EDITOR'S REPORT

Welcome to the first issue of the Chronicle for the ABA 2017-18 term. We are excited to introduce our new format thanks to the hard work of Chronicle editors Amanda Hamilton and Lauren Battaglia! In this issue, we are pleased to present three original articles on defining the relevant market in pharmaceutical antitrust cases, defining the relevant market in hospital mergers, and vertical transactions involving health systems and physician practices.

We are always interested in hearing from our Committee members. If there is a topic that you would like to see covered in a Committee program or if you have any other suggestions, please contact the Committee Co-Chairs, Seth Silber (ssilber@wsgr.com) or Leigh Oliver (leigh.oliver@hoganlovells.com).

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ABA
SECTION OF
ANTITRUST LAW

Promoting Competition Protecting Consumers

DEFINING THE RELEVANT MARKET IN PHARMACEUTICAL ANTITRUST CASES

Using Econometrics to Find Evidence of Substitution Without a SSNIP Test

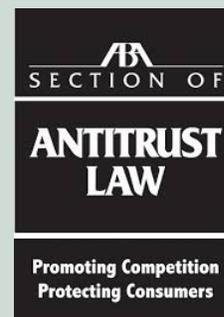Market definition is a critical component of antitrust cases and at times has been the deciding factor in determining which party in a case ultimately prevails. U.S. antitrust regulators and the courts have continued to recognize a role for market definition in antitrust cases, including in pharmaceutical antitrust cases.[2] However, in cases involving prescription drugs, certain methods commonly relied upon by courts to define the relevant market may be unreliable.[3]

To define the relevant market, courts rely on the hypothetical monopolist test framework discussed in the 2010

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Horizontal Merger Guidelines jointly issued by the Federal Trade Commission and the Department of Justice (the "Guidelines"). This test asks whether a hypothetical profit-maximizing firm that was the only present and future seller of a product (or set of products) in a candidate market (the "hypothetical monopolist") could profitably impose a small but significant and non-transitory increase in price ("SSNIP") on consumers.[4] If yes, then that set of products would be identified as the relevant product market. If not, then the set of products is expanded to include the next closest substitutes, and the test is repeated until it identifies the smallest universe of products over which the hypothetical monopolist could profitably raise its price to

consumers. The framework of the hypothetical monopolist test can be employed qualitatively, or quantitatively, whereby the predicted effects of a SSNIP on consumer purchasing patterns – and thus, the extent of demand-side substitution – is estimated empirically using econometrics.[5]

While the SSNIP test for market definition is a standard tool used in antitrust matters, the results generated by a SSNIP test in pharmaceutical cases may not be informative of economic substitution. In this article, we discuss why the empirical implementation of a SSNIP test is likely to be untenable in brand name prescription drug cases, and why the implementation of such a test can lead to unreliable

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[2] Some of the analytical tools used to assess competitive effects do not rely on market definition; however, according to the Horizontal Merger Guidelines, "[e]vidence of competition effects can inform market definition, just as market definition can be informative regarding competitive effects." See U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* (the "Guidelines"), §4 (Aug. 19, 2010), www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf.

[3] The focus of this article is on antitrust cases involving brand name prescription drugs. Antitrust cases involving only generic drugs are outside the scope of this article since the nature of competition is different; however, similar issues may exist for

generic drugs.

[4] Guidelines, supra, §4.1.1. We use the term "candidate market" to reflect instances where a relevant market is being proposed, but has not yet been confirmed.

[5] Guidelines, supra, §4.1.3. Quantitative analysis of a relevant market involves an empirical assessment of the prices paid by consumers for products in a candidate market. In particular, it involves an empirical assessment of whether the price of the product(s) at issue is constrained by competition from the other product(s) in the candidate market. By comparison, a qualitative analysis of relevant market generally relies on ordinary course business documents and other non-price data from firm(s) in the candidate market. Such documents or data may contain information about: a firm's response to competition from another firm or other products; the rivals or products that a firm takes into consideration when marketing or pricing its product, including the decision to offer any discounts; consumer surveys detailing consumer preferences; or consumer win/loss information detailing consumers lost or won from competing firms or products. In *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962), the Supreme Court set forth "practical indicia" that may be considered in identifying a relevant market using a more qualitative set of considerations.

conclusions regarding economic substitution. We then examine how natural experiments can be used to generate quantitative evidence on economic substitution and inform the relevant market definition when a SSNIP test is not possible.

Why a SSNIP Test Is Likely To Be Unreliable in Prescription Drug Cases

Unlike with a typical consumer good, using a SSNIP test to define the relevant market in prescription drug cases is often not possible. As we discuss below, this is largely the result of the complex relationships among the members of the distribution chain for prescription drugs, as well as a lack of reliable data on the net prices paid for prescription drugs.[6]

In many cases, economists can conduct a SSNIP test quantitatively by obtaining sales data for the products in the candidate market, and then using an econometric demand model to estimate elasticities.[7] Such a demand model relies on variations in prices over time. The elasticity estimates derived from a demand model are then used to conduct a SSNIP test.[8] The elasticities derived from a demand model can yield reliable results in settings where the consumer

observes the universe of products available to be purchased, including the products' attributes and the products' respective prices and, based on that information, decides which product(s) to purchase.

For example, this methodology may work well for a consumer product such as yogurt. Consumers typically know which brands are sold in the stores where they shop, know which brands they prefer, can observe the relative prices of those brands, and may well decide to purchase their second-favorite brand if it were to go on sale. An economist analyzing substitution between yogurt brands could feasibly obtain retail scanner data on prices paid and quantities sold of each brand of yogurt and use these data in a demand model to estimate elasticities. These elasticities would then serve as inputs to conduct a SSNIP test. Conversely, the estimation of such elasticities, and, thus, the ability to conduct a SSNIP test that would lead to reliable conclusions about the relevant market, is often untenable for prescription drugs. Unlike a typical consumer good, the person consuming the drug (i.e., the patient) does not decide which drug is prescribed. The entity responsible for that decision is the prescribing physician, who does not bear any cost for the drug. Instead, those costs are borne by the patients and third-party payors. This is not to

say that patients and third-party payors or their agents, pharmacy benefit managers ("PBMs"), have no influence over what drug is prescribed. Drug manufacturers compete to be included on the formularies of PBMs and health insurers by offering discounts and rebates.[9] Drug manufacturers also compete at the patient level by offering direct subsidies, such as copay coupons. A drug manufacturer can then use its formulary status and subsidies to encourage physicians to prescribe its drug.[10]

However, the price changes—and responses to those price changes—that result from the type of competition that occurs for prescription drugs are not reflected in retail-level pricing and sales data as they often would be for typical consumer goods. Indeed, the true prices[11] that would be relevant for a demand analysis of a candidate market for prescription drugs are typically not observable; at this time, there is no data source available that captures these prices and price changes for all drugs in a candidate market.[12] As a result, the econometric tools that are often used by economists to analyze demand-side substitution—*i.e.,* econometric demand models— will often not provide reliable or meaningful elasticity estimates for prescription drugs and would not be useful for market definition. This

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[6] The net price reflects the total amount paid by all payors after the application of any coupons, rebates, or discounts.

[7] An elasticity is an estimate of how much sales quantities will change in response to changes in the prices paid by consumers. *See, e.g.*, Robert S. Pindyck and Daniel L. Rubinfeld, *Microeconomics* 35 (8th Edition, 2013), (providing a general discussion of elasticities).

