UNITED STATES OF AMERICA

FEDERAL TRADE COMMISSION

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VIA E-MAIL

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Re: **Cabell Huntington Hospital Inc.'s Application for Approval of Cooperative Cooperative Agreement**

Dear Ms. Dellinger and Mr. Davis:

On behalf of FTC Bureau of Competition staff, and pursuant to W.V. Code § 16-29B-28(e)(2), I respectfully submit the attached written comments regarding Cabell Huntington Hospital Inc.'s Application for Approval of Cooperative Agreement.

If you have any questions, please feel free to contact me.

Sincerely,

Alexis James Gilman
Assistant Director
Mergers IV Division
Bureau of Competition

Enclosures

FEDERAL TRADE COMMISSION
BUREAU OF COMPETITION STAFF SUBMISSION TO THE WEST VIRGINIA HEALTH CARE AUTHORITY REGARDING COOPERATIVE AGREEMENT APPLICATION OF CABELL HUNTINGTON HOSPITAL

PURSUANT TO W. VA. CODE §§ 16-29B-26, 28–29

APRIL 18, 2016

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I. EXECUTIVE SUMMARY

The staff of the Federal Trade Commission's ("FTC") Bureau of Competition respectfully submits this public comment regarding the cooperative agreement application of Cabell Huntington Hospital ("Cabell," "CHH," or "Applicant") relating to its proposed acquisition of St. Mary's Medical Center ("St. Mary's" or "SMMC").[1] W. Va. Code § 16-29B-28(d)(4)(C) states that "[i]n reviewing an application for cooperative agreement, the authority shall give deference to the policy statements of the Federal Trade Commission." Most importantly for this proceeding, the U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines ("Merger Guidelines")[2] outline the merger-enforcement policy and analytical framework used by antitrust agencies and many courts to evaluate the potential benefits (i.e., efficiencies) and the competitive impact of a proposed merger. We appreciate the opportunity to present our analysis in written comments on the proposed cooperative agreement, currently under review by the West Virginia Health Care Authority ("Authority") pursuant to W. Va. Code §§ 16-29B-26, 28, and 29 ("West Virginia Cooperative Agreement Law" or "WVCAL").

We submit this comment to express our concern that the proposed cooperative agreement presents substantial risk of serious competitive harm, and it is likely to result in higher health care costs, lower quality, and reduced incentive to invest in innovative medical technologies for patients living in the four counties around Huntington, West Virginia. This substantial consumer harm is not likely to be fully or substantially mitigated by the proposed conduct restrictions the Applicant claims will regulate its post-acquisition conduct. Further, this harm is unlikely to be outweighed by the purported benefits the Applicant claims the proposed cooperative agreement will create.

FTC staff conducted a thorough, year-plus investigation to assess the competitive impact of this proposed cooperative agreement. FTC staff also evaluated the potential benefits, including quality-of-care benefits and cost savings, that the Applicant claims it will be able to achieve through the proposed cooperative agreement. Then, FTC staff weighed the potential benefits and likely harm from Cabell's acquisition of St. Mary's and concluded that the likely harm far outweighs the potential benefits. The WVCAL instructs the Authority to conduct a similar analysis, stating that the Authority shall approve a cooperative agreement only if it finds that "the benefits likely to result from the proposed cooperative agreement outweigh the disadvantages likely to result from a reduction in competition from the proposed cooperative agreement."[3]

The proposed cooperative agreement will eliminate significant competition between Cabell and St. Mary's, the only two hospitals in Huntington. This competition between the

[1] This staff comment expresses the views of the FTC's Bureau of Competition. The comment does not necessarily represent the views of the Commission or of any individual Commissioner.
[2] U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines (2010), https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf [hereinafter "Merger Guidelines"].
[3] W. Va. Code § 16-29B-28(f)(3).

hospitals has benefitted patients by lowering health care prices, increasing health care quality, and improving patients' hospital experiences.

Cabell and St. Mary's compete vigorously on price, which reduces health care costs for area consumers. They track each other's list charges and negotiated reimbursement rates with health plans, and try to match or beat each other's prices. Health plans have used competition between Cabell and St. Mary's to restrain reimbursement rates and obtain more favorable contract terms. The combined Cabell-St. Mary's will have substantially higher bargaining leverage that will enhance its ability to command higher reimbursement rates from health plans. Any increase in rates will be passed on to employers and ultimately the community at large in the form of higher health insurance premiums, higher deductibles, higher co-pays, and reduced insurance coverage.

In order to attract patients, Cabell and St. Mary's also compete intensely on quality and service. They have invested in new clinical technologies and added new service lines in order to attract patients and win market share from each other. The proposed cooperative agreement will substantially erode the hospitals' incentive to improve quality and add new services by ending this important dimension of competition between them.

Recognizing the strong evidence of likely competitive harm, the Applicant contends that several restrictions on its conduct ("conduct restrictions") will limit the proposed cooperative agreement's harmful effects. These conduct restrictions include an "Assurance of Voluntary Compliance" agreed to with the West Virginia Attorney General, a Letter of Agreement with a health plan, and the rate and quality regulation provisions in the WVCAL, W. Va. Code § 16-29B-28(g) and (i). But these conduct restrictions do not preserve or restore competition, and they are deeply flawed. Moreover, even if they work as promised to constrain price increases, they do not prevent competitive harm in the form of diminished quality or reduced service.

The Applicant also argues that the proposed cooperative agreement will result in a number of benefits, including cost savings and quality-of-care improvements. But its application contains nothing more than a series of vague and perfunctory assertions regarding the proposed cooperative agreement's potential benefits. There are no details regarding these plans, the timeline, or the cost to achieve them. Further, the application fails to state the methods by which the combined Cabell-St. Mary's will achieve the purported benefits, which is a requirement of the WVCAL. The Applicant not only has failed to provide any substantiation of its claimed benefits, but also has failed to show why many of the claimed benefits could not be achieved without the merger or with an alternative acquisition or affiliation that would be less harmful to competition and patients. Overall, any such benefits that might exist are very modest in scope, and they certainly fall far short of the extraordinary level necessary to counterbalance the substantial harm to competition that the proposed cooperative agreement is likely to cause.

In the remainder of this comment, we provide our analysis of the proposed cooperative agreement, using the framework set out in the WVCAL and the Merger Guidelines. In Section II, we briefly describe the merging parties and the proposed cooperative agreement. In Section III, we set out the cooperative agreement analysis required by the WVCAL. In Sections IV and V, we describe the substantial competitive harm likely to arise from the proposed cooperative

agreement and explain why the conduct restrictions will not fully prevent this competitive harm. We then apply the conclusions of this analysis to the four specific factors the Authority must consider under § 16-29B-28(f)(5) of the WVCAL when evaluating the "disadvantages attributable to any reduction in competition" from the proposed cooperative agreement. In Section VI, we set out the Merger Guidelines' framework for evaluating efficiencies claims from a proposed merger. We then apply this framework to each of the Applicant's claims regarding the nine potential benefits from the proposed cooperative agreement that the Authority must consider under § 16-29B-28(f)(4) of the WVCAL.

For the reasons explained below, FTC staff respectfully asks the Authority to deny the proposed cooperative agreement application because the disadvantages likely to result from the reduction in competition from the proposed cooperative agreement, including significant harm to consumers, far outweigh the claimed benefits.

FTC staff requests that the Authority recognize FTC staff as an affected person under § 16-2D-2 and § 16-29B-28(e)(4) of the West Virginia Code. The Bureau of Competition works to protect consumers and the public interest, promote free and open competition, and prevent anticompetitive business practices in order to allow consumers to access quality goods and services at competitive prices. With respect to this transaction, the Commission, after finding reason to believe that the agreement would violate Section 7 of the Clayton Act if consummated and that a law enforcement action would be in the public interest, issued an administrative complaint and authorized Bureau of Competition staff to seek a temporary restraining order and preliminary injunction in federal court. The Bureau of Competition's ability to protect consumers and markets, and thus to fulfill its responsibilities, may be affected by the Authority's proceeding.

Finally, FTC staff is aware that the Applicant has filed a motion for expedited review of its application with the Authority. FTC staff respectfully submits that expedited review of the application is not appropriate, and further suggests that a public hearing on the application, pursuant to § 16-29B-28(e)(2)(iii) of the WVCAL, may aid the Authority to make an informed decision on the application. This is the first cooperative agreement application submitted under the newly enacted WVCAL, so this application is a matter of first impression for the Authority. Further, the WVCAL requires the Authority to weigh the benefits of the proposed cooperative agreement against the resulting harm to competition, which is a different standard than the Authority applied in the Certificate of Need decision.[4]

[4] *In re Cabell Huntington Hospital, Inc.*, West Virginia Health Care Authority, CON File #14-2-10375-A (March 16, 2016) at 30 [hereinafter "CON Decision"].

II. FACTUAL BACKGROUND

A. The Merging Parties

1. Cabell Huntington Hospital

Cabell is a non-profit general acute care hospital located in Huntington, West Virginia. It has 303 staffed beds.[5] Cabell offers an extensive range of general acute care inpatient services, including cardiovascular, neuroscience, orthopedics, cancer care, advanced pediatrics, a Level III neonatal intensive care unit, and burn, surgical, and pediatric intensive care units.[6] Cabell also operates the Cabell Huntington Hospital Surgery Center, an ambulatory surgery center offering a wide range of outpatient surgical services.[7] Cabell is a teaching hospital and has academic affiliations with the Marshall University School of Medicine.[8]

2. St. Mary's Medical Center

St. Mary's is a Catholic non-profit hospital located in Huntington, West Virginia, only three miles from Cabell. With 393 staffed beds, it is the larger of Huntington's two hospitals.[9] St. Mary's is owned by Pallottine Health Services, Inc. ("PHS"), which is sponsored and operated by the Pallottine Missionary Sisters.[10] St. Mary's offers a broad array of general acute care inpatient services and maintains Centers of Excellence in cardiac care, cancer treatment, orthopedics, and neuroscience.[11] It also operates a campus in Lawrence County, Ohio, called St. Mary's Medical Center Ironton Campus, which offers emergency services and outpatient laboratory and imaging services, but no inpatient services.[12] St. Mary's also manages and has an ownership stake in Three Gables Surgery Center, an outpatient surgical hospital located in

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[5] Cabell Huntington Hospital, *About Us*, http://cabellhuntington.org/about/.

[6] *See* Cabell Huntington Hospital, *Our History*, http://cabellhuntington.org/about/our-history/; Cabell Huntington Hospital, *Cardiac Catheterization Lab*, http://cabellhuntington.org/services/cardiology/cardiac-catheterization/; Cabell Huntington Hospital, *Neuroscience*, http://cabellhuntington.org/services/neuroscience/; Hoops Family Children's Hospital at Cabell Huntington Hospital, *Services & Specialties: Specialized Care for Special Kids*, http://hoopschildrens.org/services/; Cabell Huntington Hospital, *Neonatal Intensive Care Unit (NICU)*, http://cabellhuntington.org/services/nicu/; Cabell Huntington Hospital, *CHH Unveils New and Expanded Burn Intensive Care Unit* (July 23, 2013), http://cabellhuntington.org/news/wns/chh-unveils-new-and-expanded-burn-intensive-care-unit; Hoops Family Children's Hospital at Cabell Huntington Hospital, *Pediatric Intensive Care Unit*, http://hoopschildrens.org/facilities-programs/pediatric-intensive-care-unit/http://cabellhuntington.org/about/our-history/; Hoops Family Children's Hospital at Cabell Huntington Hospital, "Pediatric Intensive Care Unit," http://hoopschildrens.org/facilities-programs/pediatric-intensive-care-unit/.

[7] Cabell Huntington Hospital, *CHH Surgery Center*, http://cabellhuntington.org/services/surgery/the-chh-surgery-center/.

[8] Cabell Huntington Hospital, *About Us*, http://cabellhuntington.org/about/.

[9] St. Mary's Medical Center, *About St. Mary's*, http://www.st-marys.org/about.

[10] PHS previously owned St. Joseph's Hospital in Buckhannon, West Virginia, but recently transferred sponsorship of St. Joseph's to WVU Medicine's United Hospital Center. *See* Melissa Toothman, *Transfer of St. Joseph's Hospital to United Hospital Center now complete*, The Exponent Telegram (Oct. 6, 2015), http://www.theet.com/news/local/transfer-of-st-joseph-s-hospital-to-united-hospital-center/article_8bc95190-f199-5f6c-9f9a-fe8e143bcf6a.html.

[11] St. Mary's Medical Center, *About St. Mary's*, http://www.st-marys.org/about.

[12] St. Mary's Medical Center, *Ironton Campus*, https://www.st-marys.org/centers-services/st.-marys-ironton-campus.

