No. 09-1183

IN THE

Supreme Court of the United States

LITTLE ROCK CARDIOLOGY CLINIC, P.A.; DR. BRUCE E. MURPHY AND BRUCE E. MURPHY, M.D.P.A.; DR. SCOTT L. BEAU AND SCOTT L. BEAU, M.D.P.A.; DR. DAVID C. BAUMAN AND DAVID C. BAUMAN, M.D.P.A.; DR. D. ANDREW HENRY AND D. ANDREW HENRY, M.D.P.A.; DR. DAVID M. MEGO AND DAVID M. MEGO, M.D.P.A.; DR. PAULO RIBEIRO AND PAULO RIBEIRO, M.D.P.A.; DR. WILLIAM A. ROLLEFSON AND WILLIAM A. ROLLEFSON, M.D.P.A.,

Petitioners,

v.

BAPTIST HEALTH AND BAPTIST MEDICAL SYSTEM HMO, INC.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Eighth Circuit

BRIEF OF HEALTH CARE AND INDUSTRIAL ORGANIZATION ECONOMISTS AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

JOE R. WHATLEY, JR.*
Counsel of Record
EDITH M. KALLAS
WHATLEY DRAKE & KALLAS, LLC
1540 Broadway, 37th Floor
New York, New York 10036
(212) 447-7070

Attorneys for Amicus Curiae

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INTEREST OF THE AMICI CURIAE[1]

The *amici curiae* are many of the leading healthcare and industrial organization economists in the country. They are concerned about the correct economic analysis being applied in the courts. They submit that the Eighth Circuit did not apply the correct economic analysis. This case presents an important opportunity for this Court to correct the economic analysis being applied in the Eighth Circuit, as well as in other courts. *Amici* and a brief description of their backgrounds are as follows:

David Dranove, PhD., Walter McNerney Professor of Health Industry Management, Northwestern University. Professor Dranove has published seminal research on healthcare competition. His research with Cory Capps and Mark Satterthwaite lays the foundation for a new approach for analyzing hospital competition. Professor Dranove has consulted with the Federal Trade Commission and the Department of Justice on healthcare competition.

Steven Berry, PhD., James Burrows Moffit Professor of Economics, Yale University. Professor Berry is an innovator in the field of empirical industrial organization. The methods he developed are widely used to study competition in differentiated goods markets including healthcare.

Cory Capps, PhD., Principal, Bates White. Dr. Capps served as an economist in the antitrust division of the Department of Justice where he specialized in healthcare competition. His research with David Dranove and Mark Satterthwaite lays the foundation for a new approach for analyzing hospital competition.

Michael Chernew, PhD., Professor of Health Care Policy, Harvard University. Professor Chernew is a health economist whose research includes studies of hospital competition. He is a member of the Congressional Budget Office's panel of health advisors.

Leemore Dafny, PhD., Assistant Professor of Management and Strategy, Northwestern University. Professor Dafny's research focuses on competition among health care organizations.

Guy David, PhD., Assistant Professor of Healthcare Management, University of Pennsylvania. Professor David is a health economist who studies the dynamics of competition in healthcare markets.

Kenneth Elzinga, PhD., Professor of Economics, University of Virginia:. Professor Elzinga is coauthor of the seminal research studies on the use of patient flow analysis to identify geographic markets.

H.E. Frech, PhD., Professor of Economics, UC Santa Barbara. Professor Frech is a pioneer in the study of healthcare competition. He has published a study investigating the validity of

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[1] Under Supreme Court Rule 37.2, *amici curiae* state that consent has been given for filing of this brief by counsel for all parties. Under Supreme Court Rule 37.6, *amici curiae* state that no counsel for a party has written this brief in whole or in part and that no person or entity, other than the *amici curiae*, its members, or its counsel, has made a monetary contribution to the preparation or submission of this brief.

patient flow analysis. Professor Frech has been a visiting professor at Harvard University and the University of Chicago.

Martin Gaynor, PhD., EJ Barone Professor of Economics and Health Policy, Carnegie Mellon University. Professor Gaynor is a leader in the study of competition in healthcare markets and has developed new methods for analyzing hospital market power. Professor Gaynor has consulted with the Federal Trade Commission and the Department of Justice on hospital competition.

Katherine Ho, PhD., Associate Professor of Economics, Columbia University. Professor Ho's research examines contracting between insurers and hospitals and the associated exercise of market power.

