrary, for example, suppose that hospitals were each required to charge a uniform price to all insurers. If enough insurers viewed a local market as important to their business, then hospitals' bargaining leverage in negotiations with insurers would still be rooted in demand from local customers, which is what patient-based shares measure.

[33] The economics literature confirms that different insurers pay different prices to the same hospital for the same service. *See, e.g.*, Stuart Craig, Keith Marzilli

markets can be defined around targeted customers (here, insurers) in this circumstance:

> The Agencies also often consider markets for targeted customers when prices are individually negotiated and suppliers have information about customers that would allow a hypothetical monopolist to identify customers that are likely to pay a higher price for the relevant product. If prices are negotiated individually with customers, the hypothetical monopolist test may suggest relevant markets that are as narrow as individual customers. . . . Nonetheless, the Agencies often define markets for groups of targeted customers, i.e., **by type of customer**, rather than by individual customer.[34]

Applied to the present matter, the affected "type of customer" is insurers that view selling insurance to residents of Bergen County as an important part of their business.

To be clear, our point here is not that geographic markets for hospital services *must* be defined based on patient locations, but rather that such an approach is consistent both with well-established economic principles of competition in the hospital industry and with the *Guidelines*. Depending on the

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Ericson, & Amanda Starc, *How Important is Price Variation Between Health Insurers?*, J. of Health Econ. 77 (2021).

[34] *Guidelines* § 4.1.4. (Emphasis added.) Elsewhere, the *Guidelines* further describe markets with negotiated prices: "In many industries, especially those involving intermediate goods and services, buyers and sellers negotiate to determine prices and other terms of trade. In that process, buyers commonly negotiate with more than one seller, and may play sellers off against one another." *Guidelines*, § 6.2. Although general, this description closely matches how hospital prices are determined.

facts of the matter, and again guided by the overarching principle that the goal of defining markets is "to illuminate the evaluation of competitive effects,"[35] it may be appropriate to define a geographic market based on hospital locations or based on patient locations, or to evaluate both approaches.

B.   Calculating market shares and measuring market concentration.

After a market has been defined, the next step in the analysis is to compute market shares to gauge the competitive significance of sellers and evaluate market concentration, as well as the changes in both that would result from the merger at issue.[36] In the hospital industry, there are two central approaches to calculating market shares. With the first approach, sometimes referred to as "hospital-based shares," shares are calculated based on the total patient volume of all hospitals physically located in the geographic market, including those hospitals' patients who traveled from outside the geographic market. With the second approach, sometimes referred to as "patient-based shares," shares are calculated for all patients originating from inside the geographic market, irrespective of where those patients' chosen providers are located.[37]

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[35] *Guidelines* § 4.1.1.

[36] *Guidelines* § 5.

[37] In the *Guidelines*, hospital-based shares align more closely with "Geographic Markets Based on the Locations of Suppliers" and patient-based shares align more

Both types of shares provide useful evidence about the likely competitive

effects of a merger.[38] Consider, for instance, a merger between the only two

hospitals in the same suburb of a large city. If the geographic market is defined as

that suburb, because the only two hospitals physically located there are the

merging parties, hospital-based shares will indicate that the merger is to

monopoly—a 100 percent post-merger share. By contrast, patient-based shares will

capture the extent to which other hospitals, such as those located in the city, draw

patients from the suburb. If insurers require a hospital located in the suburb in

order to be competitive, hospital-based shares correctly capture that the merging

parties are the only two options. At the same time, patient-based shares could

better reflect that the hospitals in the suburb are competitively constrained not only

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closely with "Geographic Markets Based on the Locations of Customers." *Guidelines* § 4.2. However, the two-stage nature of competition in the hospital industry—the insurer is the relevant "customer" when it comes to negotiating prices—makes drawing bright lines about which approach and which shares to utilize improper.

[38] *See also* Cory Capps, Laura Kmitch, Zenon Zabinski, & Slava Zayats, *The Continuing Saga of Hospital Merger Enforcement*, 82 Antitrust L.J. 441 (2019) ("In practice, measuring shares under both approaches may be useful. For example, if there are only two hospitals in a relevant geographic market, the post-merger supplier-based share will be 100 percent. Assuming the relevant geographic market is appropriately defined, that reflects the important piece of information that it would be impossible for insurers to offer any local hospital at all without the merged hospitals. At the same time, if there is a somewhat distant hospital that draws a significant percentage of patients from the area, that information is also relevant to the analysis of the merger.").

by each other, but also to some extent by other area hospitals to which some patients travel. Hospital-based shares, which assign zero share to hospitals physically located outside the candidate market, do not capture this possibility.

In this matter, the FTC's economic expert calculated shares and market concentration using both approaches, with the patient-based approach as the main analysis and the hospital-based approach as a sensitivity check.[39] Under *both* approaches, the merger was found to cause an increase in the Hirschman-Herfindahl Index ("HHI") of more than 200 points and result in a post-merger HHI exceeding 2,500 points, above the level at which the *Guidelines* state that a merger "will be presumed to be likely to enhance market power."[40] In fact, we understand that the hospital-based approach favored by the merging parties yielded a post-merger HHI and increase in HHI significantly *larger* than the patient-based approach.[41] In short, in addition to the patient-based approach preferred by the

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[39] District Court Opinion at 45 n.25 ("Dr. Dafny also calculated HHI using a hospital-based approach, as a 'sensitivity check,' which also resulted in an HHI over 2,500 and a change in HHI greater than 200. The patient-based calculation is the more conservative of the two approaches." (internal citation omitted.)).