Proctorville, Ohio (across the Ohio River from Huntington, West Virginia).[13] Like Cabell, St. Mary's has academic affiliations with the Marshall University School of Medicine.[14]

B. The Proposed Cooperative Agreement

PHS began the process of putting St. Mary's (and another hospital, St. Joseph's) up for sale in 2013. In January 2014, Cabell submitted a Letter of Intent to acquire St. Mary's. PHS declined Cabell's Letter of Intent in favor of pursing a Request for Proposal ("RFP") process. PHS sent out the RFP for St. Mary's in March 2014, and a number of interested parties, including Cabell, Bon Secours Health System ("Bon Secours"), Charleston Area Medical Center ("CAMC"), Thomas Health, LifePoint Health, and other providers, submitted proposals to acquire St. Mary's.[15] St. Mary's selected Cabell as its acquirer, and on August 1, 2014, the parties executed a Term Sheet. On November 7, 2014, Cabell and St. Mary's entered into a definitive agreement (the "Agreement"), whereby Cabell would become the ultimate parent entity of St. Mary's.

Cabell obtained a Certificate of Need ("CON") from the Authority on March 16, 2016.[16] In granting the CON, the Authority noted that it "historically has not given [competition] priority in hospital acquisition cases" and was not inclined to do so in reviewing Cabell's acquisition of St. Mary's because other priorities were served by the proposed acquisition.[17] Before consummating the proposed acquisition, St. Mary's must obtain approval for the sale from the Vatican. To our knowledge, Vatican approval has not yet been granted. The parties submitted their application for approval of their cooperative agreement on March 25, 2016.[18] The Authority accepted as complete the Applicant's Application for Approval of a Cooperative Agreement on April 8, 2016.

III. LEGAL STANDARD FOR APPROVAL OF COOPERATIVE AGREEMENTS

The West Virginia Cooperative Agreement Law sets out the criteria to be considered by the Authority in evaluating the Applicant's proposed cooperative agreement. In particular, the WVCAL provides that the Authority "shall approve a proposed cooperative agreement and issue a certificate of approval if it determines, with the written concurrence of the Attorney General, that the benefits likely to result from the proposed cooperative agreement outweigh the disadvantages likely to result from a reduction in competition from the proposed cooperative agreement."[19]

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[13] *See* Three Gables Surgery Center, *About Us*, http://www.threegablessurgery.com/aboutus.cfml; Three Gables Decl. ¶¶ 11, 12.
[14] St. Mary's Medical Center, *About St. Mary's*, http://www.st-marys.org/about.
[15] *See, e.g.*, OLBH Decl. ¶ 13; CAMC Decl. ¶ 18; Thomas Decl. ¶ 8.
[16] CON Decision.
[17] CON Decision at 31–32.
[18] Application for Approval of Cooperative Agreement, Cabell Huntington Hospital, Inc., CON File #14-2-10375-A (March 25, 2016) [hereinafter "Application"].
[19] W. Va. Code § 16-29B-28(f)(3).

The WVCAL further specifies the criteria the Authority should use in evaluating the benefits of, and the disadvantages of the reduction in competition from, a proposed cooperative agreement. W. Va. Code § 16-29B-28 (f)(4) instructs the Authority, in evaluating the potential benefits of a proposed cooperative agreement, to consider whether one or more of the following benefits may result:

(A) Enhancement and preservation of existing academic and clinical educational programs;
(B) Enhancement of the quality of hospital and hospital-related care, including mental health services and treatment of substance abuse provided to citizens served by the authority;
(C) Enhancement of population health status consistent with the health goals established by the authority;
(D) Preservation of hospital facilities in geographical proximity to the communities traditionally served by those facilities to ensure access to care;
(E) Gains in the cost-efficiency of services provided by the hospitals involved;
(F) Improvements in the utilization of hospital resources and equipment;
(G) Avoidance of duplication of hospital resources;
(H) Participation in the state Medicaid program; and
(I) Constraints on increases in the total cost of care.

Likewise, W. Va. Code § 16-29B-28(f)(5) instructs the Authority, in evaluating the disadvantages attributable to any reduction in competition likely to result from the proposed cooperative agreement, to consider the following factors:

(A) The extent of any likely adverse impact of the proposed cooperative agreement on the ability of health maintenance organizations, preferred provider organizations, managed health care organizations or other health care payors to negotiate reasonable payment and service arrangements with hospitals, physicians, allied health care professionals or other health care providers;
(B) The extent of any reduction in competition among physicians, allied health professionals, other health care providers or other persons furnishing goods or services to, or in competition with, hospitals that is likely to result directly or indirectly from the proposed cooperative agreement;
(C) The extent of any likely adverse impact on patients in the quality, availability and price of health care services; and
(D) The availability of arrangements that are less restrictive to competition and achieve the same benefits or a more favorable balance of benefits over disadvantages attributable to any reduction in competition likely to result from the proposed cooperative agreement.

Finally, W. Va. Code § 16-29B-28(d)(4)(C) states that "[i]n reviewing an application for cooperative agreement, the authority shall give deference to the policy statements of the Federal Trade Commission." The Merger Guidelines outline the merger-enforcement policy and analytical framework used by the federal antitrust agencies to evaluate the potential benefits (i.e., efficiencies) and the competitive impact of a proposed merger. The Merger Guidelines have

been developed and updated to reflect the federal antitrust agencies' long experience examining a wide variety of mergers—including many hospital and other health care related mergers—as well as economic and other relevant research. Courts routinely rely on the Merger Guidelines framework to analyze the likely efficiencies and competitive effects of a proposed hospital merger.[20]

Notably, the types of benefits and disadvantages that the Authority must consider are similar to the factors that FTC staff considers under the Merger Guidelines framework when reviewing hospital mergers. FTC staff recognizes that hospital mergers have the potential to result in meaningful clinical quality improvements and cost savings that would not be possible without the merger. Thus, FTC staff's analysis of a proposed merger includes a thorough assessment of the potential benefits and efficiencies, as well as the disadvantages and harms resulting from any reduction in competition. Similar to the analysis required by the WVCAL, those benefits are weighed against those likely adverse effects under the Merger Guidelines. FTC staff often concludes that the benefits would be sufficient to offset the competitive harm, particularly if that harm is modest. It should be noted, however, that the greater the likelihood of harm from a proposed merger, the more credible and substantial any claimed benefits must be to conclude that the benefits outweigh the harms.[21]

In August 2014, the FTC opened an investigation of Cabell's acquisition of St. Mary's. During this investigation, FTC staff assembled and analyzed a substantial body of evidence, including testimony from the merging parties' executives, consultants, and knowledgeable third parties; dozens of declarations from hospitals, health plans, and local employers; and hundreds of thousands of party and third-party documents. FTC staff also retained three highly regarded experts to assist in its investigation. Dr. Cory Capps, Ph.D., an economic expert at Bates White Economic Consulting, analyzed the proposed cooperative agreement's likely effects on competition and consumers.[22] Additionally, a cost-efficiencies expert, Dr. Thomas Respess III of Baker & McKenzie Consulting LLC, and a clinical quality expert, Dr. Patrick Romano of the University of California Davis, were retained to examine the Applicant's cost savings and quality benefits claims, respectively. On November 5, 2015, the FTC issued an administrative complaint challenging the transaction as violating Section 7 of the Clayton Act, 15 U.S.C. § 18.[23] During the pre-trial period of the administrative litigation in this matter, the FTC and the merging parties engaged in extensive fact discovery, including dozens of witness depositions, voluminous expert reports, and a substantial volume of documentary evidence. Therefore, FTC staff is able to provide an extensive assessment of the proposed cooperative agreement

[20] *See ProMedica Health Sys., Inc. v. FTC.*, 749 F.3d 559 (6th Cir. 2014); *FTC v. OSF Healthcare Sys.*, 852 F. Supp. 2d 1069 (N.D. Ill. 2012); *FTC v. Univ. Health, Inc.*, 938 F.2d 1206 (11th Cir. 1991); *U.S. v. Rockford Mem'l Corp.*, 717 F. Supp. 1251 (N.D. Ill. 1989), *aff'd, U.S. v. Rockford Mem'l Corp.*, 898 F.2d 1278 (7th Cir. 1990).

[21] *See* Merger Guidelines § 10 ("The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market.").

[22] An executive summary of Dr. Capps's analysis is attached to this comment as Attachment 1. This executive summary is only a portion of the report Dr. Capps authored for the administrative litigation in this matter.

[23] *See In the Matter of Cabell Huntington Hospital, Inc.*, No. 9366 (FTC Nov. 5, 2015), *available at* https://www.ftc.gov/system/files/documents/cases/151106cabellpart3cmpt.pdf. Section 7 of the Clayton Act prohibits acquisitions that may substantially lessen competition or tend to create a monopoly.

(recognizing, however, that the FTC is prohibited from publicly disclosing confidential information obtained during an investigation or in litigation). Below, we provide our analysis of the proposed cooperative agreement, using the framework set out in the WVCAL and the Merger Guidelines.

IV. THE PROPOSED COOPERATIVE AGREEMENT WILL RESULT IN SIGNIFICANT DISADVANTAGES ATTRIBUTABLE TO THE SUBSTANTIAL REDUCTION OF COMPETITION

Under W. Va. Code § 16-29B-28(f)(5), the Authority must evaluate any disadvantages attributable to any reduction in competition likely to result from the proposed cooperative agreement. After more than a year of investigation and with an extensive evidentiary record, FTC staff concludes that the proposed cooperative agreement will substantially reduce competition and result in significant disadvantages. These disadvantages include higher prices for health care services to commercial health plans and ultimately their members—local employers and individuals—and significant harm to quality, which would affect all consumers, including Medicare and Medicaid enrollees. Additionally, there are available alternative arrangements that are less restrictive to competition and that may achieve the same benefits or a more favorable balance of benefits over disadvantages attributable to the reduction in competition likely to result from the proposed cooperative agreement.[24]

A. Overview of Bargaining and Competitive-Analysis Framework

Hospitals generally compete in two stages: first, for inclusion in a health plan's network; and, second, to attract patients and physician referrals to their respective facilities. Health plans use competition between hospitals as leverage to negotiate better reimbursement rates (i.e., prices). This, in turn, results in lower premiums, copayments, deductibles, and other out-of-pocket expenses for employers who purchase health insurance for their employees or pay their employees' health care claims, consumers who receive health insurance as an employee benefit, and consumers who purchase their own health insurance. In addition, competition between hospitals to attract patients typically leads to increased quality and expanded availability of health care services. In other words, hospitals compete on both price and non-price (e.g., quality) terms, and mergers between close rivals eliminate that competition to the detriment of consumers—i.e., employers and individuals. Therefore, when competing hospitals merge, two different kinds of adverse effects may occur: higher prices charged to health plans or employers (which are then passed on to consumers) and non-price effects such as reduced quality and availability of services.

Here, the proposed cooperative agreement will eliminate competition between the only two hospitals in Huntington. It will result in a massive increase in market concentration, giving Cabell control of 76% of the inpatient general acute care services market and 65% of the outpatient surgical services market in the four counties around Huntington.[25] Further, the parties

[24] W. Va. Code § 16-29B-28(f)(5)(D).

[25] These shares are conservatively computed on the basis of patient locations (i.e., calculating market shares for all hospitals based in discharges of patients residing in the Four-County Huntington Area, even if the hospital is located

are indisputably each other's closest competitor. They compete with each other for inclusion in health plans' networks and in negotiating the reimbursement rates they receive from health plans. Once in-network with a health plan, Cabell and St. Mary's compete with each other to attract that health plan's members, and patients insured under government plans (Medicare and Medicaid), by providing high-quality care and adding new services and technology. The proposed cooperative agreement eliminates this beneficial competition, increasing the combined entity's ability to extract higher reimbursement rates from health plans and eroding its incentives to maintain or improve quality of care.

B. The Proposed Cooperative Agreement Will Result in Extraordinarily High Market Concentration

When analyzing a merger (or acquisition), the antitrust agencies often define one or more relevant products (or services) and geographic markets in which to examine the merger's likely competitive effects. The "ultimate goal of market definition is to help determine whether the merger may substantially lessen competition."[26] Market definition allows the antitrust agencies to identify market participants and measure market shares and market concentration. Market shares and market concentration are often a useful indicator of the likely competitive effects of a merger.[27]

The relevant product markets in which to evaluate the proposed cooperative agreement are (1) general acute care inpatient hospital services offered by both merging parties, and (2) outpatient surgical services offered by both merging parties. Further, the relevant geographic market in which to evaluate the proposed cooperative agreement is no larger than Cabell, Wayne, and Lincoln counties in West Virginia and Lawrence County in Ohio (the "Four-County Huntington Area"). In these relevant markets, the proposed cooperative agreement will lead to a dominant market share by the merged hospital system and substantial increases in market concentration, far exceeding the thresholds that create a presumption of competitive harm and unlawfulness under the Merger Guidelines and case law.