Richard Lindrooth, PhD., Associate Professor of Economics, University of Colorado at Denver. Professor Lindrooth's research focuses on competition among health providers. He was co-Principal Investigator of a Robert Wood Johnson Foundation funded study of new methods for defining hospital markets.

Willard Manning, PhD., Professor, University of Chicago and member of the Institute of Medicine. Professor Manning is a pioneer in development of econometric techniques in the field of health economics.

Aviv Nevo, PhD., Professor of Economics and Marketing, Northwestern University. Professor Nevo studies competition in differentiated goods markets. He received the 2007 *Compass Prize* for the paper making the most significant contribution to the understanding and implementation of competition policy.

Robert Porter, PhD., William Kenan Professor of Economics, Northwestern University and co-director, Northwestern University Center for the Study of Industrial Organization, and Fellow of the American Academy of Arts and Sciences. Professor Porter's seminal research introduces modern econometric techniques to the field of industrial organization economics.

Mark Satterthwaite, PhD., AC Buehler Professor in Hospital and Health Services Management, Northwestern University and fellow of the American Academy of Arts and Sciences. Professor Satterthwaite has published pathbreaking work on auctions and bargaining. His work with Cory Capps and David Dranove lays the foundation for a new approach for analyzing hospital competition.

Alan Sorensen, PhD., Associate Professor of Economics and Strategic Management, Stanford University. Professor Sorensen's research examines pricing strategies and includes an empirical study of hospital and insurer bargaining.

Robert Town, PhD., James Hamilton Professor of Health Economics, University of Minnesota. Professor Town's research focuses on competition in healthcare markets. His seminal research on hospital competition led to new methods for defining hospital markets. Professor Town has consulted with the Federal Trade Commission on hospital merger cases.

Michael Whinston, PhD., Robert and Emily King Professor of Business Institutions, Northwestern University co-director, Northwestern University Center for the Study of Industrial Organization, and fellow, American Academy of Arts and Sciences. Professor Whinston is the author of *Lectures on Antitrust Economics* (MIT Press).

William White, PhD., Professor of Economics and Director of the Sloan Program in Health Administration, Cornell University. Professor White is a health economist who has published seminal work on hospital competition. He has consulted with the Federal Trade Commission on hospital merger cases.

Dennis Yao, PhD., Lawrence Fouraker Professor of Business Administration, Harvard University. Professor Yao's research focuses on the economics of industry. He served as a Commissioner of the Federal Trade Commission from 1991-1994, where he helped draft the federal hospital merger guidelines.

SUMMARY OF THE ARGUMENT

The United States Court of Appeals for the Eighth Circuit upheld a district court order dismissing Little Rock Cardiology Clinic's ("LRCC") complaint against Arkansas Blue Cross and Blue Shield ("BCBS") and Baptist Health ("Baptist"). *Little Rock Cardiology Clinic v. Baptist Health,* 591 F.3d 591 (8th Cir. 2009). LRCC alleged that BCBS and Baptist had engaged in anticompetitive activities through a contract in which Baptist held the exclusive right to perform cardiology procedures to enrollees of BCBS residing in the Little Rock area. In dismissing the complaint, the Eight Circuit specifically rejected LRCC's proposed geographic market definition, using the pejorative "gerrymander" to describe the relevant geographic market alleged by LRCC. *Id.* at 599, 601. The Eighth Circuit observed that LRCC "alleges that a low percentage of patients leave its proposed geographic market, *but does not allege that a low percentage of its patients enter its proposed geographic market.*" *Id.* at 599 (emphasis added). The Eighth Circuit also states that an antitrust plaintiff cannot "limit the relevant geographic market to a location smaller than [a defendant's trade] area. . ." *Id.* at 600-01. *Amici* believe that the Eighth Circuit has erred by requiring LRCC to examine the percentage of patients that enter its proposed geographic market and by presuming that a firm's trade area necessarily informs or provides a bound upon the relevant geographic market.