[8] *See, e.g.,* Gregory J. Werden, "Demand Elasticities in Antitrust Analysis," *Antitrust Law Journal 363 (1998).*

[9] In general, a drug formulary identifies which prescription drugs are covered and/or preferred by a particular pharmacy benefit plan offered by a health insurer or PBM. A formulary may also specify certain terms of coverage for a drug, such as the amount of the patient's copayment/coinsurance and other restrictions (e.g., so-called prior authorization and step therapy requirements).

[10] Patients may also be able to influence the physician's prescription decision by inquiring about

specific drugs at the time the physician writes the prescription; however, the decision on which drug to ultimately prescribe to the patient is made by the physician.

[11] Throughout this article we refer to the final price paid by patients and third-party payors as the "true price" to differentiate it from other prices in the prescription drug distribution chain that might not account for all discounts, subsidies, and rebates.

[12] To be sure, drug manufacturers do publish list prices for their drugs, such as the "average wholesale price" ("AWP") or the "wholesale acquisition cost" ("WAC"). In addition, third-party vendors such as IMS Health and Symphony Health sell data on prescription drug sales volumes and revenues. However, these prices do not reflect all of the discounts, rebates, coupons, free samples, and other price adjustments that are common for prescription drugs, which can affect the true price paid by patients and third-party payors for prescription drugs. Though some have argued that pricing data need not capture all discounts as long as the true price and any observable price

are correlated, the challenge lies in determining whether the prices are, in fact, correlated when the true price is not observable. In addition, looking at data for patients' out-of-pocket payments, which may be available from public data sources, would not capture the true price required for an elasticity calculation. Because the adjustments to prices for prescription drugs occur at many levels in the distribution chain, including at the third-party payor level, a patient's out-of-pocket cost is not the only price that is relevant; the prices paid by third-party payors (net of rebates) are also critically important because those prices affect which drugs are listed on a health insurer or PBM's formulary, which, in turn, determines which drugs are affordable to patients based on their prescription drug benefit.

be useful for market definition. This does not mean that there are no econometric techniques that can be employed to study substitution in such cases. In the next section, we discuss how econometric techniques, specifically natural experiments, can be used to inform demand-side substitution in prescription drug cases and thus, to help define the relevant market.

How Natural Experiments Can Be Used to Find Econometric Evidence of Economic Substitution

Though standard econometric demand models typically will not provide reliable output for the purposes of conducting a SSNIP test for prescription drugs, there are other means through which econometrics can provide meaningful information regarding market definition. Indeed, it may be possible to find econometric evidence of substitution using natural experiments. For example, consumers' responses to an event or events may reveal information about which products they view as economic substitutes. The Guidelines suggest that such an approach should be considered in the context of market definition.[13]

The qualitative evidence on competition and substitution generated by drug manufacturers in the ordinary course of business can help identify natural experiments and provide insight as to which

drugs should be included in the candidate market (and, thus, in the market definition analysis).[14] Candidate natural experiments for prescription drugs might involve events that altered the rebates or discounts offered by manufacturers for drugs in the candidate market. For example, a drug manufacturer may begin offering copay coupons to patients filling prescriptions for its drug, which, all else equal, would reduce the effective net price of that drug. Another example would be a change in the placement of a drug on a major PBM or health insurer's formulary. As an illustration, a PBM or health insurer may place a drug on a preferred formulary tier in exchange for an increase in rebates paid by the manufacturer of that drug. This change would result in a reduction in out-of-pocket costs for that drug for patients covered by that plan and a reduction in the net price paid by the third-party payor.[15] Yet another example is the entry of a generic drug for a brand name drug within a therapeutic class. While sales of that generic drug's branded counterpart would be expected to decline in response to generic entry, due to the lower price of the generic drug relative to the branded drug, if other branded drugs in the same therapeutic class were also substitutes for the branded drug with a generic counterpart, then the prescriptions for those other branded drugs would also be expected to decline.

Below, we provide a stylized example of how a natural experiment can be used to derive quantitative

evidence of economic substitution and, thus, inform the question of relevant market in prescription drug cases where a SSNIP is not possible. For simplicity, we identify only a single event for the natural experiment, but multiple events can (and should) be included if they are identified as having occurred during the relevant time period. We begin by identifying six (6) drugs as possible candidates for inclusion in the relevant market based on our review of the qualitative evidence on competition and substitution. In our example, Drug 1 began offering a copay coupon to patients that limited out-of-pocket expenditures to patients whose out-of-pocket cost would have been higher without the coupon.[16] The issuance of the coupon for Drug 1 would be the natural experiment and we would study the effect, if any, on substitution between our six candidate drugs resulting from Drug 1's coupon.

To study the effect of Drug 1's coupon on physician prescribing patterns for each of the six candidate drugs, we construct a reduced-form regression model. While this is not a structural demand model,[17] this reduced-form model provides a way of analyzing whether there is quantitative evidence of substitution in response to changes in one component of Drug 1's price (i.e., patients' out-of-pocket costs for prescriptions) that is consistent with the qualitative evidence on substitution. Specifically, this model studies whether there are statistically significant systematic

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[13] Specifically, the Guidelines note that the analysts should take into account, among other things, "how customers have shifted purchases in the past in response to relative changes in price or other terms and conditions." *See* Guidelines, *supra*, §4.1.3.

[14] This is true for natural experiments as well as demand modeling, both of which must be informed by the facts of the case.

[15] A formulary status change may result from a drug manufacturer offering a PBM, or health insurer, a new or additional rebate in exchange for preferred formulary status. Similarly, a drug manufacturer reducing its rebates or refusing to provide rebates may result in the exclusion of the manufacturer's

drug(s) from the formulary. Formulary status changes can be identified through qualitative information obtained from drug manufacturers or through the purchase of a third-party data set that tracks drugs' formulary placement, such as those sold by FingerTip Formulary and MMIT.

[16] A coupon that limits a patient's out-of-pocket costs, but does not affect the patient's total expenditures, would not be an appropriate event for this analysis. For example, if the coupon limited a patient's out-of-pocket expenditure to $25, but that patient would have paid $25 or less regardless of the coupon, then the coupon was not effective in reducing the patient's total drug expenditures. Thus, the economist would want to confirm, from either

the qualitative or quantitative information available, that the coupon actually reduced the effective net price paid by patients for a given drug before using the issuance of a coupon as a natural experiment.

[17] A structural model of demand is an econometric model that aims to estimate an entire demand system for the products in the market—*i.e.*, it aims to estimate the demand curves for each product as functions of the attributes and prices of all of the products included in the market. On the other hand, a reduced-form econometric model estimates the effect of specific variables on some other variable of interest; it does not estimate the underlying products' demand curves or the entire demand system.

changes in physician prescribing patterns that can be attributed to Drug 1's coupon (i.e., the event). This reduced form model is shown below:

$$Rx = \sum \alpha_i Drug_i + \sum \beta_i (Drug_i \times Event) + \gamma_0 (Other\ Controls) + \varepsilon$$

In our example, the dependent variable, Rx, is the number of prescriptions written by physicians for each of the six drugs in the candidate market in each month.[18] We want to study the effect of Drug 1's coupon on the variable Rx.