1. The Proposed Cooperative Agreement Will Significantly Harm Competition and Consumers in The Relevant Product Markets for Inpatient General Acute Care Services and Outpatient Surgical Services

The relevant product or service market "identifies the product[s] and services with which the [merging parties'] products compete."[28] The Merger Guidelines explain that a relevant product market is determined by assessing whether a hypothetical monopolist that is the only seller of the product at issue could profitably impose a small but significant and non-transitory

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outside the Four-County Huntington Area). Computing shares based on the locations of the hospitals (i.e., calculating market shares only for hospitals located in the Four-County Huntington Area), as indicated in Merger Guidelines § 4.2.1, would give Cabell and St. Mary's a combined post-acquisition market share of 100%.

[26] Merger Guidelines § 4.1.3.

[27] *See* Merger Guidelines § 5.

[28] *FTC v. CCC Holdings Inc.*, 605 F. Supp. 2d 26, 37 (D.D.C. 2009). For purposes of discussing the relevant market in this public comment, FTC staff use the terms "relevant product market" and "relevant service market" interchangeably.

increase in price ("SSNIP").[29] If so, that product (or group of products) constitutes the relevant product market; if not, then the product market should be expanded to include other products (or services) to which consumers would switch in the face of the hypothetical SSNIP. Courts and the antitrust agencies regularly utilize the hypothetical monopolist test when defining a product market.[30]

The first relevant product market for the Authority to examine is inpatient general acute care ("GAC") services sold to commercial health plans and provided to their insured members.[31] The inpatient GAC services market includes a broad cluster of medical and surgical diagnostic and treatment services offered by both Cabell and St. Mary's that typically require an overnight hospital stay.[32] Courts have consistently held in prior hospital merger cases that a cluster market for inpatient GAC services is a relevant product market.[33]

Under this "cluster market" approach, hundreds of individual inpatient GAC services are clustered together, even though each individual service is potentially a distinct product market because the services are not substitutable for one another. For example, knee surgery cannot be substituted for heart surgery in response to a price increase.[34] As a matter of analytical convenience, however, it is appropriate to group individual services together into a single cluster market, so long as "the competitive conditions for two markets are similar enough to analyze them together."[35] For purposes of clustering inpatient GAC services, the relevant competitive conditions include the number and identity of market participants, their market shares, the geographic market for each service, and the barriers to entry for each service.[36] Here, the competitive effects of the proposed acquisition on the hundreds of individual inpatient GAC services offered by both Cabell and St. Mary's can be analyzed together, because each service is offered by the same market participants under similar competitive conditions.

The inpatient GAC services cluster market is limited to the services that both Cabell and St. Mary's offer. It would be illogical to include services in the relevant market that only one of

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[29] Merger Guidelines § 4.1.1.

[30] *FTC v. Whole Foods Mkt. Inc.*, 548 F.3d 1028, 1038 (D.C. Cir. 2008); *OSF*, 852 F. Supp. 2d at 1075; *In re ProMedica Health Sys., Inc.*, No. 9346, 2012 WL 2450574 at *32 (F.T.C. June 25, 2012); *In re Evanston Nw. Healthcare Corp.*, No. 9315, 2007 WL 2286195, at *45–46 (F.T.C. Aug. 6, 2007).

[31] A commercial health plan is a private insurance company that negotiates rates and other terms with healthcare providers (such as hospitals and outpatient service providers) on behalf of health plan enrollees. Although the formal product market relates to commercial health plans and their members because they would be harmed by anticompetitive price increases while government-insured (e.g., Medicare and Medicaid) patients would not, commercial *and* government insured patients would be harmed by the cooperative agreement's harm to quality and service.

[32] As discussed below, the inpatient GAC services market does not include outpatient services, because competitive conditions for outpatient services differ from those for inpatient services, and because health plans and patients cannot substitute outpatient services for inpatient services in response to a price increase on inpatient services.

[33] *ProMedica*, 749 F.3d at 565–68; *Univ. Health*, 938 F.2d at 1211 n.11; *OSF*, 852 F. Supp. 2d at 1075–76; *Evanston Nw.*, 2007 WL 2286195, at *46-47.

[34] Under the Merger Guidelines, market definition "focuses solely on demand substitution factors, i.e., on customers' ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service." Merger Guidelines § 4.

[35] *ProMedica*, 749 F.3d at 567.

[36] *See ProMedica*, 749 F.3d at 565-66.

the two hospitals offer, because the proposed acquisition, by definition, does not eliminate competition for such services, as courts evaluating hospital mergers have explained.[37] Further, the Merger Guidelines explain that market definition begins when a product of one merging firm competes with a product of the other merging firm.[38]

The second relevant product market for the Authority's analysis to focus on is outpatient surgical services sold to commercial health plans and provided to their insured members. The outpatient surgical services market is a cluster of outpatient general surgery procedures offered by both Cabell and St. Mary's that do not require an overnight hospital stay.[39]

The Applicant seems to suggest that inpatient and outpatient services are in the same product market. If so, that is incorrect for the reasons explained above. But even if the Authority were to analyze inpatient and outpatient services together as a single service market as the Applicant suggests, given the merging parties' dominant share of inpatient discharges and outpatient procedures, the conclusions about the anticompetitive effects of the cooperative agreement would not change.

2. The Proposed Cooperative Agreement Will Significantly Harm Competition and Consumers in The Four-County Huntington Area

A relevant geographic market is the geographic "arena of competition affected by the merger."[40] Under the case law and Merger Guidelines, the relevant question in defining the geographic market is whether a hypothetical monopolist controlling all of the relevant services in the proposed geographic market could profitably impose a SSNIP.[41] If so, that area is the relevant geographic market; if not, then the geographic market should be expanded to include a broader geographic area to which consumers would turn. A geographic market need not include the area from which *all or even nearly all* of the merging parties' (or a hypothetical monopolist's) customers come from; it only needs to consist of the smallest area in which a

[37] *See, e.g., ProMedica*, 2012 WL 2450574, at *39 ("Absent an overlap or potential overlap involving a given service line, there is no substantial lessening of competition, and, thus, no need to include the service in the relevant [cluster] product market.").
[38] Merger Guidelines § 4.1.
[39] Outpatient surgical services are appropriately evaluated separately from the inpatient GAC market for several reasons. First, the competitive conditions for outpatient surgical services differ from those for inpatient GAC services. Unlike inpatient GAC services, outpatient surgical services are provided not only in hospitals, but also in freestanding ambulatory surgery centers. For example, Three Gables Surgery Center in Proctorville, Ohio, is an ambulatory surgery center that provides outpatient surgical services, but a negligible amount of inpatient surgical services. Three Gables Decl. ¶ 6. For this reason, courts and the FTC regularly exclude outpatient services from the inpatient GAC services market. *See ProMedica*, 2012 WL 2450574, at *36; *OSF*, 852 F. Supp. 2d at 1076; *Evanston Nw.*, 2007 WL 2286195, at *46-47. Second, inpatient GAC services and outpatient surgical services are not reasonably interchangeable. Health plans and patients could not substitute outpatient surgical services for inpatient GAC services in response to a price increase on inpatient GAC services. The decision to treat a given condition on an inpatient or outpatient basis is driven by clinical considerations, not price. *See, e.g.*, Three Gables Decl. ¶ 6; Aetna (June 4) Decl. ¶ 6. Further, outpatient surgery is substantially less expensive than inpatient surgery. Thus, health plans and patients would not switch to inpatient surgery in response to a SSNIP for outpatient surgery, because inpatient surgery would still be far more expensive than outpatient surgery.
[40] Merger Guidelines § 4.2.
[41] Merger Guidelines § 4.2.1.

hypothetical monopolist could profitably impose a SSNIP.[42] Thus, the Applicant's overly broad proposed geographic market is inconsistent with the Merger Guidelines and applicable caselaw.

a) The Proper Relevant Geographic Market is No Larger than the Four-County Huntington Area

For both inpatient GAC services and outpatient surgical services, FTC staff concludes that the Authority's analysis should focus on a relevant geographic market no larger than Cabell, Wayne, and Lincoln counties in West Virginia and Lawrence County in Ohio (the "Four-County Huntington Area"). Most residents of the Four-County Huntington Area seek inpatient GAC services and outpatient surgical services locally. Cabell and St. Mary's are the only hospitals located within the Four-County Huntington Area, and together they account for the vast majority of inpatient and outpatient care provided to area residents. Contrary to the Applicant's assertions, hospitals outside the Four-County Huntington Area are not attractive options for most area residents because of their distant locations, and they are not meaningful competitors to Cabell and St. Mary's. For these reasons, a hypothetical monopolist controlling all inpatient GAC services and outpatient surgical services in the Four-County Huntington Area would find it profitable to raise prices by a small but significant amount.

When evaluating health care provider mergers, courts and antitrust agencies (including states attorneys general) have consistently found that patients prefer local access to health care.[43] The Huntington area is no different. Health plans, local employers, and third-party hospitals agree that residents of the Four-County Huntington Area strongly prefer to obtain inpatient GAC services and outpatient surgical services close to where they live or work.[44] Unsurprisingly, data also show that most commercially insured patients who reside in the Four-County Huntington Area seek inpatient and outpatient care within the Four-County Huntington Area.[45] These data are backed up by health plans and local employers who provided sworn statements indicating that most residents living in the Four-County Huntington Area seek inpatient GAC services and outpatient surgical services at either Cabell or St. Mary's.[46]

Dr. Capps conducted a quantitative analysis of patients' travel patterns in this case, and his analysis confirms the common-sense notion that residents of the Four-County Huntington Area prefer to receive care close to home. The chart below demonstrates that most commercially insured residents of the Four-County Huntington Area travel 25 minutes or less from their home zip code to their chosen hospital. Further, 76% of commercially insured patients residing in the Four-County Huntington Area stay in that area for inpatient GAC services. Of the minority of residents that leave the Four-County Huntington Area for inpatient GAC services, most of them

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[42] Merger Guidelines § 4.1.1.

[43] *See, e.g., Saint Alphonsus Med. Ctr. – Nampa, Inc. v. St. Luke's Health Sys., Ltd.*, 778 F.3d 775, 785 (9th Cir. 2015); *Rockford*, 898 F.2d at 1285; *In re ProMedica Health Sys.*, 152 F.T.C. 708, 759 (2011).

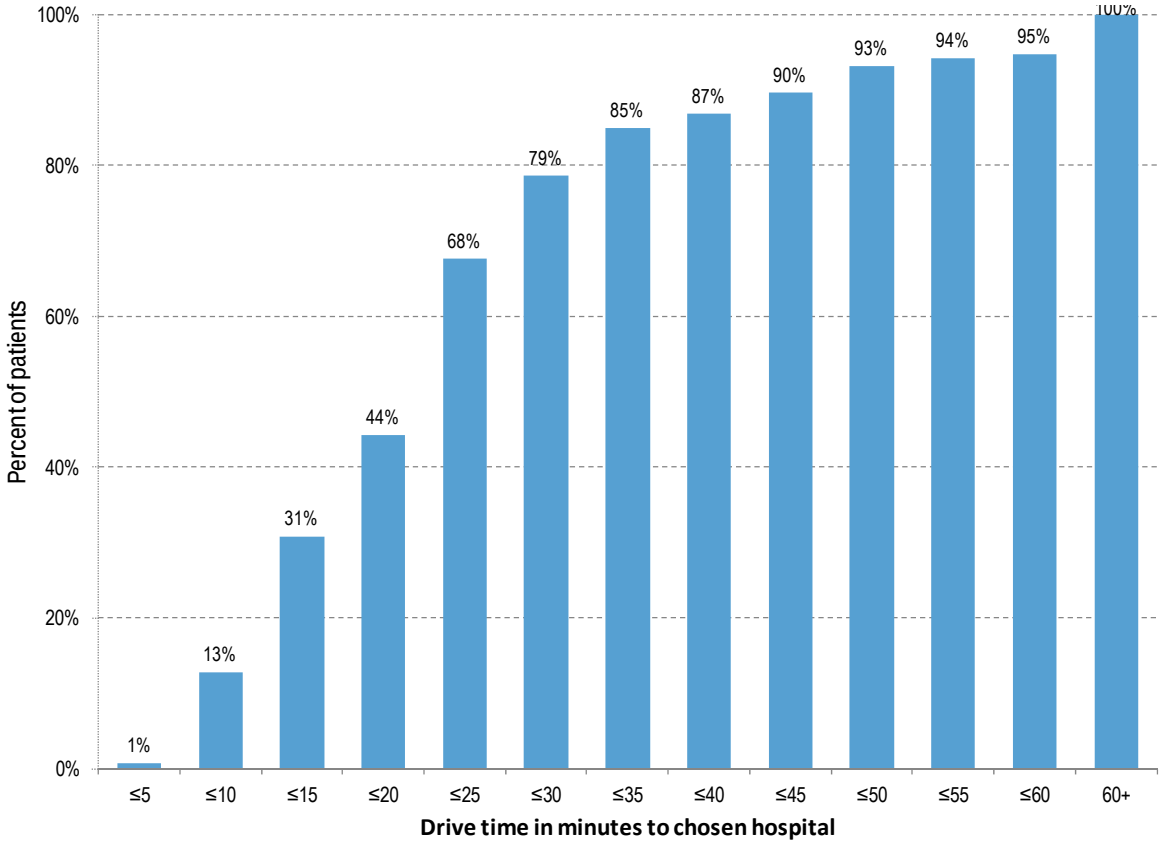
[44] Aetna (June 4) Decl. ¶ 5; Cigna Decl. ¶ 17; Stratose Decl. ¶ 21; Steel of WV Decl. ¶ 11; Energy Services Decl. ¶ 9; Adams Trucking Decl. ¶ 5; Wooten Machine Decl. ¶ 5; KDMC Decl. ¶ 5; OLBH Decl. ¶ 6; CAMC Decl. ¶ 7.