The Eighth Circuit appears to be requiring the use of *patient flow analysis* for defining the geographic market in which Baptist competes. Analysts often examine flows of goods and services to help identify where a business draws its customers from and where else its potential customers might turn. The area from which a business draws its customers is often referred to as the *trade area* or *service area*; the Eighth Circuit criticized LRCC for failing to identify Baptist's trade area. Although knowledge of a trade area may prove useful to a business manager, for example when determining where to deploy sales staff, the Supreme Court has rejected the simple use of the trade area for defining markets and held that "[t]he proper question to be asked…is not where the parties to the merger do business…but where… the effect of the merger on competition will be direct and immediate." *United States v. Philadelphia Nat'l Bank,* 374

U.S. 321, 357 (1963). The trade area could be coincident with the geographic market, but one cannot be certain without directly examining competitive effects.

The economic theory and empirical evidence that we summarize below show that patient flow analysis and the identification of trade areas is inappropriate for understanding hospital competition; such analyses generate unreliable conclusions about hospital competition.

Despite these concerns, patient flow analysis has been routinely used in healthcare antitrust cases. It was the *de facto* standard in Federal Trade Commission and Department of Justice challenges to hospital mergers, including, but not limited to, hospital merger cases in Rockford, Illinois; Dubuque, Iowa; Joplin, Missouri; Grand Rapids, Michigan, Ukiah, California; Long Island; and Northern California.[2] Patient flow analysis has also been used in cases where the plaintiff alleges that a hospital has engaged in anticompetitive conduct, including the present matter.

After a decade of losing challenges to hospital mergers, and informed by the results of its hospital merger retrospective, the Federal Trade Commission rethought its approach to analyzing competition in hospital markets.[3] In *In re Evanston Northwestern Healthcare Corp.*, No. 9315, (F.T.C April 28, 2008), the FTC rejected the use of patient flow analysis in favor of a direct examination of merger effects in the context of the market situation in which hospitals compete. An administrative law judge ruled in favor of the FTC in this matter and the full Commission upheld the substance of that ruling in a unanimous decision; the case did not appear before a federal judge. More recently, the FTC recognized the limits of flow analysis in its attempt to block a merger in Northern Virginia. *In re INOVA Health System Foundation*, No. 9236,(F.T.C June 17, 2008) complemented the traditional Merger Guideline analysis by directly estimating the impact of the merger using econometric methods using a bilateral bargaining framework and data on patient-level hospital admissions. The merging hospitals withdrew their merger application before the case went to trial

The FTC's new approach stands in sharp contrast with the Eighth Circuit's recent ruling in the Little Rock case. The resulting confusion is likely to create bad and inconsistent antitrust policy. Should plaintiffs be required to perform flow analysis in defining relevant geographic markets, as the Eighth Circuit has ruled? Or is the FTC correct to reject flow analysis?

For more than two decades, national health policy has relied on market-based approaches to cost containment. When threatened by competition, healthcare providers have sought to increase efficiency and, in some cases, have also undertaken potentially anticompetitive

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[2] *United States v. Rockford Mem'l Corp.*, 717 F. Supp. 1251 (N.D. Ill. 1989), *aff'd*, 898 F.2d 1278 (7th Cir. 1990), *cert. denied*, 498 U.S. 920 (1990). *California v. Sutter Health Sys.*, 84 F. Supp. 2d 1057 (N.D. Cal. 2000), *aff'd mem.*, *California v. Sutter Health*, 217 F.3d 846 (Table), unpublished op. at, 2000 WL 531847 (9th Cir. May 2, 2000); *United States v. Mercy Health Servs.*, 902 F. Supp. 968 (N.D. Iowa 1995), *vacated as moot*, 107 F.3d 1045; *Fed. Trade Comm'n v. Freeman Hospital*, 69 F.3d 260 (8th Cir. 1995); *Fed. Trade Comm'n v. Butterworth Health Corp.*, 946 F. Supp. 1285 (W.D. Mich.1996); *Ukiah Valley Med. Ctr. v. Fed. Trade Comm'n*, 911 F.2d 261 (9th Cir. 1990); *United States v. Long Island Jewish Med. Ctr.*, 983 F. Supp. 121 (E.D.N.Y. 1997). *See* Tenn, S., The Price Effects of Hospital Mergers: A Case Study of the Sutter-Summit Transaction. Working Paper No. 293, Federal Trade Commission, November 2008 (critiquing the Ninth Circuit decision in *Sutter*).

[3] FTC, "Federal Trade Commission Announces Formation of Merger Litigation Task Force," news release, Aug. 28, 2002.

measures, such as exclusive contracts and mergers with close rivals. It is therefore essential that all stakeholders understand how the courts will evaluate such practices. This requires a clear answer to the question: should parties to a hospital antitrust claim be required to perform patient flow analysis? We urge the Supreme Court to resolve the ongoing confusion by answering this question. Once the Court has reviewed the economic evidence, we believe they will agree with us that the answer is no.