On the right-hand side we have the variables that we propose explain physician prescribing patterns. The first variable, $Drug_i$, represents a set of indicator (or "dummy") variables for each of the six drugs (i = 1 through 6). These dummy variables control for any unobserved differences between the drugs that are static over time and that are expected to affect the number of dispensed prescriptions for each drug. The next term on the right-hand side, ($Drug_i \times Event$), represents a set of interaction terms that capture the effect of Drug 1's coupon (Event) on dispensed prescriptions for each of the six drugs ($Drug_1$, $Drug_2$... $Drug_6$).[19] Event is an indicator variable that is equal to zero before the coupon is introduced and equal to one during the months in which the coupon is available. This event variable is interacted with (i.e., multiplied by) each of the six drug indicator variables, $Drug_i$. For example, the ($Drug_1$ x Event) interaction term shows the effect of the coupon for Drug 1 on prescriptions of Drug 1, while ($Drug_2$ x Event) shows the effect of the coupon for Drug 1

on prescriptions of Drug 2. The regression contains six interaction terms (one for each drug).

The final variable on the right-hand side, *Other Controls*, is a set of other control variables that must be accounted for when measuring the effect of Drug 1's coupon on the number of prescriptions dispensed for each of the six candidate drugs. These variables are critically important and can impact the results; however, determining what other variables should be included in the regression is a case-specific exercise. For example, if promotional activity by the drug manufacturer has been found to be an important determinant of demand, then it is also important to control for that activity in the model. In addition, if the qualitative evidence indicates that there is seasonality in demand, or important aggregate changes to demand over time, it is also important to control for those factors as well.

Ultimately, the variables of interest in this example are ($Drug_i \times Event$), which capture how the prescriptions dispensed for each candidate drug responded to the introduction of the coupon for Drug 1. Theoretically, if the candidate market is properly defined and Drugs 2 through 6 are substitutes for Drug 1, then one would expect the coefficient on Drug 1 to be positive (*i.e.*, a decrease in the effective price of Drug 1 leads to more prescriptions of Drug 1) and the coefficients on Drugs 2 through 6 to be negative (*i.e.*, a decrease in the effective price of Drug 1 leads to fewer prescriptions of Drugs 2 through 6).

It is also important for an economist

to conduct a sanity check of the results. For example, if the introduction of a coupon for Drug 1 leads to a *decrease* in sales of Drug 1, this would be inconsistent with a downward sloping demand curve. Such results could indicate, for example, that the functional form of the model is incorrect or that the model is missing important control variables. If, instead, the introduction of a coupon for Drug 1 had no effect on prescriptions of Drug 1, this may indicate (i) that the coupon did not lead to a statistically significant change in prescribing patterns for Drug 1; (ii) that the coupon did not have the effect of reducing patients' out-of-pocket costs for Drug 1; and/or (iii) that there are not enough observations to estimate a statistically significant result. Determining the answer would require the economist to review the factual foundation for the natural experiment.

If the results pass a sanity check and Drug 1's coupon did, in fact, have a positive effect on prescriptions of Drug 1, then attention turns to the statistical significance of the coefficients on the ($Drug_i \times Event$) variables. For example, negative and statistically significant coefficients for the ($Drug_2 \times Event$) and ($Drug_4 \times Event$) variables would provide quantitative evidence consistent with the hypothesis that Drugs 2 and 4 are substitutes for Drug 1. A lack of statistical significance for Drugs 2 through 6 may or may not indicate that these drugs are substitutes for Drug 1. There may, in fact, be other reasons for why the coefficients are not statistically significant. Again, the economist would have to consider these results in the context of the facts or other confounding

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[18] The time period analyzed in the regression should be selected carefully based on the facts of the case.

[19] In cases where there are multiple events, there would be multiple sets of event indicator variables. Each of these event indicator variables would be separately interacted with each product indicator. For example, if there were two events, there would be a total of twelve (Drug x Event) indicator variables included in the regression.

factors that may affect the model before reaching any conclusions.

While these natural experiments do not provide the elasticity estimates necessary to conduct a SSNIP test, they can yield valuable and reliable evidence of substitution among prescription drugs in a candidate market. As such, they can inform the question of the relevant product market in pharmaceutical cases. In this way, it is possible to overcome the complexities inherent in the pharmaceutical industry that make demand models incapable of producing reliable results.

The Road Ahead

The use of natural experiments to inform the question of market definition in prescription drug cases is not a mere theoretical concept. In the 2015 *Doryx* decision in favor of the defendants, the court pointed to the results of the defendants' expert's regression analysis. This regression analysis measured the change in physicians' prescribing patterns in response to changes in drug coupons offered by Warner Chilcott, the manufacturer of Doryx. The judge cited the results of this regression as evidence of substitution between Doryx and other oral tetracyclines used to treat acne. Specifically, the court relied on the regression model's measured decrease in sales of Doryx and increase in sales of other oral tetracyclines (*i.e.*, drugs that were not the generic equivalent of Doryx) in response to Warner Chilcott ceasing to offer copay coupons for Doryx. The court used this evidence to conclude, consistent with other evidence of substitution in that case, that the relevant market in which to

assess the alleged anticompetitive effects included both generic and branded versions of oral tetracyclines.[22]

While the *Doryx* decision highlighted the usefulness of such natural experiments in market definition for prescription drug cases, the court in *Aggrenox* took a different approach to the question of market definition, ruling that defining the relevant market was not a necessary step in assessing whether the defendants possessed market power or whether the defendants' alleged behavior harmed competition.[23] Rather, the court in *Aggrenox* decided that direct evidence of harm to competition, including supracompetitive prices, would be sufficient without "express articulation of the relevant market definition" and, thus, limited the relevant market to Aggrenox and its AB-rated bioequivalent generic substitutes.[24]

While differences in the claims in *Aggrenox* (reverse-payments) and *Doryx* (product hopping) may have had something to do with different approaches taken by the courts, no consistent precedent for defining relevant market—or whether market definition is even necessary—for the purpose of assessing market power and anticompetitive effects in prescription drug cases has yet emerged. As such, market definition continues to be an important component of such cases. Furthermore, because of the complex nature of competition in the prescription drug industry that can make estimating demand elasticities for a SSNIP test impractical and unreliable, economists should look to other methods in which econometrics can be used to inform an analysis of market definition.

In this regard, the court's decision in *Doryx* suggests a continued role for natural experiments to aid the market definition exercise in future cases involving brand name prescriptions drugs.

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[20] As is true for all econometric models, all the coefficients for all the variables, including statistical significance, should be carefully reviewed.

[21] For example, the model may be missing relevant control variables—e.g., if Drug 2's manufacturer also offered a coupon around the same time that Drug 1 introduced its coupon, but that information is not available to the analyst, then the effect of Drug 1's coupon on Drug 2 may appear insignificant even if

they are, in fact, substitutes.

[22] *See Mylan Pharm., Inc. v. Warner Chilcott Pub. Ltd. Co., et. al.,* Civ. No. 12-3824, 2015 WL 1736957 (E.D. Pa. Apr. 16, 2015).

[23] *See In re Aggrenox Antitrust Litig.*, No. 3:14-md-2516 (SRU) (D. Conn, Aug 8, 2016), ECF No. 489 (discovery order defining relevant market) ("Aggrenox Discovery Order").