[40] *Id.* at 44-45 & n.2; *see also Guidelines* § 5.3 ("Mergers resulting in highly concentrated markets [HHI above 2,500] that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power.").

[41] Memorandum in Support of Federal Trade Commission's Motion for a Preliminary Injunction, *FTC v. Hackensack Meridian Health, Inc.*, 2:20-cv-18140-JMV-JBC, ECF 133, 29 (D.N.J. Mar. 22, 2021) (showing a post-merger HHI of

FTC's expert, the FTC's expert also evaluated the hospital-based approach advocated for by the merging parties and found consistent evidence of anticompetitive effects.

In cases where hospital-based and patient-based shares yield different conclusions about the likely competitive effects of a merger, direct evidence of likely effects is particularly valuable.[42] In the present matter, although hospital-based and patient-based shares appear to yield the same overall conclusion,[43] the district court additionally evaluated numerous forms of direct evidence and found that "direct evidence supports the conclusion that the merger will substantially lessen competition in Bergen County."[44]

2,835 points and a change in HHI of 841 points for patient-based shares, compared to a post-merger HHI of 5,002 points and a change in HHI of 1,510 points for hospital-based shares).

[42] *Guidelines* § 4 ("Where analysis suggests alternative and reasonably plausible candidate markets, and where the resulting market shares lead to very different inferences regarding competitive effects, it is particularly valuable to examine more direct forms of evidence concerning those effects.").

[43] We understand that the merging parties' economic expert, Dr. Wu, examined several candidate markets in which the post-merger HHI fell below the 2,500-point threshold. Opening Brief at 17. As noted in the text, in these circumstances direct evidence of merger effects increases in importance. The district court evaluated these alternative candidate markets and found that "even if the Court were to accept any of Dr. Wu's markets as alternative candidate markets, direct evidence supports the conclusion that the merger will substantially lessen competition in Bergen County." District Court Opinion at 46.

[44] *Id.* at 46-54.

III.   THE ACADEMIC LITERATURE CLEARLY DEMONSTRATES THE VALUE OF HOSPITAL COMPETITION.

As a final point, it is worth summarizing the lessons from the broad economics literature examining the effects of hospital mergers and hospital competition. Numerous studies have found that hospital mergers between close competitors generally lead to higher post-merger prices.[45] When hospitals obtain higher prices in negotiations with insurers, research further finds that these higher prices are likely to flow through to consumers, leading both to higher insurance premiums and lower wages.[46] These findings are consistent with the fundamental principles underlying the antitrust laws—that reduced competition can lead to artificially high prices, thereby harming the buyers of the relevant product or service. In addition to hospital prices, the research literature has also studied the effects of hospital mergers on the quality of care. Although the findings of this

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[45] *See, e.g.*, Benjamin Handel & Kate Ho, *Industrial Organization of Health Care Markets*, Handbook of Industrial Organization (forthcoming) ("[A] fairly substantial literature [finds] that commercial prices tend to increase following mergers of hospitals in the same geographic and product market without a significant quality improvement.").

[46] *See, e.g.*, Katherine Baicker & Amitabh Chandra, *The Labor Market Effects of Rising Health Insurance Premiums*, Journal of Labor Economics, vol. 24, no. 3 (2006); *see generally* Daniel Arnold & Christopher Whaley, *Who Pays for Health Care Costs? The Effects of Health Care Prices on Wages*, RAND Corporation (2020).

literature are less developed, on balance the literature suggests that hospital mergers have either neutral or negative effects on quality.[47]

Overall, these research findings highlight the importance of upholding competition in markets for hospital services and preventing hospital mergers that pose a significant risk of lessening competition.

CONCLUSION

The district court's acceptance of the FTC's patient-based geographic market is consistent with well-established economic principles, the realities of hospital-insurer negotiations, and the *Guidelines*. The merging parties' argument that defining such a market requires price discrimination at the patient level (*i.e.*, the ability of hospitals to charge patients residing in Bergen County higher prices) is poorly informed and misguided, as it neglects the way that prices are determined in the industry. Hospital prices are set in negotiations between hospitals and insurers, as captured by the standard two-stage model of hospital competition. Because insurers must construct provider networks that are attractive to prospective enrollees, insurers seeking to sell insurance to residents of Bergen

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[47] *See, e.g.*, Robert Town & William Vogt, *How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?*, Robert Wood Johnson Foundation Synthesis Project (2006) ("Although the results of the literature are mixed, a narrow balance of the evidence and the evidence from the best studies indicates that hospital consolidation more likely decreases quality than increases it.").

County are more subject to the exercise of market power by Bergen County hospitals than insurers that seldom sell in Bergen County. In other words, bargaining yields a form of price discrimination that is entirely consistent with the FTC's patient-based geographic market. Moreover, we reiterate that, based on the public documents available, the substantive conclusions of the FTC's economic expert regarding market shares and market concentration are only strengthened by adopting the hospital-based approach favored by the merging parties.

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2.   <u>Word Count:</u> The undersigned certifies that the foregoing brief uses a proportionally spaced, 14-point Times New Roman typeface, and that the text of the brief contains 6,274 words according to the word count provided by Microsoft Word.

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/s/ Jamie Crooks

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Dated: November 5, 2021