This brief describes the historical use of patient flow analysis in hospital antitrust cases and the relevant economic evidence on the use of flow analysis. The brief concludes by examining the validity of flow analysis to define the geographic market served by Baptist in Little Rock to demonstrate that the economic analysis used by the Court was wrong.

ARGUMENT

I. The Eighth Circuit Misapplied Flow Analysis

Flow analysis was developed by Elzinga and Hogarty ("EH") in conjunction with their studies of coal and beer markets.[4] EH proposed that one can define the geographic market in which competition plays out by studying the imports and exports of goods into and out of candidate geographic markets. If imports and exports represent "small" percentages of total transactions (where small may be subjectively defined as 10% or 25%), then the analyst may infer that transport costs are high and the candidate market is a well-defined geographic market.

It is seductively simple to translate this methodology to define geographic markets for hospitals. Rather than examine imports and exports of goods, the analyst examines inflows and outflows of patients. If relatively few patients leave the proposed geographic market to receive care elsewhere (low outflows) and relatively few patients treated at hospitals within the proposed market reside outside of the market (low inflows), then the market is, under the theory, well defined. Patient flow analysis was first used to define hospital markets in *In re Hospital Corp. of America,* 106 F.T.C 361 (1985). The Seventh Circuit subsequently applied the methodology in *United States v. Rockford Memorial Hospital Corp.*, 717 F. Supp. 1251 (N.D. Ill. 1989), aff'd, 898 F.2d 1278 (7th Cir.), cert. denied, 498 U.S. 920 (1990), after which patient flow analysis became the *de facto* standard for hospital merger cases.[5]

In the present case, the Eighth Circuit found that LRCC's complaint was deficient because, *inter alia*, it failed to properly define the geographic market served by Baptist. LRCC alleged that the geographic market comprised the cities of Little Rock and North Little Rock and asserted that, "Little Rock cardiology patients rarely go outside of the Little Rock market." (Third Am. Compl. ¶ 43). The Eighth Circuit noted that LRCC failed to assert that inflows are low. *Little Rock Cardiology,* 591 F.3d at 599 (LRCC "does not allege that a low percentage of its

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[4] Kenneth G. Elzinga & Thomas F. Hogarty, "The Problem of Geographical Market Delineation in Antimerger Suits," *Antitrust Bulletin* 18, no. 45 (1973): 45–81; Kenneth L. Elzinga & Thomas F. Hogarty, "The Problem of Geographical Market Delineation Revisited: The Case of Coal," *Antitrust Bulletin* 23 (1978): 1–18.

[5] *See California v. Sutter*, 130 F Supp. 2d. 1109 at 1122 (N.D. Cal. 2001).("The Court finds a service area based on the 90% level of significance …to be more appropriate than one based on an 85 percent threshold as proposed by plaintiff. Courts have **generally acknowledged** the 90 percent level of significance"). (Emphasis added.)

patients enter its proposed geographic market."). In other words, the Eighth Circuit rejected LRCC's geographic market definition because it had not fully implemented the EH test.

In requiring LRCC to perform a full EH analysis, the Eighth Circuit ignored a large body of theoretical and empirical research exposing deep flaws in using EH-style flow analysis to define hospital markets. Frech, *et al.*, show that the EH test can lead to geographic market definitions that lack any semblance of face validity.[6] In particular, they find that when EH is applied to specific hospitals in California, one may need to expand the geographic market to include the entire state. Thus, a hypothetical merger of every hospital in the San Francisco Bay Area could pass muster under the EH test. A related problem is that the geographic market depends on the initial candidate market. Thus, if one begins the analysis by defining the geographic market in which hospital "A" competes, one might define a market that includes hospital "B." However, if one begins by defining the market in which B competes, one might exclude A. Such a perverse conclusion casts substantial doubt on the validity of the methodology.

Another major flaw with the EH method is its lack of theoretical foundation.[7] Simply put, there is no economic theory to justify its use in differentiated goods markets such as inpatient hospital services. As a result, one cannot use inflow and outflow percentages to understand how hospitals compete. For example, there is no formula that allows one to use flow percentages to predict the effect of a hospital merger on prices.