[24] "Moreover, as a practical matter, the only 'relevant' market in this case, and in similar cases brought under *FTC v. Actavis*, will be the market in which the challenged settlement agreement allegedly acted as an anticompetitive restraint: that is, in this case, it will be implicitly defined by the scope of the disputed patent." *Aggrenox* Discovery Order at 5.

RECENT TRENDS IN HOSPITAL MERGER CHALLENGES:
Vertical Transactions in *Sanford Health* and *CHI Franciscan Health*

Although merger enforcement in healthcare has continued to be a steady focus of the antitrust agencies, there seems to be an increasing focus on vertically-integrated health systems' acquisitions of physician practices. This article will discuss two recent healthcare merger enforcement actions with vertical aspects: *In re Sanford Health, et al.* ("Sanford Health")[2], and *State of Washington v. Franciscan Health System d/b/a CHI Franciscan Health, et al.* ("CHI Franciscan Health").[3] The two cases reflect a few common themes in healthcare mergers, including the fact that consumer preferences still play a role in market definitions, and the government's continued use of the parties' ordinary course documents to validate market definitions and theories of anticompetitive harm.

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Background

Sanford Health

In June 2017, the Federal Trade Commission ("FTC") filed an administrative complaint to enjoin the merger of North Dakota healthcare providers, Sanford Health, Sanford Bismarck, (together "Sanford") and Mid Dakota Clinic, P.C. ("MDC"). Sanford, a vertically-integrated system, seeks to acquire MDC, a multispecialty physician practice. Presently, Sanford has approximately 36 adult primary care physicians, 4 pediatricians, 8 OB/GYNs, and 6 general surgeons, while MDC has 23 adult primary care physicians, 6 pediatricians, 8 OB/GYNs, and 6 general surgeons. Sanford also operates the Sanford Medical Center Bismarck, a general hospital and Level III trauma center with over 200 beds.

In its complaint, the government alleges that Sanford and MDC are the largest providers of certain healthcare services in the Bismarck-Mandan region. The FTC noted the merger would result in "by far the largest – and in one case, the only – group of physicians offering these services" in the four-county Bismarck-Mandan geographical market.[4] Specifically, the complaint focuses on the markets for adult primary care physician services, pediatrics, obstetrics and gynecology, and general surgery physician services. According to the FTC, the merger would result in a combined entity possessing a 75% market share for adult primary care physicians, and a 100% market share for general surgery physicians.[5] Although there is another large vertically-integrated health system in the geographic market, CHI St. Alexius, the government claims that this organization and other smaller, independent physician groups that offer these services would not be able to expand quickly or sufficiently enough to successfully combat the merger's anticompetitive effects.

CHI Franciscan Health

On August 31, 2017, the State of Washington filed a complaint in the U.S. District Court for the Western District of Washington, seeking to enjoin two transactions of Franciscan Health System, d/b/a CHI Franciscan Health and Franciscan Medical Group (together, "CHI Franciscan")—one

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[2] *In re Sanford Health, et al.*, Compl., Dkt. No. 9376 (FTC, June 21, 2017).

[3] Compl., *State of Washington v. Franciscan Health Sys. d/b/a CHI Franciscan Health, et al.*, No. 3:17-cv-05690 (W.D. Wash. filed Aug. 31, 2017).

[4] *Sanford Health*, Compl. at 1.

[5] *Id*. at 2.

with The Doctor's Clinic ("TDC"), and the other involving its acquisition of WestSound Orthopaedics ("WestSound").[6] Unlike the *Sanford Health* case, the transactions at issue between CHI Franciscan and TDC had already closed, further illustrating the state and federal governments' willingness to unwind consummated transactions.[7]

The transaction between CHI Franciscan and TDC involved three separate agreements—a Professional Services Agreement, a Management Services Agreement, and an Asset Purchase Agreement. TDC, a 54-physician business operating in family medicine, internal medicine, orthopedics, urology, general surgery, obstetrics, and cardiology, approached CHI Franciscan seeking a financial partner, as it was increasingly concerned about physician attrition.[8] The September 2016 agreements resulted in TDC canceling its existing contracts with certain payors, and joining in CHI Franciscan's physician group's contracts.[9] TDC operates seven locations, all located within Kitsap County, including an ambulatory surgery facility. TDC also sold certain ancillary services to CHI Franciscan as part of the transaction.

The WestSound acquisition, completed on or before July 1, 2016, involved CHI Franciscan's acquisition of a physicians group with a main location and satellite office, both located in Kitsap County. At the time of the acquisition, WestSound employed seven physicians, all of whom specialized in orthopedic

care and primarily practiced out of the main facility. As a result of the transaction, WestSound became wholly-owned by CHI Franciscan. The Washington Attorney General emphasized that "[t]he Kitsap Peninsula . . . has limited offerings for orthopedic services beyond what Defendants offer. As a result of the Kitsap Transactions, nearly all orthopedic physicians within the Kitsap Peninsula are either employed by or contracted with CHI Franciscan."[10]

Current Enforcement Trends

Continued Focus on Vertical Transactions

Although both the Sanford Health and CHI Franciscan Health cases involve vertically-integrated systems' acquisitions of physician practices, the CHI Franciscan Health action in particular reflects a continued interest of the enforcement agencies in vertical transactions in healthcare. The FTC has successfully challenged other vertical combinations in recent years, such as its landmark win in *Saint Alphonsus Med. Center-Nampa, Inc. v. St. Luke's Health Sys., Ltd*.[11] In *St. Luke's*, the FTC successfully blocked the hospital/physician merger based on competitive harms in the markets for certain ancillary services, such as laboratory services and x-rays, in addition to direct horizontal overlaps between service lines.[12]

It seems the Washington Attorney

General in CHI Franciscan Health has taken note of the district court victory in *St. Luke's*, choosing to mirror its allegations of competitive harm to markets for ancillary services. Part of the complaint focuses on CHI Franciscan's purchase of an ambulatory surgery center, laboratory, and imaging facility from TDC.[13] According to the complaint, this purchase allowed CHI Franciscan to shift procedures performed at those locations to one of its hospital facilities—thereby benefitting from the higher hospital-based rates.[14] In addition to higher reimbursement rates charged to payors, the shift of ancillary services to the hospital has allegedly harmed quality—increasing scheduling delays and response times for patients.[15]

Market Definitions in Healthcare Mergers: Consumer Preferences and the Hypothetical Monopolist Test

Despite the focus on commercial payors in applying the hypothetical monopolist test in healthcare transactions, both *Sanford Health* and *CHI Franciscan Health* illustrate the importance of consumer preferences to market definitions. The FTC has recently enjoyed significant victories on appeal in merger cases based on incorrect applications of the hypothetical monopolist test. In *FTC v. Advocate Health Care Network*, the Seventh Circuit held that the district court erred in "its misunderstanding of the hypothetical monopolist test: it overlooked the test's results and mistook the test's iterations for

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[6] *CHI Franciscan Health, Compl.* at 2-3.

[7] *Id*.

[8] *Id*. at 63.

[9] *Id*. at 3-5 (alleging "Defendants further realized that the Kitsap Transactions would allow them to collectively gain leverage to obtain higher payments in their negotiations with healthcare payers").

[10] *Id*. at 12.

[11] 2014 WL 407446 (D. Idaho, June 25, 2014) (ordering divestiture of affiliation between healthcare providers where providers' merger violated Clayton

Act and state law), *aff'd Saint Alphonsus Med. Center-Nampa, Inc. v. St. Luke's Health System, Ltd.*, 778 F.3d 775 (9th Cir. 2015).