[45] Although not specifically analyzed as part of staff's geographic market analysis, this will also be true of most government-pay (e.g., Medicare, Medicaid) patients.

[46] Cigna Decl. ¶¶ 17–19; Humana Decl. ¶ 11; Stratose Decl. ¶¶ 21–22; Steel of WV Decl. ¶ 12; Energy Services Decl. ¶ 9; Adams Trucking Decl. ¶ 5; Wooten Machine Decl. ¶ 5.

live in the area's periphery, and they are leaving the area for the hospital that is closest to their home, or a hospital that is closer to their home than the Huntington hospitals.

Figure 1: Travel Times for Four-County Huntington Area Residents to Their Chosen Hospital[47]



The map below helps to visualize the distinctions between the hospital choices of patients residing in the Four-County Huntington Area and patients residing in the surrounding areas. In the area including and around the City of Huntington, nearly all patients select a Huntington hospital, as indicated by red and pink shading. In and around the City of Charleston, the large majority of patients selects a hospital in Kanawha or Boone County, as indicated by green shading. In Kentucky, most patients choose a Kentucky hospital, as indicated by light blue shading. In the areas of Ohio north of Lawrence County, a majority of patients opts for an Ohio hospital, as indicated by yellow shading. This pattern is a direct reflection of patients' strong preference for local hospitals. That is, if patients were relatively indifferent between nearby hospitals and hospitals located 25 or 50 minutes away, then the shading of the various pie charts

[47] The figure is based on 2012–2014 hospital discharge data for Kentucky, Ohio, and West Virginia. Data are limited to commercially insured general acute care patients residing in the Four-County Huntington Area and receiving inpatient treatment at short-term acute care hospitals located in Kentucky, Ohio, or West Virginia. The sample excludes transfers, court-ordered admissions, newborns, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis. The sample includes non-overlapping and overlapping services.

would consistently reflect a more even mixture of blue, red, green, and yellow. However, with the exception of a small number of zip codes on the fringes of the Four-County Huntington Area, they do not.[48] The overall pattern shows a geographical separation between the four areas and highlights patients' preference for local providers.[49]

[48] In fact, there are no zip codes with significant amounts of blue, red, *and* green shading. Instead, a small number of zip codes around the outer boundary of the Four-County Huntington Area reflect a split between two geographic areas. This is entirely consistent with the conclusion that patients prefer local providers. Only the minority of patients in intermediate areas that are similarly distant from two cities show a pattern of splitting their admissions. If one of the three urban areas—Ashland, Huntington, or Charleston—is closer to a given zip code than the other two, then the large majority of patients from that zip code will select a hospital in the closer urban area.

[49] There are some minor exceptions in the fringes of the Four-County Huntington Area, such as in eastern Lincoln County. Inclusion of these zip codes in the relevant geographic market is conservative in that it results in lower estimated market shares for Cabell and St. Mary's.

Figure 2: Locations of Chosen Hospitals by Zip Code[50]

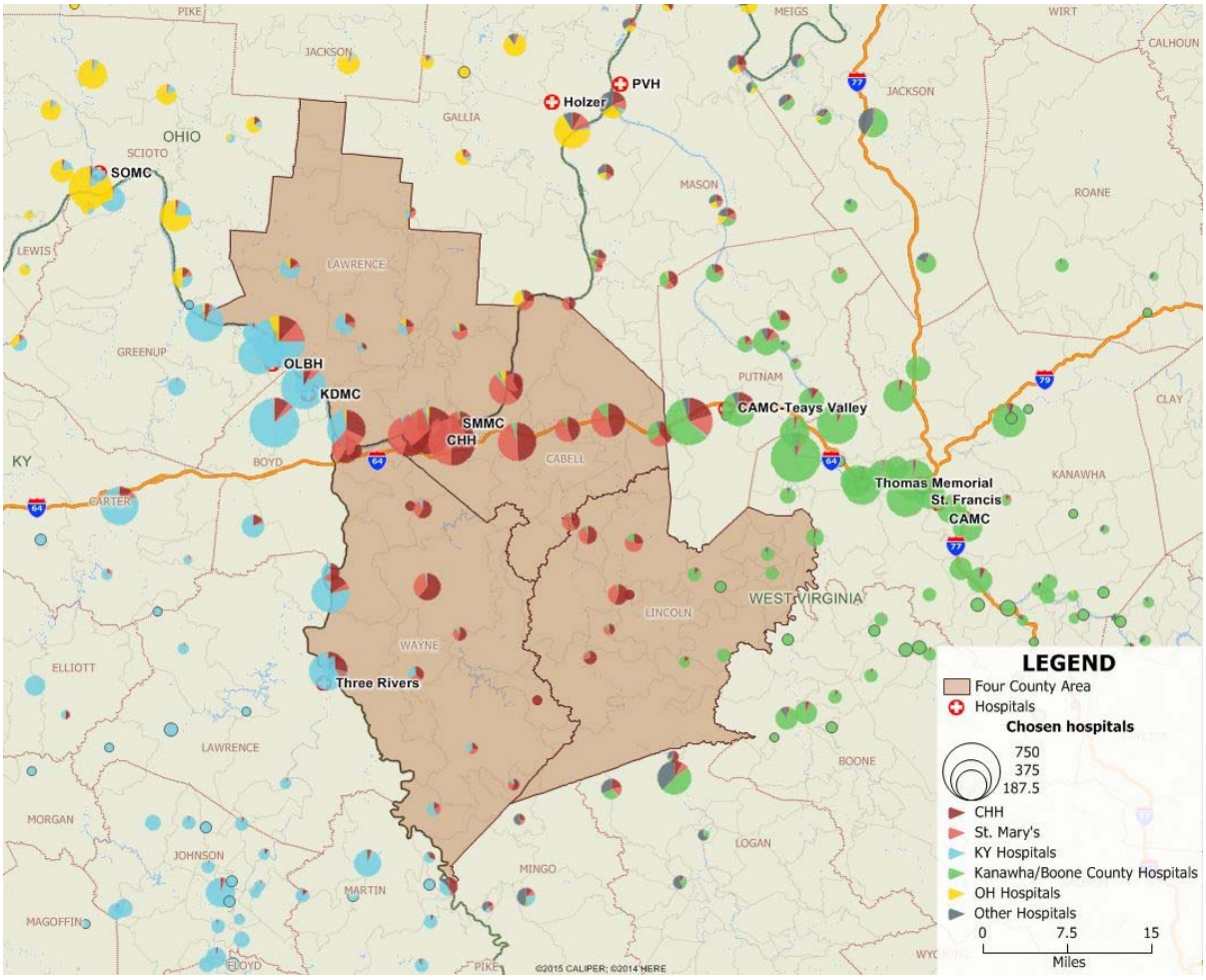


Figure 2 also shows that FTC staff's proposed relevant geographic market is not qualitatively sensitive to the precise boundaries of the relevant geographic market. If a small number of peripheral zip codes were added or removed, market shares would not change significantly. For example, zip codes in the easternmost part of Lincoln County could be removed, and/or the westernmost zip codes in Putnam County could be included, and market shares would remain similar.

Even though a small *minority* of residents living in the periphery of the Four-County Huntington Area may seek care outside of the area, that does not mean that the geographic market is broader or that hospitals outside of the area are significant competitors to Cabell and St. Mary's. Nor does it mean that, if Cabell's and St. Mary's prices rose or quality decreased, a

[50] The figure is based on 2014 hospital discharge data for Kentucky, Ohio, and West Virginia. Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in Kentucky, Ohio, or West Virginia in overlapping DRGs offered by Cabell and St. Mary's. The sample excludes transfers, court-ordered admissions, newborns, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis.

majority of residents of the Four-County Huntington Area would seek care outside of the area. Likewise, even though a number of residents living *outside* the Four-County Huntington Area seek inpatient and outpatient care *in* the area (i.e., at Cabell and St. Mary's), that does not change the conclusion about the geographic market or mean that hospitals outside the Four-County Huntington Area are meaningful competitors. The following explains why patients' preference for local care is important to the analysis and why inflow and outflows from the geographic market have relatively little relevance.

Because residents of the Four-County Huntington Area have a very strong preference for local care, health plans have declared that they cannot market a health insurance product in the Four-County Huntington Area that excludes *both* Cabell and St. Mary's.[51] According to health plans, a viable insurance product in this market must include at least Cabell *or* St. Mary's.[52] That is, a health plan that does not include either Cabell or St. Mary's would be highly unattractive, likely so unattractive that it could not be profitably offered. Indeed, local employers also have declared that they cannot offer their employees a health-plan network that excludes both Cabell and St. Mary's.[53] This means that a significant number of patients in the Four-County Huntington Area do not view a network that lacks both Cabell *and* St. Mary's to be acceptable. In fact, every health plan offered to employers in the Four-County Huntington Area includes at least one of the Huntington hospitals in its network. This also means that health plans and employers do not view hospitals in Ohio, Kentucky, and other parts of West Virginia as adequate alternatives for residents of the Four-County Huntington Area. And, ultimately, this shows that the Four-County Huntington Area is a meaningful geographic area for competitive effects analysis.[54]

Indeed, the evidence shows that hospitals located outside the Four-County Huntington Area draw few patients from the Four-County Huntington Area, and consequently do not view themselves as meaningful competitors to Cabell and St. Mary's. The next-closest hospitals to Cabell and St. Mary's are King's Daughters Medical Center ("KDMC") and Our Lady of Bellefonte Hospital ("OLBH"). Both are located in Ashland, Kentucky, roughly a 25-minute drive west from Huntington. Driving from Huntington to Ashland requires crossing the Ohio River, a natural and psychological barrier to travel for health care.[55] As a result, OLBH draws less than 1% of its patients from West Virginia.[56] In fact, OLBH's CEO views Ashland to be a completely separate market from the Four-County Huntington Area.[57] Consequently, OLBH does not actively market itself in Huntington.[58] KDMC's limited competition with Cabell and

[51] Aetna (June 23) Decl. ¶ 10; Cigna Decl. ¶ 16.
[52] Even if this were not the case, the transaction could still have anticompetitive effects. In other words, a merger may still substantially lessen competition even if the merged hospital system is not a "must have" system for health plans' provider networks.
[53] Wooten Machine Decl. ¶ 5; City National Decl. ¶ 10.
[54] As discussed below with regard to the competitive effects of the cooperative agreement, this also means that the merged Cabell-St. Mary's would have increased leverage to demand higher rates because health plans do not have a credible alternative post-merger to contracting with Cabell-St. Mary's in order to serve residents of the Four-County Huntington Area.
[55] Steel of WV Decl. ¶ 17; OLBH Decl. ¶ 8.
[56] OLBH Decl. ¶ 8.
[57] OLBH Decl. ¶ 8.
[58] OLBH Decl. ¶ 11.