In 2003, the FTC and DOJ held 27 days of hearings on a broad set of healthcare competition law and policy topics, including hospital geographic market definition. In their ensuing joint report, the agencies stated that "[h]ospital geographic markets should be defined properly" and that "[T]he Agencies' experience and research indicate that **the Elzinga-Hogarty test is not valid or reliable in defining geographic markets in hospital merger cases**." "Competition Law: Hospitals," in *Improving Health Care: A Dose of Competition*, FTC and DOJ, chap. 4, at 5 (2004). (Emphasis added.)

Perhaps the most important theoretical weakness of EH analysis in the context of hospital mergers is that it ignores the market situation in which hospitals compete and prices are set. This weakness is especially telling given the Eighth Circuit's own observation that "[t]he

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[6] H.E. Frech III, James Langenfeld, and R. Forrest McClure, "Elzinga-Hogarty Tests and Alternative Approaches for Market Share Calculations in Hospital Markets," *Antitrust Law Journal* 71 (2004): 949. The authors conduct a detailed analysis of the sensitivity of the defined market to alternative assumptions and find that small changes in those assumptions can generate large changes in the defined market, an indication that EH is not a robust methodology for defining markets. They conclude by recommending caution in interpreting patient flow results and suggesting that such results be used only as a part of a fuller analysis:

> Given these results, we suggest that the courts refrain from using a bright line rule of thumb for interpreting EH results. We believe that arbitrary choices, such as 90 percent LIFO/LOFI tests, are particularly inappropriate. Analyzing patient flows as an approximation of where competition exists makes some sense. However, constructing an up-or-down test of market definition based on pre-ordained percentages of patient flow strikes us as an attempt to create a bright line where none exists. In our case study, using the 90 percent with the "rank then combine" method led to including zip codes from all over the State of California in the relevant market for a merger of two hospitals located a few miles away from each other.

[7] Werden, G., "The Limited Relevance of Patient Migration Data in Market Delineation for Hospital Merger Cases" 8 *Journal of Health Economics*, 363-76 (1990) . Capps and others, "Antitrust Policy and Hospital Mergers: Recommendations for a New Approach," *Antitrust Bulletin* 47, 2 (Winter 2002): 617–714.

determination [of a relevant market] is essentially one of fact, turning on the unique *market situation* of each case." *H. J. Inc. v. Int'l Tel. & Tel. Corp.*, 867 F.2d 1531, 1537 (8th Cir. 1989) (emphasis added).[8]

II. The Eighth Circuit Ignored the Eighth Circuit Ignored the Circumstances of the Market in which Hospitals Compete

Hospital competition has been described as a two-stage process.[9] In the first stage, hospitals and insurers negotiate prices through a process known as selective contracting. Under selective contracting, hospitals offer discounts with the goal of being included in payers' provider networks. Payers then give patients financial incentives to select in-network hospitals. In the second stage, hospitals compete for patients.[10]

Prior to selective contracting, there was almost no price competition among hospitals. Patients faced minimal out-of-pocket price differences across hospitals, which blunted hospital incentives to reduce prices. This is why Dranove, Satterthwaite and Sindelar described selective contracting as injecting price competition into the market.[11]

Selective contracting introduced price competition into the markets in which hospitals compete; importantly, however, that competition is largely restricted to first stage competition to be included in payers' networks. This is because patients in the second stage continue to face minimal out-of-pocket price differences when visiting in-network providers. Under selective contracting, patients tend to visit in-network providers, though they may visit an out-of-network provider for idiosyncratic reasons, such as obtaining highly valued services that patients cannot obtain under satisfactory terms in-network. Out-of-network hospital use is uncommon; thus, price is of secondary importance in second stage competition.

In a paper critiquing the EH test, Capps, *et al.*, describe stage one competition and the importance of networks. They observe that insurers cannot successfully compete for the

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[8] The FTC commissioners made a similar point in their unanimous decision in *In the Matter of Evanston Northwestern Healthcare Corporation and ENH Medical Group, Inc.*, No. 9315 (Fed. Trade Comm'n April 28, 2008), Opinion of the Commission by Chairman Majoras (Aug. 6, 2007) at 77–78:

> MCO demand for hospital services is partially a derived demand based on patient preferences, and the percentage of patients in a given area who use a hospital can, in certain circumstances, provide some rough indication of MCO preferences when they form a network. Ultimately, however, we believe that we should view patient flow data with a high degree of caution because of the silent majority fallacy and payor problem and, at best, we should use it as one potentially very rough benchmark in the context of evaluating other types of evidence. A robust application of the hypothetical monopolist methodology is almost certain to produce a more reliable determination of the geographic market than is analysis of patient flow data.