[12] *Id*. at *12; *but see St. Luke's Health Sys.*, 778 F.3d at 786-87 (labeling the lower court's ancillary services finding "problematic" and holding said finding "is not supported by the record").

[13] *CHI Franciscan Health*, Compl. at 21-22.

[14] *Id*. at 22.

[15] *Id*. at 24-25.

logical circularity."[16] Similarly, in *FTC v. Penn State Hershey Medical Center*, the Third Circuit held that the district court should have instead employed the hypothetical monopolist test in its market definitions. In both cases, the appellate courts emphasized that geographic market definitions are "most directly about the likely response of insurers, not patients, to a price increase."[17] Indeed, in defining the geographic market in *Sanford Health* as the Bismarck-Mandan area, the complaint states: "area residents strongly prefer to obtain the relevant services close to where they live. Indeed, it would be very difficult for a payer to market successfully to employers with employees living in the Bismarck-Mandan area a health plan that did not include PCPs, pediatricians, OB/GYNs, or general surgeons located within the Bismarck-Mandan area."[18]

Despite the focus on commercial payors in applying the hypothetical monopolist test, the *Sanford Health* complaint also states that "Quantitative and qualitative evidence, including Respondents' own executives and ordinary course documents, confirm that the Bismarck-Mandan area is the relevant geographic market."[19] Similarly, the *CHI Franciscan Health* complaint illustrates that consumer preference is still a critical part of the geographic market definition. Specifically, the geographic market in *CHI Franciscan Health* is alleged to be Kitsap Peninsula, including the Bainbridge and Fox Islands in Washington. Notably, in explaining the geographic market, the complaint discusses the natural barriers around this region making it difficult for consumers to seek healthcare services elsewhere—although Kitsap Peninsula is a short

distance from Downtown Seattle, crossing Elliott Bay requires paying a toll for the Tacoma Narrows Bridge or using the ferry.[20] Related to the discussion below, the complaint also cites to ordinary course documents to support the geographic market definition.[21]

Ordinary Course Documents

The impact of ordinary course documents in a merger challenge is illustrated in the *Sanford Health* and *CHI Franciscan Health* complaints. For example, in *Sanford Health*, the FTC cites to Sanford's ordinary course documents that state that MDC is its "main clinical competitor" and "a major competitor for primary care" in order to evidence Sanford's acknowledgment of anticompetitive effects of the proposed merger. The FTC also cited MDC's Chief Financial Officer in its complaint as stating: "Sanford is going to be a demon to deal with competitively . . . Combining with them would put us in the dominant health care system for quite a while." Documents created during diligence may also be at risk of being used in such complaints, including those created by third parties who have been hired to consult on the merger. For instance, MDC's 2015 strategy assessment was prepared by an outside marketing consultant and cited by the FTC in the *Sanford Health* complaint, as the consultant's work product focused on Sanford as MDC's closest and most significant head-to-head competitor.[22]

Likewise, the Washington Attorney General's complaint in *CHI Franciscan Health* pointed to quotes from the parties' employees from ordinary course documents, citing them as evidence of the parties' awareness

that the sale of ancillary services "would enable [CHI Franciscan] to effectively shut down the facilities providing those services and shift their outpatient procedures to CHI Franciscan's inpatient hospital . . . benefiting from higher, hospital-based rates."[23] For example, the complaint cites the following internal email of CHI Franciscan's Chief Financial Officer: "I am all for taking advantage of hospital based pricing . . . . It would be great to drop a couple of million more to our bottom line, if we think we can do it."[24] The complaint further alleges that "TDC sold these services even as it acknowledged that . . . residents would receive inferior, costlier care," quoting TDC's former physician president as saying, "I can't wait to hear how CHI messages the addition of TDC . . . . You can now get your outpatient care in a complex, relatively unsafe, and vastly more expensive location. You are welcome, Kitsap County . . . .'"[25] The complaint goes even further in citing to ordinary course documents in order to demonstrate the alleged anticompetitive intent of the parties: "These rapid acquisitions prompted TDC's medical director to suggest, while in negotiations with CHI Franciscan, 'that the theme song for the Franciscan Health System' should be Queen's 'Another One Bites the Dust.'"

In addition to internal documents, public statements made by the parties' employees or officers may also be used against them in such complaints. In *CHI Franciscan Health*, the Washington Attorney General alleges that a CHI Franciscan representative admitted in public statements to various newspapers that the purpose of the affiliation with TDC was to "enable [the parties]

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[16] 841 F.3d 460, 473 (7th Cir. 2016).

[17] *Advocate Health Care Network*, 841 F.3d at 471.

[18] *Sanford Health*, Compl. at 6-7.

[19] *Id*. at 7.

[20] *CHI Franciscan Health*, Compl. at 14-15.

[21] *Id*.

[22] *Sanford Health*, Compl. at 12.

[23] *CHI Franciscan Health*, Compl. at 3.

[24] *Id*.

[25] *Id*.

to obtain higher reimbursements from payers – 'If you're bigger, you are able to negotiate better contracts.'"[27]

Conclusion

The continued scrutiny of healthcare transactions as an antitrust enforcement policy is evident by the recent cases of *Sanford Health* and *CHI Franciscan Health*. This trend is likely to continue, especially as to health systems' acquisitions of physician practices. Although vertical integration can offer procompetitive benefits, such as improve coordination of care and lower transaction costs,[28] the Washington Attorney General noted in *CHI Franciscan Health* expressed a view that vertical transactions "reflect a national trend of consolidation and competition in the healthcare industry, which is continuing to fuel growth in healthcare spending."[29] The *Sanford Health* and *CHI Franciscan Health* cases illustrate continuing themes in merger enforcement cases, including yet another reminder about the impact of ordinary course documents during an investigation and the importance of qualitative, in addition to quantitative, data in market definitions.

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[26] *Id.*

[27] *Id.*

[28] *See* Deborah Haas-Wilson and Martin Gaynor, *Increasing Consolidation in Healthcare Markets: What Are the Antitrust Policy Implications?*, 33 HEALTH SERVS. RES. 1403, 1411 (1998).

[29] *Id.* at 5.

THE APPROPRIATE TEST FOR RELEVANT GEOGRAPHIC MARKET DEFINITION IN HOSPITAL MERGERS

Healthcare markets can be a matter of life and death for consumers, who rely on effective antitrust enforcement to help provide access to high-quality services at affordable prices. Public policy at the intersection of antitrust and health care is notoriously difficult, however, due to the complex economics of modern healthcare markets. Hospital systems need to grow, invest, innovate, and – to a degree – collaborate to achieve effective outcomes. Antitrust must be attuned to procompetitive conduct, but also condemn anticompetitive behavior. Distinguishing the two requires a commitment to empiricism and the development of economic theories that most accurately predict competitive effects. That process is particularly difficult in healthcare mergers. Sometimes driven by efficiencies, but occasionally motivated by the pursuit of market power, such mergers require antitrust enforcers to assess

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a complex web of relationships between healthcare providers, commercial payors/insurers, and patients. And, after they evaluate the likely consequences of a merger, the agencies must convince the courts that they are right.

This article addresses a critical issue in evaluating healthcare mergers - namely, the appropriate geographic market in which to analyze the competitive effects of a health-system combination by looking at the two competing theories of geographic market definition as they have been used in the past and are currently being used in litigation.