St. Mary's is primarily with respect to patients living in southern Ohio and eastern Kentucky (i.e., largely outside the relevant geographic market), and is limited to certain specific service lines.[59]

After the Ashland hospitals, the next-closest hospital to Huntington is CAMC-Teays Valley Hospital, located 35 minutes away in Hurricane, West Virginia. CAMC-Teays Valley is a small, 70-bed community hospital that lacks the breadth and depth of services provided by Cabell and St. Mary's.[60] As a community hospital, it focuses on offering general medical services to residents of the Putnam County area.[61] It does not offer obstetrics services, trauma services, open heart surgery, neurosurgery, a catheterization lab, a neonatal ICU, a pediatric ICU, or a burn unit.[62] Accordingly, competition between CAMC-Teays Valley Hospital and the Huntington hospitals is limited to a few communities on the western side of Putnam County.[63]

CAMC also operates three hospitals in Charleston, West Virginia—CAMC Memorial Hospital, CAMC General Hospital, and CAMC Women and Children's Hospital. Charleston is approximately a 55-minute drive from Huntington. Few residents of the Four-County Huntington Area are willing to travel so far for care. CAMC's Chief Financial Officer declared that "Huntington-area patients tend to travel to Charleston only for specialized tertiary and quaternary services that they could not obtain in Huntington."[64] In fact, Cabell and Wayne counties account for less than 1% of inpatient discharges at CAMC's three Charleston hospitals.[65] As a result, CAMC does not view its Charleston hospitals as competitors to Cabell or St. Mary's.[66] Because of the distance between the two cities, the Huntington and Charleston areas have historically been, and continue to be, two separate markets for health care.[67]

Hospitals that are even more distant from Huntington draw few patients from the Four-County Huntington Area, and do not view themselves as significant competitors to Cabell and St. Mary's:

- Holzer Gallipolis Medical Center is a general acute care hospital located in Gallipolis, Ohio. Holzer Health System's Executive Vice President and Chief Operating Officer declared that "Huntington-area residents typically do not travel nearly an hour to receive care at Holzer Gallipolis, a small community hospital."[68] Thus, Holzer "does not consider Cabell or St. Mary's in Huntington, West Virginia, to be primary competitors of Holzer Gallipolis for inpatient GAC services."[69]

[59] KDMC Decl. ¶ 6.
[60] CAMC Decl. ¶ 9.
[61] CAMC Decl. ¶ 5.
[62] CAMC Decl. ¶ 5.
[63] CAMC Decl. ¶ 9.
[64] CAMC Decl. ¶ 7.
[65] CAMC Decl. ¶ 6.
[66] CAMC Decl. ¶ 10.
[67] CAMC Decl. ¶ 10.
[68] Holzer Decl. ¶ 10.
[69] Holzer Decl. ¶ 10.

- Thomas Health System operates two hospitals in Charleston—Thomas Memorial Hospital (50 minutes from Huntington) and St. Francis Hospital (55 minutes from Huntington). Thomas Health System's Chief Operating Officer declared that "[o]ur hospitals draw almost no patients from Cabell or Wayne counties" and that "[i]t would be quite rare for people in the immediate Huntington area to travel 50 miles to seek treatment at Thomas Memorial or St. Francis, particularly for basic inpatient GAC services or outpatient services."[70]

- Three Rivers Medical Center ("Three Rivers") is a 90-bed general acute care hospital located in Louisa, Kentucky, approximately 40 minutes south of Huntington. Three Rivers' CEO declared that "patients in the Huntington area typically do not travel to Three Rivers for treatment," he and does not view Three Rivers as a competitor to Cabell or St. Mary's.[71]

- Williamson Memorial Hospital ("Williamson Memorial") is a 75-bed general acute care hospital located in Williamson, West Virginia, approximately 80 miles south from Huntington.[72] Williamson Memorial's CEO declared that patients from Huntington do not travel to Williamson for care, nor do patients from Williamson travel to Huntington for care, because it would involve traveling nearly two hours over mountainous state roads.[73] Consequently, she does not consider Williamson Memorial a competitor to Cabell or St. Mary's.[74]

- Logan Regional Medical Center ("Logan Regional") is a 140-bed general acute care hospital located in Logan, West Virginia, approximately 65 miles southeast of Huntington.[75] According to Logan Regional's Chief Financial Officer, patients from Huntington do not bypass Cabell or St. Mary's to seek care at Logan Regional, and Logan Regional does not view Cabell or St. Mary's as competitors.[76]

- Pleasant Valley Hospital ("PVH") operates a 101-bed general acute care facility and a 100-bed nursing and rehabilitation center in Point Pleasant, West Virginia, approximately 50 miles northwest of Huntington.[77] In 2013, PVH entered into a Joint Management Services Agreement with Cabell, likely reducing PVH's incentives to compete against Cabell.[78] PVH publicly states that its mission is to provide care to "residents of Mason and Jackson counties in West Virginia and Gallia and Meigs

[70] Thomas Decl. ¶ 6.
[71] Three Rivers Decl. ¶¶ 5, 7.
[72] Williamson Memorial Decl. ¶¶ 1, 3.
[73] Williamson Memorial Decl. ¶ 6.
[74] Williamson Memorial Decl. ¶ 7.
[75] Logan Regional Decl. ¶ 1.
[76] Logan Regional Decl. ¶¶ 3, 4.
[77] Cabell Huntington Hospital, *CHH & PVH Complete Joint Management Services Agreement*, http://cabellhuntington.org/news/wns/chh-and-pvh-complete-joint-management-services-agreement
[78] Cabell Huntington Hospital, *CHH & PVH Complete Joint Management Services Agreement*, http://cabellhuntington.org/news/wns/chh-and-pvh-complete-joint-management-services-agreement

counties in Ohio," suggesting it does not compete for patients residing in the Four-County Huntington Area.[79]

Quantitative analysis confirms that Cabell and St. Mary's compete closely with one another, but very little with hospitals outside the Four-County Huntington Area. One way of quantifying the degree of competition between merging hospitals is to consider what would happen if, hypothetically, one of the merging hospitals were dropped from a health plan's network and so was no longer an option for that plan's patient members. The patients who would have used the dropped hospital must now use another hospital instead. If a large fraction of those "diverted" patients from merging-Hospital A would choose merging-Hospital B (and vice-versa), then the two merging hospitals can be said to be close competitors. This fraction of diverted patients is known as the "diversion ratio" and is a standard economic metric used in hospital merger cases.[80] Importantly, the diversion ratio provides a *direct* measure of the degree of competition between the merging parties and does not depend on any particular geographic market definition. No matter how the geographic market is defined, these diversion ratios illustrate that Cabell and St. Mary's are each other's closest competitor.

As part of his analysis of the Four-County Huntington Area, Dr. Capps performed a diversion analysis that found high diversions between Cabell and St. Mary's, indicating that they are each other's closest competitor. If Cabell became unavailable, 48.5% of its patients would go to St. Mary's. Likewise, if St. Mary's became unavailable, 54% of its patients would go to Cabell. Diversions to hospitals outside the Four-County Huntington Area are much lower. No other hospital would get more than 16% of Cabell's diverted patients or more than 13% of St. Mary's diverted patients. These low diversion ratios indicate that hospitals in these outlying areas are not close substitutes for Cabell or St. Mary's, and thus, these areas are not properly considered in the same geographic market. The table below depicts the diversion ratio figures calculated by Dr. Capps.

[79] Pleasant Valley Hospital, *About*, http://pvalley.org/about/

[80] *See* Merger Guidelines § 6.1 ("Diversion ratios between products sold by one merging firm and products sold by the other merging firm can be very informative for assessing unilateral price effects, with higher diversion ratios indicating a greater likelihood of such effects." Unilateral effects refer to the elimination of competition that enables the merged firm to unilaterally raise prices.).

Figure 3: Diversion Ratio Analysis[81]

iversions TO	Distance to Huntington in min.	Diversions FROM	
		CHH	St. Mary's
Cabell Huntington Hospital	4	--	54.0%
St. Mary's Medical Center	7	48.5%	--
King's Daughters Medical Center	24	15.2%	13.0%
CAMC (Charleston)	56	11.2%	9.2%
CAMC (Teays Valley Hospital)	36	2.3%	2.6%
Our Lady of Bellefonte Hospital	27	4.3%	3.8%
THS-Thomas Memorial Hospital	49	4.0%	3.3%
Pleasant Valley Hospital	57	1.2%	1.4%
THS-St. Francis Hospital	53	1.1%	1.7%
Holzer Gallipolis	57	1.3%	1.4%
All other hospitals	-	10.9%	9.6%

b) The Applicant Incorrectly Analyzes the Relevant Geographic Market

The Applicant incorrectly argues that the geographic market should be much broader.[82] But this argument fundamentally misunderstands geographic market definition and contradicts the Applicant's own historical view of the hospitals' primary service area. The Merger Guidelines make clear that geographic market definition requires "considering likely reactions of *customers* to price increases for the relevant product(s) imposed in a candidate geographic market."[83] The fact that Cabell or St. Mary's may draw patients from an outlying area does not answer the critical question—where residents of the Four-County Huntington Area can practicably go to obtain inpatient GAC services or outpatient surgical services. Here, substantial evidence demonstrates that residents of the Four-County Huntington Area overwhelmingly turn to the only two hospitals within the area—Cabell and St. Mary's—for inpatient GAC services and outpatient surgical services. This is especially true of residents of the city of Huntington, for whom all other hospital alternatives to Cabell and St. Mary's are far from their homes. Moreover, Cabell and St. Mary's have historically viewed the Four-County Huntington Area as

[81] The figure is based on 2012–2014 hospital discharge data for Kentucky, Ohio, and West Virginia. Diversions are based on all patients residing within 90 minutes of the City of Huntington (i.e., they are not limited to Four-County Huntington Area patients). Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in Kentucky, Ohio, or West Virginia. The sample excludes newborns, transfers, court-ordered admissions, patients with ungroupable DRGs 981-999, and records with gender or age inconsistent with the diagnosis. "CAMC (Charleston)" includes CAMC's General, Memorial, and Women and Children's hospitals.

[82] *See* Application at 16.

[83] Merger Guidelines § 4.2.1. *See also United States v. Phila. Nat'l Bank*, 374 U.S. 321, 359 (1963); *St. Luke's*, 778 F.3d at 784; *OSF*, 852 F. Supp. 2d at 1075.

their primary service area, and they have analyzed their market share and competition within that area.[84]

The Applicant argues that *United States v. Carilion Health System* is "particularly instructive in defining the relevant market here."[85] But the Applicant errs in relying on this nearly 30-year-old case, which has been discredited and is inconsistent with the current approach of antitrust law. Commentators have said that the geographic market analysis of the *Carilion* decision lacks "economic or legal logic"[86] and "obviously did not adhere to the . . . principles mandated by the case law and Merger Guidelines."[87] Indeed, no modern antitrust case involving health care providers has followed the approach of the *Carilion* case.

The Applicant also places great weight on the fact that many of Cabell and St. Mary's patients live outside the City of Huntington.[88] The Applicant argues that, because "[h]ospitals cannot discriminate in prices based upon a patient's residence. . . . the loss of patients living outside of Huntington likely would render any non-competitive price increase unprofitable to the two hospitals."[89] The Applicant's analysis is incorrect as a matter of fundamental economic theory. The current prices at Cabell and St. Mary's reflect *all* of the constraints on their prices. After the acquisition, the largest of these constraints will be removed, namely that imposed by competition with each other. Consequently, the hospitals will operate in a less constrained way, by either raising prices or reducing investment in quality, even if they cannot price discriminate. Furthermore, price typically does not motivate patients to travel for care, for the simple reason that a patient's out-of-pocket costs vary little, if at all, as long as the patient seeks care at an in-network hospital. Therefore, the Applicant's premise—that an increased number of patients will travel outside of the Huntington area for care in response to a price increase—is incorrect.

Instead, as court decisions have affirmed, the proper question for geographic market definition is how health plans marketing to residents of the Four-County Huntington area would respond in the case of a SSNIP. If the health plans would drop both Cabell and St. Mary's from their network, and rely upon hospitals in adjacent regions to provide care for their insured, then the relevant geographic market would need to be expanded beyond the Four-County Huntington Area. If the health plans would not drop the hospitals from their network and would instead pay the price increase, then the Four-County Huntington area is an appropriate geographic market.

Applied here, the question is how a network that contained neither Cabell nor St. Mary's would be received. If a health plan network that did not include either Cabell or St. Mary's would be very unattractive to health plan customers, due to local residents' strong preference for local care, then having such an unattractive product would greatly reduce the health plan's

[84] The fact that Cabell and St. Mary's may sometimes analyze other geographic areas in addition to the Four-County Huntington Area does not change where the primary area of competitive overlap is located, nor does it mean that competition cannot be harmed in the Four-County Huntington Area.
[85] Application at 17.
[86] 2 John J. Miles, Health Care & Antitrust Law § 12.11 n.41 (2015).
[87] Thomas L. Greaney, *Chicago's Procrustean Bed: Applying Antitrust Law in Health Care*, 71 Antitrust L.J. 857, 917 n.61 (2004).
[88] *See* Application at 19.
[89] *See* Application at 19.

profits. As a result, the health plan would be willing to pay a higher price to the merged entity to prevent this.