[9] This view of hospital competition was adopted by the Federal Trade Commission in all stages of its analysis of the acquisition of Highland Park Hospital by Evanston Northwestern Healthcare. See generally, *In the Matter of Evanston Northwestern Healthcare Corporation and ENH Medical Group, Inc.*, No. 9315 (F.T.C. April 28, 2008), and see in particular Initial Decision of Chief Administrative Law Judge Stephen J. McGuire at 16 (Oct. 21, 2005); Opinion of the Commission by Chairman Majoras ("Majoras Opinion") at 10, 62–63 (Aug. 6, 2007); and Concurring Opinion of Commissioner J. Thomas Rosch at 1–2 (Aug. 6, 2007).

[10] In many if not most cases, physicians play an important role in helping patients choose their hospital. Thus, hospitals may compete to attract physicians, for example by providing new technology and a well-trained nursing staff. When I discuss hospital competition for patients, I implicitly include hospital efforts to attract physicians.

[11] D. Dranove, M. Satterthwaite, and J. Sindelar, "The Effect of Injecting Price Competition into the Hospital Market: The Case of Preferred Provider Organizations," *Inquiry* 23, no. 4 (1986): 419–31.

business of local employers and local employees if they fail to include local providers in their networks.[12] This is because local employees highly value the option to be able to visit a local provider. A contract that required employees to always travel outside their metropolitan area for hospital care would not be viable. Even so, it is still possible that a nontrivial percentage of local residents travel elsewhere for care and a nontrivial percentage of locally hospitalized patients may originate from outside the area.

Capps, *et al.*, use the phrase "the silent majority fallacy" to capture the fact that patient flow data is inappropriate for defining geographic markets. They conclude that the EH test may generate excessively broad *geographic* markets. Kenneth Elzinga, one of the authors of the EH method, questioned the applicability of the EH model for defining hospital markets when testifying on behalf of the FTC in the Evanston Northwestern hospital merger case. *In re Evanston Northwestern Healthcare Corp.*, No. 9315 (F.T.C. Feb. 11, 2005).[13] In his testimony, Elzinga noted the important role of first stage competition and echoed use of the term "silent majority fallacy" by Capps, *et al.*, to describe the importance of localized competition. The five Commissioners of the Federal Trade Commission rejected the use of flow analysis in their ruling in *Evanston*. Although these hospitals receive a large percentage of their patients from outside of the nearby North Shore suburbs, the Commission found that the relevant geographic market was a relatively small triangle of the North Shore suburbs.[14]

In a related paper, Capps and Dranove provide empirical evidence that using EH flow analysis can lead to overly broad geographic market definition.[15] They examine pricing before and after mergers in four market areas. In each area, EH analysis would have led to the conclusion that the merging hospitals competed in broad markets and therefore lacked the power to raise prices. Yet in three of the four market areas studied, mergers led to statistically significant and economically important price increases. Capps and Dranove conclude that EH analysis can lead to overly broad geographic markets and could mask the presence of hospital market power. The retrospective evidence on pricing introduced in the *Evanston* case is consistent with Capps and Dranove. Despite the relatively high inflows into the North Shore geographic market, evidence at trial revealed that the merging hospitals raised prices by 10% or more post-merger, relative to pricing trends elsewhere around Chicago. *Evanston Northwestern Healthcare*, No. 9315 Feb. 10, 2004, http://www.ftc.gov/os/caselist/0110234/040210 emhcomplaint.pdf. In other words, EH analysis suggested that the merger would not give the hospitals market power; empirical evidence showed otherwise.

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[12] C. Capps and others, "Antitrust Policy and Hospital Mergers: Recommendations for a New Approach," *Antitrust Bulletin* 47, 2 (Winter 2002): 617–714.

[13] "[T]here is this silent majority, and if patient flow data show that a non trivial number of people travel to a distant hospital, the problem in the Elzinga-Hogarty Test, using patient flow data, is that one might assume from it – assume incorrectly – that the existence of those traveling patients protects and disciplines the prices paid by the silent majority who don't travel, and these economists, Greg Werden and others and myself, are persuaded that in that regard, the Elzinga-Hogarty Test, using patient flow data, is misleading in trying to establish the contours of a relevant geographic market area." Transcript of Record at 2,391, *Evanston Northwestern Healthcare*, No. 9315 (F.T.C. Feb. 11, 2005) (testimony of Ken Elzinga).