Mechanics of Payment and Levels of Competition in Hospitals

One reason hospital mergers are difficult to scrutinize under antitrust law is because payment and competition occur at two levels. The first level involves competition between hospitals to be included in payors' insurance plan networks. That competition involves a negotiation over the rates that hospitals will accept, and that payors will pay. Rarely does this negotiation occur between the patient and the

hospital itself, but rather between hospitals and third-party payors. Third-party payors typically refer to public or private insurers, which include federal and state public programs. The public insurance options typically include Medicare from the federal government and state Medicaid programs, which are available only to those who meet the necessary qualifications. The second stage of competition occurs when in-network health systems compete to attract insured patients to their hospitals.

Because the payment occurs at two levels, and negotiation takes place between the hospitals and the insurers, hospital mergers can greatly affect the balance of power between these groups. A hospital gains more bargaining power if there are fewer alternatives available for the insurer.[1] For example, if the two largest hospitals in an area, with 35% market share each, merge and combine to provide 70% of all services in the area, then the merged system would likely hold increased power in its negotiations with insurers.

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[1] *See, e.g., FTC v. Advocate Health Care*, 841 F.3d 460, 465 (7th Cir. 2016).

The Relevant Product Market in Hospital Mergers: Inpatient General Acute Care Services

The relevant market consists of both a product and a geographic market. In hospital mergers, the product market is often not at issue and is generally defined as the market for inpatient general acute care services ("GAC").[2] GAC services require a patient to stay overnight, and cover a variety of medical services.[3] These services include: emergency procedures, surgery, and internal medicine procedures.[4] GAC services do not include outpatient, rehabilitation, or psychiatric procedures.[5] Notably, all inpatient services are not substitutes for one another, but courts have determined that the cluster market approach to market definition is appropriately used to define general acute care services as a relevant product market.[6] While some hospital merger cases were decided based on product market definition, many more cases rest on the definition of the relevant geographic market.[7]

Geographic Market: The Elzinga–Hogarty Test: Its Mechanics, Applications, and Limitations

The Mechanics of the Disfavored Elzinga-Hogarty Test

The Elzinga-Hogarty ("E-H") test tries to estimate whether the geographic market is correct based on the number of patients who receive GAC services and come from inside the geographic area tested.[8] The test also looks at how many patients travel from inside the geographic area to receive services from hospitals outside the area. This is also known as the patient inflow-outflow test. There are two different measures used when performing the E-H test. The first measures the service area that accounts for the percent of patients who receive services at the hospitals in the proposed merger.[9] The service area is drawn to capture 75-90% of all patients for the hospitals involved in the merger.[10] The threshold for a strong market definition is 90% and the threshold for a weak market is 75% or below.[11] The second measure is the inverse of the first. It measures how many patients leave the area for services. The theory behind this test is that if a large percentage of patients leave the area for services, they would also do so in response to a price increase. If the percentage of patients who leave the area for services is high, the negative effect of the price increase on consumers is low, because patients would switch to hospitals outside the area.[13]

The Seventh Circuit in *Advocate*, which ultimately rejected the E-H test, explained that a market would pass the E-H test "if both: (1) a high level of sales (usually 75-90%) is to buyers located in the market; and (2) a similarly high percentage of buyers located in the market buys within it."[14] The E-H test determines the pre-merger consumer movement and uses that to determine the likely consumer movement after the merger.[15] The underlying assumption is that consumers who already buy from outside the area are similar to those who do not, and the consumers who do not currently buy from outside the area would travel outside the area in response to a post-merger price increase.[16]

Applications of the Elzinga-Hogarty Test by U.S. Federal Courts in Hospital Mergers

For over twenty years, the E-H test was the dominant focus of geographic market analysis by courts. One early case that used the idea of patient inflow-outflow data was *U.S. v. Carilion Health System*.[17] The court's analysis in Carilion was a less sophisticated version of the E-H test. The court stated that the market included "all counties and cities from which Roanoke Memorial draws at least 100 patients a year."[18] Though the court makes no direct reference to patient inflow or outflow, the court clearly used patient inflow to determine what the market should be. The court also provided no justification for choosing 100 as the minimum number of patients.

As courts evolved, they used the E-H test by name and conducted a more thorough analysis of patient inflow-outflow data. In *FTC v. Freeman Hospital*, the court

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[2] *Id*. at 468.

[3] *Id*.

[4] *See, e.g., FTC v. OSF Healthcare System,* 852 F. Supp. 2d. 1069, 1075-76 (N.D. Ill. 2012)*.*

[5] *Id*.

[6] *Advocate*, 841 F.3d at 468.

[7] *See ProMedica Health System, Inc. v. FTC*, 749 F.3d 559, 565-68 (6th Cir. 2014); *OSF Healthcare*, 852 F.Supp. 2d. at 1075. *But see Alphonsus Medical Center-Nampa Inc. v. St. Luke's Health System Ltd.*, 778 F.3d 775, 784 (9th Cir. 2015); *FTC v. Penn State Hershey Medical Center*, 2016 WL 2622372 (M.D. Pa.) at 3-4;

FTC v. Freeman Hosp., 69 F.3d 260, 268 (8th Cir. 1995); *FTC v. Tenet Health Care Corp.*, 186 F.3d 1045, 1051-52 (8th Cir. 1999).

[8] The Elzinga-Hogarty Test was originally designed to measure beer and coal markets through product movement and was later applied to hospital mergers. *Advocate*, 841 F.3d at 469.

[9] *See, e.g.*, H.E. Frech III, et al., *Elzinga-Hogarty Tests and Alternative Approaches for Market Share Calculation in Hospital Markets*, 926-27, 71 Antitrust Law Journal No. 3 (2004).

[10] *Id*.

[11] *Id*.

[12] *Id*. at 927.

[13] *Id*. at 927.

[14] *Advocate*, 841 F.3d at 469.

[15] *Id*. at 469-70.

[16] *Id*. at 470.

[17] *U.S. v. Carilion Health System*, 707 F. Supp. 840 (W.D. Va. 1989).

[18] *Id*. at 847-48.

conducted the E-H analysis starting with examining the "zip codes of patients discharged from the three hospitals in Joplin."[19] The hospitals' expert witness did the analysis first for the merging hospitals, then for the other hospitals within the proposed geographic area, until the area covered 90% of the merging hospitals' patient sales.[20] The analysis resulted in a geographic market with a 27-mile radius around Joplin, Missouri, and contained seven acute care facilities.[21] The hospitals' expert did not conduct the second prong of the E-H test, the percentage of patients who leave the proposed area for services, because he believed only the admissions data was relevant when determining where patients decide to receive services.[22] The final geographic market established by the hospitals' expert included hospitals 54 miles away from Joplin.[23] The district court determined that this market was the acceptable geographic market and the Eighth Circuit affirmed, stating that the FTC's market definition only discussed where patients currently go, and not any reasonable alternatives if the price of services increased.[24]

In *U.S. v. Mercy Health Services*, it was the government that relied heavily on the E-H test. The government used the patient inflow-outflow data to construct a relatively small geographic market.[25] The government also concluded that

patients were loyal to their doctors and would be unlikely to switch doctors.[26] The government's proposed market was a 15-mile radius around Dubuque County, Iowa, and represented 88% of the admittances for GAC. The district court determined the government's model was too static and based on what had happened in the past instead of what was likely to happen in the future.[27] The court also determined that the government lacked sufficient evidence to prove that doctor-patient loyalty overrides patients' financial considerations.[28] The court, thus, disagreed with the government's geographic definition and declined to enjoin the merger.[29] After the government filed an appeal, the two merging hospitals decided to drop the merger, and the Eighth Circuit declined to make a ruling on the case about whether the government's alleged geographic market was properly defined.[30]