To summarize, Dr. Capps' quantitative analysis and evidence from third parties align to show that Cabell and St. Mary's are overwhelmingly the top two choices for residents of the Four-County Huntington Area; that more distant hospitals are not close substitutes; and that a health plan network with *neither* Huntington hospital would be so unattractive as to be unmarketable. As a result, a hypothetical monopolist controlling all hospitals within the Four-County Huntington Area would profitably be able to implement a small but significant price increase, because most residents in the Four-County Huntington Area would *not* accept a network that includes only hospitals outside of the Four-County Huntington Area. Thus, the Four-County Huntington Area is the location in which competition will be substantially reduced and constitutes the proper geographic market within which the Authority should analyze the effects of the proposed cooperative agreement.

3. Proposed Cooperative Agreement is Presumptively Anticompetitive Due to Extraordinarily High Market Shares, Market Concentration, and Increase in Concentration

Case law and the Merger Guidelines calculate the effect of mergers based on market share, market concentration, and changes in concentration. Mergers that result in high market shares, high market concentration, and significant increases in market concentration are presumed to provide the merged firm with market power and, therefore, are presumed unlawful.

The proposed cooperative agreement is presumptively unlawful because, after the acquisition, Cabell would comment a dominant inpatient GAC service market share. Cabell and St. Mary's are the only two significant competitors providing inpatient GAC services in the Four-County Huntington Area. Based on patient discharges, Cabell has a 41.3% market share in the inpatient GAC services market in the Four-County Huntington Area, while St. Mary's holds a 34.9% share, resulting in a **76.2% combined market share**.[90] Based on patient days, Cabell has a 35.7% market share in the inpatient GAC services market in the Four-County Huntington Area, while St. Mary's holds a 40.2% market share, resulting in a **75.9% combined market share**. Market shares of this level far exceed those presumed to be unlawful by the Supreme Court.[91]

Under the Merger Guidelines, the proposed cooperative agreement is presumptively anticompetitive because it would result in a vast increase in market concentration in both

[90] Dr. Capps calculated market shares for inpatient GAC services in the Four-County Huntington Area based on patient discharges and patient days. Importantly, these calculations include hospitals located inside *and outside* the Four-County Huntington Area that care for patients living in the Four-County Huntington Area. This approach is a conservative estimate of market shares held by Cabell and St. Mary's, because it fully accounts for the small number of patients who live in the Four-County Huntington Area, but who may travel outside the area for care. If market share were calculated only based on providers located within the geographic market, Cabell and St. Mary's inpatient market share would be 100%.

[91] *See Phila. Nat'l Bank*, 374 U.S. at 364 ("Without attempting to specify the smallest market share which would still be considered to threaten undue concentration, we are clear that 30% presents that threat.")

relevant markets. The typical measure for determining market concentration is the Herfindahl-Hirschman Index ("HHI"), which is calculated by summing the squares of the individual firms' market shares.[92] Under the Merger Guidelines and applicable case law, mergers and acquisitions resulting in a post-merger HHI above 2,500 and an increase in HHI of more than 200 points are presumed likely to be anticompetitive and thus unlawful.[93]

The proposed cooperative agreement far exceeds these thresholds. It would cause a tremendous increase in HHI and result in an extraordinarily high post-merger HHI, triggering a strong presumption that the transaction is anticompetitive.[94] As Figure 4 below shows, in the inpatient GAC service market, the proposed cooperative agreement would result in a post-merger HHI of at least 5,879 and an HHI increase of at least 2,868. These figures far exceed the Merger Guidelines thresholds—a post-merger HHI of at least 2,500 and an increase of at least 200 points—at which the proposed transaction is presumed anticompetitive and thus illegal. In addition, these concentration levels far exceed those found by courts in past merger cases to trigger a presumption of illegality.[95]

Figure 4: Market Shares and HHIs, Inpatient GAC Services in the Four-County Huntington Area[96]

Hospital	Share of discharges		Share of inpatient days	
	Pre-acquisition	Post-acquisition	Pre-acquisition	Post-acquisition
Cabell Huntington Hospital	41.3%	76.2%	35.7%	75.9%
St. Mary's Medical Center	34.9%		40.2%	
King's Daughters Medical Center	9.1%	9.1%	8.8%	8.8%
Our Lady of Bellefonte Hospital	4.9%	4.9%	4.7%	4.7%
Charleston Area Medical Center	3.7%	3.7%	4.1%	4.1%
All other	6.1%	6.1%	6.4%	6.4%
HHI	3,049	5,932	3,011	5,879
Change in HHI		+2,883		+2,868

[92] Merger Guidelines § 5.3; *see St. Luke's*, 778 F.3d at 786; *ProMedica*, 749 F.3d at 568.
[93] Merger Guidelines § 5.3; *see St. Luke's*, 778 F.3d at 786; *ProMedica*, 749 F.3d at 568.
[94] Merger Guidelines § 5.3; *see Phila. Nat'l Bank*, 374 U.S. at 364.
[95] *See ProMedica*, 749 F.3d at 568 (*prima facie* case established for inpatient GAC market where merger reduced competitors from four to three, with combined share of 58%, HHI increase of 1,323, and post-merger HHI of 4,391); *OSF*, 852 F. Supp. 2d at 1079 (*prima facie* case established for inpatient GAC market where merger reduced competitors from three to two, with combined share of 59.5%, HHI increase of 2,052 points, and post-merger HHI of 5,406).
[96] The figure is based on 2014 hospital discharge data for Kentucky, Ohio, and West Virginia. Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in Kentucky, Ohio, or West Virginia, in overlapping diagnoses related groups (DRGs) offered by CHH and St. Mary's. The sample excludes newborns, transfers, court-ordered admissions, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis. The figures for Charleston Area Medical Center include all CAMC-owned hospitals (CAMC General, CAMC Memorial, CAMC Teays Valley, and CAMC Women and Children's).

Alternative geographic market definitions result in similarly high market shares and HHIs, and a presumption that the proposed cooperative agreement is anticompetitive. The figure below sets out market shares and HHIs for five alternative geographic markets: the Huntington area (i.e., the City of Huntington and surrounding zip codes); that area plus the remainder of Cabell County; a 30-minute drive-time radius around Huntington; the area accounting for 75% of the merging hospitals' patient discharges; and the Four County Area plus the City of Ashland. In all cases, the post-acquisition share exceeds 50%.

Figure 5: Market Shares and HHIs, Inpatient GAC Services in Alternative Relevant Geographic Markets[97]

Geography	Discharges				Inpatient days			
	Combined share	HHI			Combined share	HHI		
		Pre	Post	Change		Pre	Post	Change
Four County Area	75.6%	3,008	5,848	2,841	75.1%	2,961	5,777	2,816
Huntington area	93.8%	4,430	8,812	4,383	93.4%	4,379	8,724	4,346
Huntington area + Cabell	92.5%	4,305	8,578	4,274	91.7%	4,236	8,418	4,182
30-minute radius	63.1%	2,635	4,616	1,981	62.4%	2,566	4,508	1,941
Four County Area + Ashland	63.0%	2,487	4,459	1,972	62.4%	2,430	4,379	1,949
75% Combined PSA	50.8%	1,777	3,058	1,280	50.7%	1,774	3,060	1,286

Similarly, Cabell and St. Mary's are the two most significant competitors providing outpatient surgical services in the Four-County Huntington Area. As measured by outpatient surgical visits, Cabell has a 34.9% market share in the outpatient surgical services market in the Four-County Huntington Area, while St. Mary's holds a 30.4% market share, resulting in a **65.3% combined market share**. Again, a market share of this level far exceeds that presumed to be unlawful by the Supreme Court.

As the table below shows, the cooperative agreement results in a post-acquisition HHI of 4,437 and an HHI increase of 2,123 with respect to outpatient surgical services. Again, this post-merger concentration level and increase in concentration far exceed the thresholds laid out in the Merger Guidelines and create a strong presumption that the proposed acquisition is illegal.

[97] The figure is based on 2012–2014 hospital discharge data for Kentucky, Ohio, and West Virginia. Data reflect commercially insured general acute care patients receiving treatment at short-term acute care hospitals located in Kentucky, Ohio, or West Virginia, in DRGs offered by Cabell and St. Mary's. The sample excludes newborns, transfers, court-ordered admissions, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis. Restricted to overlapping DRGs, which are defined separately for pediatric and adult (14+) patients. Ashland is defined to be zip codes 41101, 41102, 41105, 41114, and 41129. The 75% combined PSA is calculated as the fewest zip codes required to reach 75% of CHH's and St. Mary's combined patient volume.

Figure 6: Market Shares and HHIs, Outpatient Surgical Services in the Four-County Huntington Area[98]

Facility	Type	System affiliation	Pre-acquisition facility share	Pre-acquisition system share	Post-acquisition system share
Cabell Huntington Hospital[99]	HOPD & ASC	CHH	34.8%	34.8%	65.2%
St. Mary's Medical Center	HOPD	SMMC	30.4%	30.4%	
Three Gables Surgery Center	ASC	SMMC*	8.1%	8.1%	8.1%
King's Daughters' Medical Center[100]	HOPD	KDMC	7.5%	7.5%	7.5%
Our Lady Of Bellefonte Hospital	HOPD	Bon Secours	4.8%	4.8%	4.8%
Charleston Area Medical Center[101]	HOPD	CAMC	4.1%	4.2%	4.2%
CAMC-Teays Valley Hospital	HOPD		0.1%		
Thomas Memorial Hospital	HOPD	THS	1.8%	3.1%	3.1%
Saint Francis Hospital	HOPD		1.3%		
Missing provider name			0.5%	0.5%	0.5%
All other facilities combined			6.7%	6.7%	6.7%
HHI				2,309	4,425
Change in HHI				+2,116	

These outpatient shares and concentration levels likely overstate the degree of post-acquisition competition, because they conservatively treat Three Gables Surgery Center as a fully independent competitor. However, Three Gables has a "close business relationship" with St. Mary's, which likely reduces Three Gables' competitive incentives.[102] Specifically, a St. Mary's entity, St. Mary's Medical Management ("SMMM"), manages Three Gables.[103] SMMM employs Three Gables' administrator, negotiates contracts on behalf of Three Gables, provides general operational support for Three Gables, and has a minority ownership interest in Three Gables.[104] If Three Gables is treated as part of St. Mary's, then the post-acquisition market share of the combined entity rises to 73.3%, with a post-merger HHI level of nearly 6,000.

[98] The figure is based on 2014 outpatient claims data from Aetna, Anthem, Highmark, and United. Data are limited to commercially insured patients residing in the Four County Area (Cabell County, WV; Lincoln County, WV; Wayne County, WV; Lawrence County, OH). Patient visits to unidentified facilities ("Missing provider name") are included for the purpose of calculating market shares, but excluded from the HHI calculations. Outpatient surgeries are defined based on the "narrow" surgery flag defined by HCUP Healthcare Cost and Utilization Project, *Surgery Flag Software*, (2015), https://www.hcup-us.ahrq.gov/toolssoftware/surgflags/surgeryflags.jsp.
[99] "Cabell Huntington Hospital" includes Cabell Huntington Hospital and Cabell Huntington Surgery Center.
[100] KDMC includes King's Daughters Medical Center and King's Daughters Medical Center Ohio (less than 0.1% share).
[101] Includes all CAMC-owned hospitals (CAMC General, CAMC Memorial, CAMC Teays Valley, and CAMC Women and Children's).
[102] Three Gables ¶ 11.
[103] Three Gables ¶ 11.
[104] Three Gables ¶¶ 11, 12.

C. The Proposed Cooperative Agreement Will Eliminate Vigorous Competition between Cabell and St. Mary's That Benefits Consumers and the Community

The proposed cooperative agreement will eliminate the vigorous price and quality competition that exists between Cabell and St. Mary's today. The Merger Guidelines explain that "[t]he elimination of competition between two firms that results from their merger may alone constitute a substantial lessening of competition" leading to anticompetitive effects.[105] "The extent of direct competition between … the merging parties is central to the evaluation" of whether that substantial lessening of competition is likely to occur.[106]

Cabell and St. Mary's focus their competitive efforts mainly on each other, and this close competition manifests itself in several ways. They compete with each other for inclusion in health plans' networks and in negotiating the reimbursement rates they receive from health plans. Once in-network with a health plan, Cabell and St. Mary's compete with each other to attract that health plan's members through adding new services and technology and providing high-quality care. As described below, the proposed cooperative agreement would end this beneficial competition, increasing the combined entity's ability to extract higher reimbursement rates from health plans and eroding its incentive to maintain or improve quality of care.