[14] Majoras Opinion, *supra* note 9, at 58, 78.

[15] C. Capps and D. Dranove, "Hospital Consolidation and Negotiated PPO Prices," *Heath Affairs* 23, 2 (2004): 175–81.

III. The Relevant Geographic Market is Defined by the Geographic Scope of Competition, Which Is Not Determined by the Flow Data Required by the Eighth Circuit

These findings concerning the validity of EH have direct application to the Little Rock case. The issue at hand is defining the geographic market served by Baptist. The market must be defined in the context of the market situation in which Baptist competes. Like most hospital markets, pricing in this market is determined through stage one competition in which insurers doing business in Little Rock selectively contract to assemble hospital networks. An insurer attempting to do business with employers and employees in the Little Rock area would have little success if its network excluded Little Rock hospitals in favor of hospitals in cities that are 40 miles away or more, such as Pine Bluff. Little Rock employers and employees would strongly prefer an insurer whose hospital network offered local access. Thus, during stage one competition, insurers who wish to do business with Little Rock employers and employees would seek to contract with hospitals within the Little Rock metropolitan area. This defines the geographic scope of competition.[16]

Now consider what we might conclude if we examined flow data. Some Little Rock residents may choose to receive care outside of Little Rock, although it is unlikely that outflows would be high and LRCC observed as much in its complaint. (Third Am. Compl. ¶43). This suggests that Little Rock-area residents value access to local hospitals and stage one competition is therefore confined to Little Rock-area hospitals. Even so, some residents of Pine Bluff and other distant communities may travel to Little Rock for care and the inflow percentage (the percentage of patients in Little Rock hospitals who emanate from outside Little Rock) could possibly exceed 10 percent. LRCC did not produce an inflow statistic in its complaint and the Eighth Circuit found LRCC at fault for failing to do so. But examination of inflow statistics as demanded by the Eighth Circuit is not relevant to defining the geographic market in this context. Indeed, an analysis of inflow statistics and the resulting trade area reveal nothing about the willingness of Little Rock residents to substitute more distant and less convenient hospitals for their local hospitals, which is the central question of market definition for stage one competition.

CONCLUSION

In its complaint, LRCC alleged that the relevant geographic market served by Baptist Hospital is the cities of Little Rock and North Little Rock. The Eighth Circuit rejected LRCC's complaint in part because LRCC failed to use patient flow analysis and define a trade area when defining the geographic market. Economic theory and evidence show that patient flow analysis and trade areas are inappropriate for defining hospital geographic markets. Even the coauthor of the seminal research proposing the use of flow analysis, Kenneth Elzinga, rejects its use when

[16] Gaynor, M. and W.Vogt "Competition among Hospitals" *RAND Journal of Economics 34(4)* (2003): 764-85 and Capps, Dranove, and Satterthwaite "Competition and Market Power in Option Demand Markets" *RAND Journal of Economics* 34(4) (2003):737-63 have proposed more rigorous methods for defining geographic markets by directly predicting merger effects. Both methods yield qualitative similar geographic markets that tend to be much smaller than the markets obtained from patient flow analysis. (Gaynor, Kleiner, and Vogt, "A Structural Approach to Market Definition: An Application to the Hospital Industry," working paper, 2010.) The method Capps, *et al.* and Gaynor and Town does suggest that examination of *outflow* data may provide a useful first step for defining markets.

studying hospital markets. While the discovery process might lead to a more refined geographic market definition than the one proposed by LRCC, the Eighth Circuit clearly overreached when it concluded, based primarily on inappropriate considerations of *inflows*, that LRCC had "gerrymandered" the market definition. *Little Rock Cardiology*, 591 F.3d at 599, 601. The Eighth Circuit's insistence that LRCC use a methodology that is inappropriate for the market situation in question is economically incorrect.

Respectfully submitted.

JOE R. WHATLEY, JR.
EDITH M. KALLAS
WHATLEY DRAKE & KALLAS, LLC
1540 Broadway, 37th Floor
New York, New York 10036
(212) 447-7070

Attorneys for Amici Curiae

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