In another case, in 1996, the FTC sued to block the merger of Butterworth and Blodgett hospitals in Grand Rapids, Michigan. As to market definition, the court stated that the FTC needed to show "practical alternative sources to which consumers of general acute care. . . would turn if the merger were consummated and the merged entity raised prices beyond competitive levels."[31] The FTC posited that the relevant geographic market was a 30-mile radius around

and including Grand Rapids.[32] This market was chosen primarily based on patient flow data consistent with the E-H test.[33] The geographic area encompassed 106 zip codes and accounted for 90% of patients admitted for GAC services, making it a strong market by E-H standards.[34] The court determined that the market appropriately took into account past patient information, and that the FTC constructed a market that demonstrated patients were unable or unlikely to consume services outside the alleged geographic market.[35] The FTC cited evidence such as patient and employee views in Grand Rapids to support its position that consumers of acute care services would not travel outside the market for services in response to a 5-10% increase in price.[36] Despite finding in favor of the FTC on geographic market, the court ultimately denied the preliminary injunction, stating that if the FTC decided to "unwind" the merger after an administrative hearing, it could be done easily.[37]

In a case brought by the DOJ against Long Island Jewish Medical Center, the district court utilized the E-H test to determine the relevant geographic market.[38] The government alleged the relevant market consisted of parts of Nassau and Queens counties in New York.[39] The DOJ chose this market because 80% of the patient discharges for the merging hospitals came from

[19] *FTC v. Freeman Hosp.*, 69 F.3d 260 (8th Cir. 1995).
[20] *Id*. at 264-65.
[21] *Id*. at 265.
[22] *Id*.
[23] *Id*.
[24] *Id*. at 271-72.
[25] *U.S. v. Mercy Health Services*, 902 F. Supp. 968, 976-77 (N.D. Iowa 1995).
[26] *Id. at 977*.
[27] *Id*.
[28] *Id*.
[29] *Id*. at 989.
[30] *U.S. v. Mercy Health Services, 107 F.3d 632, 635-37 (8th Cir. 1997)*.
[31] *FTC v. Butterworth Health Corp., 946 F.Supp. 1285, 1291 (W.D. Mich. 1996)*.
[32] *Id.* at 1291.
[33] *Id*.
[34] *Id.* at 1292.
[35] *Id*. at 1293.
[36] *Id.* at 1292.
[37] *Id*. at 1309.
[38] *U.S. v. Long Island Jewish Medical Center*, 983 F. Supp. 121, 140-41 (E.D.N.Y. 1997).
[39] *Id.* at 140.

either Nassau or Queens, and the remainder from three other counties.[40] This patient discharge metric is analogous to the patient outflow data used in the E-H test. The court determined that there were two relevant geographic markets based on different products. The geographic market for primary and secondary services (analogous to general acute care) included only Queens and Nassau counties.[41] The court determined that the geographic market for primary and secondary services included only Queens and Nassau counties, because other hospitals were too far away to be an alternative for these services.[42] The DOJ proposed a much narrower market consisting of "approximately five miles from the two merging hospitals, without a precise boundary."[43] The court found that the merger would not substantially lessen competition based on the relevant product and geographic markets.[44]

Critical Deficiency of the Elzinga-Hogarty Test

It is now accepted that the E-H Test contains a critical deficiency when applied to hospital mergers. The most critical error of using the E-H test in hospital mergers is the silent majority fallacy.[45] The test assumes that if some patients presently travel for care, more would do so to avoid a price increase, making an increase unprofitable.[46] But, in fact, often a "silent majority" of patients will not travel, enabling anticompetitive price increases.[47] Ken Elzinga himself has stated that the E-H test was designed to apply to the movement

of goods rather than the movement of people, and the test does not account for the preferences of patients when choosing a healthcare provider.[48]

Retiring the Elzinga–Hogarty Test in Favor of the Hypothetical Monopolist Test

Mechanics of the Hypothetical Monopolist Test

The hypothetical monopolist test ("HMT") is the preferred approach to establishing the relevant geographic market in hospital mergers. This is because the HMT measures the potential of economic harm caused by the merger instead of measuring only patient inflow and outflow data. The test measures whether a hypothetical monopolist in a geographic area could raise prices (usually by 5-10%) and still make a profit.[49] This price increase is referred to as a "small but significant non-transitory increase in price" or SSNIP. If consumers would travel outside the proposed market in order to circumvent the higher prices, then the relevant market is too small and should be enlarged.[50] The process is repeated until a market satisfies the HMT.[51] Notably, the HMT does not need to establish a market that includes all competitors, but only the effective area of competition of firms that would "substantially constrain [the firm's] price-increasing ability."[52] The HMT indicates whether a market is too narrow, but the test can also show if the market is too broad by

repeating the test until the smallest possible geographic market that still satisfies the test is determined.

Applications of the HMT by U.S. Federal Courts in Hospital Mergers

Many past hospital merger cases featured the E-H test to determine the geographic market, but courts have favored the HMT for identifying the appropriate geographic market in recent hospital mergers. One case that represents the adoption of the HMT in place of the E-H test is *Saint Alphonsus Medical Center-Nampa Inc. v. St. Luke's Health System*. In *Saint Alphonsus*, a hospital in Nampa, Idaho, merged with a physician health system that operated an emergency clinic.[53] The Ninth Circuit applied the HMT and determined that costs associated with a price increase fell mainly to the insurance companies and not the consumers themselves.[54]

Another case that illustrates a court's application of the HMT to determine the relevant geographic market is the Third Circuit's approach in *FTC v. Penn State Hershey Medical Center*. In this case, the Third Circuit found that the district court erred in rejecting the HMT and applying the E-H test.[55] According to the Third Circuit, the district court "erred in both its formulation and application of the proper legal test."[56] The district court focused entirely on patient inflow data and not the insurer response to a SSNIP.[57] The Third Circuit also found that the district court weighted too heavily the agreement between insurers and hospitals not to raise prices for a five-year period.[58]

[40] *Id*. at 126.

[41] *Id*. at 141.

[42] *Id*. at 141-42.

[43] *Id*. at 140.

[44] *Id*. at 149.

[45] *See, e.g.*, *Advocate*, 841 F.3d at 474-75.

[46] *Id*.

[47] *Id*.

[48] Kenneth G. Elzinga & Anthony W. Swisher, *Limits of the Elzinga-Hogarty Test in Hospital Mergers: The*

Evanston Case, 18 Int'l J. of Economics of Business 133, 141 (2011). Mr. Elzinga was also the FTC's expert in *Evanston* and advocated for using the HMT for geographic market definition.

[49] *See, e.g.*, *Advocate*, 841 F.3d at 468-69.

[50] *Id*.

[51] *Id*.

[52] *Id*. at 469.

[53] *Saint Alphonsus Medical Center-Nampa Inc. v. St. Luke's Health System Ltd.*, 778 F.3d 775, 781-82 (9th Cir. 2015).

[54] *Id*. at 785.