1. Cabell and St. Mary's Are Closest Competitors, Not Complements

Cabell and St. Mary's are not just close competitors—they are indisputably each other's closest competitor. As Cabell's CFO emphasized in 2013, St. Mary's is Cabell's "main competitor for all but our exclusive services," which are limited to three service lines: neonatal ICU, pediatric ICU, and burn. Other documents from the two hospitals, their consultants, and ratings agencies consistently describe Cabell and St. Mary's not only as "competitors," but also as each other's "main," "primary," or "strongest" "competitors," and "long-standing rival[s]." The merging parties' own merger consultant testified that Cabell and St. Mary's have been "head-to-head competitors for a very long period of time." Health plans, local employers, and outlying hospitals share this view, declaring that Cabell and St. Mary's are each other's closest competitor.[107]

This is not surprising, given the striking similarities between Cabell and St. Mary's. For example, they are in very close proximity—only three miles apart. They are similarly sized—Cabell has 303 licensed beds, while St. Mary's has 393 licensed beds.[108] They have similar service offerings[109]—in fact, Dr. Capps calculates that over 90% of commercially insured patients treated at either Cabell or St. Mary's received a service that both hospitals offer. They are both high quality hospitals.[110]

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[105] Merger Guidelines § 6.
[106] *ProMedica*, 749 F.3d at 569 (quoting Merger Guidelines § 6.1).
[107] Aetna (June 23) Decl. ¶ 10; CAMC Decl. ¶ 9; Cigna Decl. ¶ 16; Holzer Decl. ¶ 13; Stratose Decl. ¶ 20.
[108] Cabell Huntington Hospital, *About Us*, http://cabellhuntington.org/about/; St. Mary's Medical Center, *About St. Mary's*, http://www.st-marys.org/about.
[109] Adams Trucking Decl. ¶ 4; Steel of WV Decl. ¶ 14.
[110] CAMC Decl. ¶ 7; Humana Decl. ¶¶ 9, 11; Steel of WV Decl. ¶ 14; Stratose Decl. ¶ 16; Three Rivers Decl. ¶ 5.

Dr. Capps' diversion analysis, described in Section IV.B.2 above with respect to geographic market analysis, also demonstrates that Cabell and St. Mary's are each other's closest competitor by a wide margin. Importantly, the diversion analysis does not depend on any particular definition of the relevant geographic market. Indeed, it accounts for virtually all patients of Cabell and St. Mary's, because it is based on all patients residing within a 90-minute radius around Huntington—an area much larger than the Four-County Huntington Area that includes Ashland, Kentucky; Charleston, West Virginia; and other, more distant areas. In fact, this area is *larger* than the 80% service area the Applicant claims is the relevant geographic market.

The diversion analysis shows that if Cabell were not available today, approximately 48.5% of its patients would go to St. Mary's. Similarly, if St. Mary's were not available today, approximately 54% of its patients would go to Cabell. These diversion ratios are as high or higher than diversion ratios in recent cases enjoining health care provider mergers.[111] By contrast, diversions to outlying hospitals are much lower. Only about 15% of Cabell's diverted patients and 13% of St. Mary's diverted patients would seek care at KDMC. And only 11% of Cabell's diverted patients and 9% of St. Mary's diverted patients would seek care at CAMC's Charleston hospitals. The diversions for every other hospital are below 5%. These results demonstrate that outlying hospitals are not close substitutes for Cabell or St. Mary's.

The Applicant incorrectly argues that health plans view Cabell and St. Mary's as complements, rather than substitutes. Because each hospital offers a few discrete service lines that the other currently does not, the argument goes, a health plan must contract with both hospitals today to market a viable health insurance product in Huntington.[112] The Applicant concludes that health plans "need" both hospitals—thus implicitly conceding the hospitals have significant market power—and the proposed cooperative agreement will result in no change in the combined entity's bargaining leverage.[113] It is true that there are a few discrete services that only one of the hospitals currently provides or that one hospital offers much more of than the other hospital—e.g., Cabell offers some specialized pediatric, neonatal, and obstetric services, and certain high-end cardiac services are only available at St. Mary's. But the merging parties' argument that Cabell and St. Mary's are complements rather than substitutes is patently incorrect. The evidence shows that Cabell and St. Mary's are intense, head-to-head competitors across the overwhelming majority of inpatient GAC and outpatient surgical services that both hospitals offer—and health plans share that view.

As an initial matter, Applicant's argument is plainly at odds with how the hospitals view each other in the ordinary course of business, as evidenced by the documents noted above, in which the merging parties' and third parties describe Cabell and St. Mary's as, e.g., "primary," or "strongest" "competitors," "long-standing rival[s]."

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[111] *See Saint Alphonsus Med. Ctr. – Nampa, Inc. v. St. Luke's Health Sys., Ltd.*, Nos. 1:12–CV–00560–BLW, 1:13–CV–00116–BLW, 2014 WL 407446, at *9-10 (D. Idaho June 20, 2014) (finding merging parties were each other's closest competitor, with diversions of 50% and approximately 33%); *ProMedica*, 2012 WL 2450574, at *55 (finding diversion of 28% from St. Luke's to ProMedica indicated ProMedica was a "significant competitor").
[112] *See* Application at 16.
[113] *See* Application at 16.

Further, any non-overlapping or minimally overlapping services between Cabell and St. Mary's are at least partly attributable to suspect coordination between the hospitals. A health care marketing firm retained by St. Mary's wrote in 2013 that the hospitals had maintained a "gentlemen's agreement," which allocated services that each hospital would "own" within the market. Under this arrangement, "St. Mary's key services included cardiac care and cancer." Fortunately, aggressive competition effectively brought an end to this gentlemen's agreement. According to this document, the "competitive market" between Cabell and St. Mary's ended this "mutual understanding," and Cabell became "very aggressive in growing these services." The events described by this document are consistent with the facts, including Cabell's opening of the Edwards Comprehensive Cancer Center in 2006 and Cabell's 2013 receipt of a Certificate of Need to offer emergency primary percutaneous coronary intervention ("PCI"), a cardiac catheterization service. This episode demonstrates that intense competition between Cabell and St. Mary's can—and does—nearly eliminate the set of non-overlapping services, as one hospital or the other perceives a need in the market and works to fill it.

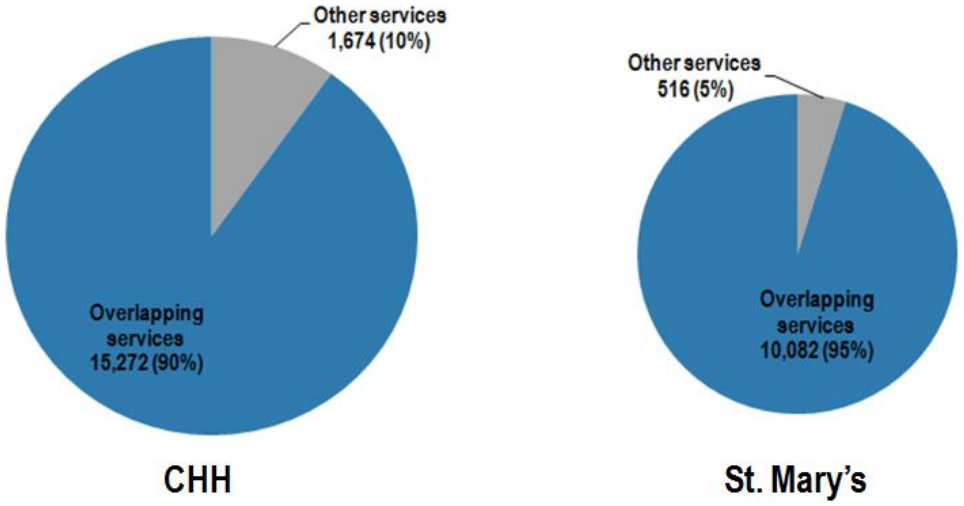
Quantitative analysis also shows that Cabell's and St. Mary's services largely overlap, rather than complement each other. According to Dr. Capps's analysis, 92% of commercially insured patients at either Cabell or St. Mary's receive a service that *both* hospitals offer. The figures below aid in visualizing the largely overlapping service offerings at Cabell and St. Mary's. Even in those specialties where the hospitals have some unique services—cardiac for St. Mary's, and obstetrics and neonatal for Cabell—most discharges at either hospital were for services that both hospitals offer. For example, 80% of labor and delivery discharges at both hospitals, and 78% of newborn discharges at both hospitals, were in services that both hospitals offer.

Figure 7: Percentage of Discharges of Commercially Insured Patients in Overlapping Services at Cabell and St. Mary's[114]

		Number of discharges		% of discharges in overlapping services	
		Overlapping services	Non-overlapping services	By hospital	Combined
Adults	CHH	11,412	376	96.8%	96.0%
	St. Mary's	9,161	481	95.0%	
Pediatrics	CHH	3,860	1,298	74.8%	78.2%
	St. Mary's	921	35	96.3%	
Total	CHH	15,272	1,674	90.1%	92.0%
	St. Mary's	10,082	516	95.1%	

[114] The figure is based on 2012–2014 hospital discharge data for West Virginia. Data are limited to commercially insured general acute care patients and exclude records with ungroupable DRGs 981–999 or with gender or age inconsistent with the diagnosis. Patients transferred out to another short-term hospital for inpatient care, to a cancer center, to a children's hospital, or to a federal hospital are also excluded from the data.

Figure 8: Commercially Insured Patients in Overlapping and Non-Overlapping Services, Total Patients[115]



The Applicant's argument that health plans view Cabell and St. Mary's as complements is contradicted by health plan declarations describing Cabell and St. Mary's as competitors. One health plan described how "Cabell and St. Mary's compete against each other in the Huntington area"[116] and stated that Cabell and St. Mary's are each other's "closest substitutes."[117] Another health plan stated that Cabell and St. Mary's are each other's "closest competitors" and that "Cabell and St. Mary's compete in the provision of health care services today."[118] A third health plan stated that "Cabell and St. Mary's are each other's closest competitors for inpatient services."[119] These statements plainly contradict the Applicant's contention that health plans see Cabell and St. Mary's as complements, rather than substitutes or competitors.

Finally, the Applicant's "complements" argument simply makes no sense from a competition perspective. Taken to its logical conclusion, the Applicant's argument implies that unless two merging hospitals overlap in every service line they offer, a merger can never result in harm to competition. This makes little sense, and is certainly not supported by economic theory or by courts.[120] Rather, the Applicant's argument is at odds with the facts, the case law, and common sense.[121]

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[115] *Id.*
[116] Aetna (June 4) Decl. ¶ 14.
[117] Aetna (June 23) Decl. ¶ 10.
[118] Cigna Decl. ¶¶ 16, 22.
[119] Stratose Decl. ¶ 20.
[120] *See ProMedica*, 749 F.3d at 562 (Sixth Circuit upheld judgment that merger was unlawful even though ProMedica (a tertiary hospital) offered services that St. Luke's (a community hospital) did not).
[121] Moreover, the Applicant's arguments contradict one another. On the one hand, the Applicant argues that the hospitals are complements because local residents insist on having both Cabell and St. Mary's in their health plan networks—that is, residents would not accept a health plan that had only one Huntington hospital because they don't

2. The Proposed Cooperative Agreement Will Increase Cabell's Bargaining Leverage and Result in Higher Reimbursement Rates To The Detriment of Employers and Patients

The WVCAL requires the Authority to consider whether the proposed cooperative agreement will have an adverse impact on the ability of health plans "to negotiate reasonable payment and service arrangements" with health care providers.[122] For commercially insured patients living in the Four-County Huntington Area, prices for inpatient GAC services and outpatient surgical services are determined in bilateral negotiations between their health plans and hospitals. The prices that emerge from these negotiations will depend on the *relative* bargaining power of the hospital versus that of the health plan. The health plan's bargaining leverage comes from the fact that hospitals desire access to the health plan's members. The hospital's bargaining leverage comes from the fact that its absence from the health plan's network makes that network less attractive to potential members. The critical determinant of a hospital's bargaining leverage in these negotiations is the availability of substitute hospitals that the health plan can turn to in the event that no agreement is reached with that particular hospital. If a hospital has several competing, closely substitutable hospitals in the market that are or can be included in the health plan's network, then the absence of that first hospital from the health plan's network will not make that network much less attractive, and so that hospital will have less bargaining leverage and, thus, less ability to command a high price.[123]

In contrast, a merger of two closely substitutable hospitals will increase the combined entity's leverage. The reason is that, after the merger, failure to reach an agreement with the merged hospital system means that the health plan's network will lack both hospitals, instead of just one. A network that is missing both hospitals is likely to be very unattractive to the health plan's potential members, especially if other hospitals are not close substitutes.[124] This was noted by the court in *OSF*: "As a general rule, the merger of two closely substitutable hospitals will increase the combined system's bargaining leverage because the alternative . . . of not contracting becomes less attractive from the perspective of health plans."[125] This is more acute when other close substitutes are not available—in that situation, losing both hospitals from the network means health plan members would have to turn to a third, *much* less desirable substitute

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offer all the services that patients want and residents do not want to travel to distant hospitals for services that its one in-network hospital would lack. On the other hand, the Applicant says that there is no risk that they could raise prices on the combined Cabell/St. Mary's system because local residents could easily travel to more distant hospitals to get the services offered by Cabell and St. Mary's. The Applicant's arguments cannot both be true.