[55] *FTC v. Penn State Hershey Medical Center*, 2016 WL 5389289 (3d Cir. Sept. 27, 2016) at 5-6.

[56] *Id*. at 6.

[57] *Id*.

[58] *Id*. at 9.

Of these errors, the focus on patient inflow data and the lack of focus on the payor (insurer) response to a SSNIP presented particularly large errors in the district court's analysis of the geographic market. The patient inflow analysis represented the district court's application of half of the E-H test, not the HMT. The Third Circuit stated that the district court fell prey to the silent majority fallacy, believing that because many patients already traveled into the proposed geographic market for service, that more would be willing to travel in response to a price increase.[59] The district court also failed to account for the likely response of insurers to a SSNIP. Following the district court's analysis, competition would only take place on one level, between hospitals competing for patients. This is false because competition among hospitals takes place on two levels, competition for patients and to be included in the payors' networks.[60] The Third Circuit held that the government properly defined the geographic market under the HMT, and that the district court erred in applying half of the E-H test.[61]

Another recent case in which a district court was reversed for incorrectly applying the E-H test is *FTC v. Advocate Health Care Network*. In *Advocate*, two hospital systems, Advocate and NorthShore, planned to merge. The FTC responded by filing a complaint and sought a preliminary injunction against the merger.[62] The Government's expert, Dr. Tenn, applied the HMT to determine the appropriate geographic market. After several iterations of the test, Dr. Tenn concluded that the relevant market included fifteen hospitals in the

North Shore area.[63] Dr. Tenn also looked at diversion ratios for patients in the North Shore area and which hospitals they would go to if the hospital they had previously chosen were unavailable.[64] Dr. Tenn conducted this analysis to show the percentage of patients that would switch to one of the merging hospitals in response to the SSNIP or should their current hospital become unavailable.

The Seventh Circuit stated that the district court had committed multiple errors when deciding this case. The first error was that the district court believed Dr. Tenn's logic to be circular and stated he assumed the answer before running the test.[65] The Seventh Circuit believed this to be an error by the district court because the HMT is iterative, meaning that it is repeated until the market is sufficiently large to meet the requirements.[66] The Seventh Circuit stated the proposed market is merely a candidate market and that the analysis is conducted to see whether the market passes the HMT.[67] This does not, in the court's eyes, make the logical circular, but offers one possible market as the effective area of competition, which Dr. Tenn did.[68] The court also stated that if the market is too narrow, the test will give that result and a larger proposed market can be the next iteration of the HMT.[69]

The Seventh Circuit said the district court also erred in its assessment of the geographic market by not giving correct weight to patient preference and falling victim to the silent majority fallacy.[70] The Seventh Circuit cited testimony from insurance company executives in support of its determination that

patients prefer to receive care close to home for more basic services, but would be willing to travel for complex services that fall outside the scope of the GAC product market.[71] The Seventh Circuit also cited Dr. Tenn's analysis that 95% of patients travel less than thirty minutes to receive GAC care.[72]

Regarding the silent majority fallacy, the Seventh Circuit agreed with insurance company executives that insurers had to include either Advocate or NorthShore in their network in the North Shore area, a fact that the district court discounted.[73] The Seventh Circuit stated that "the geographic market asks in essence, how many hospitals can insurers convince most customers to drive past to save a few percent on their health insurance premiums? We should not be surprised if that number is very small."[74] The district court looked at present travel habits of patients to determine the likelihood of patients' willingness to travel post-merger.[75] According to the Seventh Circuit, the district court fell prey to the silent majority fallacy in that it focused on patients who leave the market, not the market power the hospitals possess over those who choose not to leave.[76]

The Seventh Circuit relied on Elzinga's own critique of using the E-H test in its analysis of the geographic market in hospital mergers. An article written by Elzinga and Anthony Swisher discusses exactly how the E-H test will lead to an overly broad definition of the geographic market for hospital mergers.[77] The Seventh Circuit cited Elzinga and Swisher's critique saying that "some patients will be

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[59] *Id*.

[60] *Id*. at 8.

[61] *Id*. at 11.

[62] *Advocate*, 841 F.3d at 464.

[63] *Id*. at 466.

[64] *Id*.

[65] *Id*. at 465-66.

[66] *Id*. at 468 (quoting *In re Southeastern Milk Antitrust Litig.*, 739 F.3d 262, 278 (6th Cir. 2014)).

[67] *Id*. at 473.

[68] *Id*.

[69] *Id*.

[70] *Id*. at 476.

[71] *Id*.

[72] *Id*.

[73] *Id*.

[74] *Id*.

[75] *Id*.

[76] *Id*.

[77] *See* Elzinga & Swisher, *supra* n. 48 at 137-38.

willing to travel to see a particular specialist . . . others will not."[78] This is precisely what leads to the overly broad market definition. Elzinga and Swisher explained that "a widget does not care where it is sold, shipped, and then consumed; a person may care very much at what hospital her appendix is removed."[79] The Seventh Circuit agreed with Elzinga and Swisher's analysis of the silent majority fallacy of the E-H test, and accepted this analysis in its opinion.[80]

Problems with the HMT

One potential issue with using the HMT for hospital mergers is that the regulators could define a small or irregularly shaped market that passes the HMT, but might not be the most accurate representation of the affected market. For example, suppose two hospitals on opposite sides of a city are merging. The FTC challenges this merger and says the market consists only of the two merging hospitals and this market passes the HMT, despite the fact there are many other hospitals located within the city. This market could pass the HMT if the effective area of competition for GAC consisted of these two hospitals, especially if they were located near large population centers and other hospitals were not close to either center. Using only the HMT, this market could be considered correct. It is unlikely, however, that this market would accurately capture the potential economic harms created by the merger. One possible solution to the irregularly shaped market problem is that the HMT focuses on the effective area of competition and needs to include all competitors that would "substantially constrain the

firm's price-increasing ability."[81]

Another restriction on the HMT comes from the Seventh Circuit's decision in *42nd Parallel North v. E Street Denim Company*.[82] In *42nd Parallel North*, the Seventh Circuit explicitly rejected an "absurdly small" market definition of only a small business district in Highland Park that did not include the entire city or surrounding areas.[83] The Seventh Circuit deliberately included this point in its Advocate opinion to explain why an overly small or irregularly shaped geographic market would not pass muster. Other courts should take a lesson from the Seventh Circuit's limitation to the HMT in similar circumstances to promote competition and avoid blocking or deterring mergers that are not anticompetitive.

Conclusion

Based on the discussion above, courts should use the HMT to determine the appropriate geographic market for hospital mergers. In addition to the complex economics involved in hospital mergers, the HMT avoids the flaws associated with the E-H test, mainly the fallacy of the silent majority. Despite the history of courts using the E-H test in hospital mergers, two cases decided in 2016 suggest that the HMT is the preferred method for determining the appropriate geographic market. As more hospital mergers occur, antitrust lawyers should use the HMT when determining the relevant geographic market, as the DOJ and FTC are likely to use this test when reviewing or challenging such mergers in the future.

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[78] *Advocate*, 841 F.3d at 470.

[79] Elzinga & Swisher, *supra* n. 48 at 141.

[80] *Advocate*, 841 F.3d at 470.

[81] *Advocate*, 841 F.3d at 469.

[82] 286 F.3d 401 (7th Cir. 2002).

[83] *Id*. at 406.

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