[122] W. Va. Code § 16-29B-28(f)(5)(A).

[123] *See* Martin Gaynor & Robert Town, *The Impact of Hospital Consolidation—Update*, Robert Wood Johnson Foundation (June 2012) at 2 [hereinafter "Gaynor and Town, Impact of Hospital Consolidation"] ("The evidence points to differences in hospital bargaining leverage as a principal driver of the difference between relatively expensive and inexpensive hospital systems within the same hospital market."). This article is attached to this comment as Attachment 2.

[124] Comparing the value of a health plan network with and without a given hospital system implicitly assumes that the component hospitals negotiate jointly on an all-or-nothing basis. Such all-or-nothing bargaining is widespread in the hospital industry. However, if the two hospitals instead negotiate separately post-merger, the basic logic would remain the same, and the merger would still increase prices and/or reduce quality.

[125] 852 F.Supp. 2d at 1083.

for care. This increase in bargaining leverage enhances the merged entity's ability to demand, and extract, higher reimbursement rates from health plans. Indeed, there is strong economic evidence that mergers between hospitals that are close competitors lead to substantial price increases.[126]

Here, Cabell and St. Mary's are each other's closest substitutes. Cabell and St. Mary's compete closely on pricing terms and reimbursement rates negotiated with health plans. By acquiring St. Mary's, Cabell will end this competition and substantially increase its bargaining leverage with health plans. This increased leverage will, in turn, enhance the combined entity's ability to command higher reimbursement rates from health plans. And any increase in rates will be passed on to employers and ultimately the community at large in the form of higher health insurance premiums, higher deductibles, higher co-pays, potentially reduced insurance coverage, and even lower wages.[127]

In this case, numerous business documents created in the ordinary course show that Cabell and St. Mary's carefully monitor and respond to the other's health plan negotiations, charges, and costs. Indeed, Cabell and St. Mary's track the outcomes of each other's health plan negotiations and try to "meet or beat" the other's terms, viewing any negotiated rate advantage over the other as "very helpful." Likewise, health plans have played Cabell and St. Mary's off of each other to obtain lower reimbursement rates or more favorable terms, which benefits local residents. Thus, absent the proposed cooperative agreement, health plans can negotiate lower rates either by explicitly or implicitly threatening to exclude Cabell or St. Mary's from their networks or by assigning either hospital to a less preferential tier. Indeed, health plans in this market have used these threats to minimize or resist price increases by Cabell and St. Mary's.

The proposed cooperative agreement would destroy this competition and the resulting benefits. As explained previously, health plans have declared that they need to contract with at least one of the two Huntington hospitals. Health plans have declared that they cannot market a viable health insurance product in the Four-County Huntington Area that excludes both Cabell and St. Mary's, due to local residents' strong preference for local care and in-network access to

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[126] Martin Gaynor, *New Health Care Symposium: Consolidation and Competition in US Health Care*, Health Affairs Blog (Mar. 1, 2016), http://healthaffairs.org/blog/2016/03/01/new-health-care-symposium-consolidation-and-competition-in-us-health-care/ [hereinafter "Gaynor, Consolidation and Competition"] ("Studies of hospital mergers show that mergers between close competitors can lead to price increases anywhere from 20 to up to 60 percent."). This article is attached to this comment as Attachment 3. *See also* Bob Kocher & Ezekiel D. Emanuel, *Overcoming the Pricing Power of Hospitals*, 308 JAMA 1213, 1213 (2012) [hereinafter "Kocher and Emanuel, Overcoming Pricing Power"] ("Hospital consolidations have not created high-quality and low-cost integrated delivery systems. Prices for hospital services are 13% to 25% higher in consolidated hospital markets."). This article is attached to this comment as Attachment 4.

[127] *See* Martin Gaynor, Kate Ho, & Robert J. Town, *The Industrial Organization of Health-Care Markets*, 53 J. Econ. Literature, no. 2, 2015, at 235, 236 [hereinafter "Gaynor, Ho, & Town, Industrial Organization"] ("Employers pass through higher health-care costs dollar for dollar to workers, either by reducing wages or fringe benefits, or even dropping health insurance coverage entirely."); Gaynor, Consolidation and Competition ("Much of higher private health care spending is paid for by workers. Higher health care costs are passed on by employers to their workers. The average American family hasn't had an increase in their real income net of health care costs in a long time.").

at least one Huntington hospital.[128] Because the proposed cooperative agreement eliminates St. Mary's as an independent alternative, health plans will have little choice but to reach agreement with the combined entity in order to offer a Huntington hospital in their networks, even if they need to pay higher prices to keep the combined Cabell/St. Mary's system in-network.[129] Thus, the proposed cooperative agreement will substantially increase Cabell's bargaining leverage with health plans and allow it to obtain higher rates, which will ultimately come out of the pockets of local employers and residents.

In fact, Cabell recognizes that a merger with a competing hospital would increase its bargaining leverage. In a presentation on hospital affiliations, Cabell's CFO identified "Negotiating Power" with "Third party payers" as a "main reason[]" to affiliate. Likewise, health plans and employers stated that the merger of Cabell and St. Mary's will increase the combined entity's bargaining leverage in negotiations with health plans and the patients they represent.[130] The result of this increased leverage will be significantly higher health care costs.

3. Increased Bargaining Leverage and Higher Reimbursement Rates Will Lead to Increased Health Care Costs for Local Employers and Community Members

Skewing the bargaining leverage so far in Cabell's and St. Mary's favor will have direct and serious consequences for the Huntington community. FTC staff's concern regarding bargaining leverage is not an academic exercise, nor is it driven by a desire to protect health insurance companies from paying higher reimbursement rates. Rather, FTC staff's concern stems from the fact that the direct result of the combined entity's increased bargaining leverage will be increased health care costs for Huntington employers and employees, which will have profound and long-lasting consequences. The likelihood of significantly higher health care costs is a serious disadvantage attributed to the reduction in competition likely to result from the cooperative agreement. The full impact of this disadvantage should be considered under the WVCAL, W. Va. Code § 16-29B-28(f)(5)(A) and § 16-29B-28(f)(5)(C).

As courts have often found, "higher hospital reimbursement rates are passed on to employers and often to their employees . . . [and] higher rates would be passed on to the community-at-large."[131] Self-insured employers will be the first to feel the brunt of reimbursement rate increases, because these employers directly pay most of their employees' health care costs. Fully-insured employers will also see their costs increase. The merged hospital system's increased reimbursement rates will be passed on by health plans to fully-insured employers in the form of higher health insurance premiums.

These increased costs will have dire consequences for employers in the Four-County Huntington Area. For example, the president and CEO of one local employer stated that health

[128] Aetna (June 23) Decl. ¶ 10; Cigna Decl. ¶ 16.
[129] Stratose Decl. ¶ 28; Aetna (June 23) Decl. ¶ 10.
[130] Aetna (June 23) Decl. ¶ 12; Humana Decl. ¶ 16; Stratose Decl. ¶¶ 28–29; Steel of WV Decl. ¶ 25.
[131] *See ProMedica*, 2012 WL 2450574, at *23.

care costs are one of his company's largest cost items.[132] He further stated that "[i]f health care costs continue to increase dramatically after the merger, we would be compelled to reduce staff and curtail our operations or, in the worst case, shut down the steel mill" his company operates in Huntington.[133] Indeed, economic research indicates that increases in insurance premiums are correlated with reduced employment, reduced working hours, and reduced wages for employees.[134]

Local employers also described how their employees and dependents would have to help shoulder these increased health care costs in the form of higher premiums, higher deductibles, higher co-payments, and higher out-of-pocket expenses:

- "As Adams' healthcare costs have increased annually, higher prices could affect the welfare of Adams' employees. . . . [Higher prices] would likely come in the form of higher premiums for Adams and our employees, and higher deductibles, copayments, and out-of-pocket expenses for our employees."[135]

- "If Cabell increased prices after the merger, I believe that Highmark would likely pass on its higher costs to us through higher premiums. Because there are no viable alternatives to Cabell and St. Mary's for our employees, we would simply have to pay the higher premiums. In turn, Wooten would have little choice but to pass on these increased health care costs to our employees through higher premiums, deductibles, co-payments, and out-of-pocket costs."[136]

- "If our health care costs increase due to the merger, we would be forced to pass on these higher costs to our employees through higher premiums, deductibles, co-payments, and other out-of-pocket expenses."[137]

- "An increase of five to ten percent or more [in health care provider rates] would force us to pass on these higher costs to our employees in the form of higher deductibles, premium payments, or out-of-pocket costs. Indeed, Energy Services was recently forced to increase our employees' deductible and their out-of-pocket maximum in light of the higher health care costs we have faced."[138]

Economic research confirms that higher health care costs are passed on to end consumers through higher premiums, higher deductibles, an increased percentage of the premium paid by employees, reduced insurance coverage, and even lower wages.[139] In addition, these higher costs

[132] Steel of WV Decl. ¶ 3.
[133] Steel of WV Decl. ¶ 25.
[134] Katherine Baicker & Amitabh Chandra, *The Labor Market Effects of Rising Health Insurance Premiums*, 24 J. Lab. Econ., no.3, 2006, at 609.
[135] Adams Trucking Decl. ¶ 7.
[136] Wooten Machine Decl. ¶ 8.
[137] Steel of WV Decl. ¶ 25.
[138] Energy Services Decl. ¶ 17.
[139] Gaynor, Ho, & Town, Industrial Organization; Gaynor, Consolidation and Competition; *see also* Kaiser Family Foundation & Health Research & Educational Trust, *Employer Health Benefits 2015 Annual Survey* (Sept. 2015) at

fall disproportionately on the least fortunate—higher private prices are a greater burden for low-income individuals, and they make less remunerative public programs (such as Medicaid) less attractive to providers, likely harming access.[140]

Huntington residents will face more than just greater financial burdens from increased health care costs—there will be a real cost to their health. Local employers testified that increased out-of-pocket costs could cause employees to "delay or forego their visits to physicians for routine physical checkups or minor illnesses or injuries."[141] Delaying necessary medical care has the "potential for dire health and financial consequences."[142] Further, academic studies show that increased health care costs are often passed on to employees through reduced or eliminated insurance coverage.[143] In turn, a lack of health insurance leads to serious and adverse health consequences for patients, including reduced access to preventative care, poorer health outcomes, and premature death.[144]

Thus, the proposed cooperative agreement and the increased prices it would bring would have substantial and dire effects on the finances, job security, and health of residents of the Four-County Huntington Area. These are the very disadvantages to be considered in the review of the cooperative agreement, according to the WVCAL, W. Va. Code § 16-29B-28(f)(5)(C). Even with the conduct restrictions described below in Section V, the proposed cooperative agreement will have a substantial "adverse impact on patients" with respect to the "price of health care services."[145]

D. The Proposed Cooperative Agreement Will Result in Lower Quality of Care and Service Levels

Under the WVCAL, W. Va. Code § 16-29B-28(e)(5)(C), the Authority must assess the impact of the cooperative agreement on patients with respect to quality of health care services. The Merger Guidelines recognize that a merger can lead to a substantial lessening of "non-price" (e.g., quality) competition. A merger that enhances market power may harm consumers through

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52, 87, 90, 127, http://files.kff.org/attachment/report-2015-employer-health-benefits-survey [hereinafter "Kaiser/HRET 2015 Survey"].

[140] Gaynor, Consolidation and Competition.

[141] Steel of WV Decl. ¶ 25. *See also* Adams Trucking Decl. ¶ 7.

[142] Energy Services Decl. ¶ 17.

[143] *See* Kaiser/HRET 2015 Survey at 52 (surveying firms with between 3 and 199 employees that do not offer insurance coverage, and finding the high cost of health insurance was the most commonly cited reason for not offering coverage).

[144] Kaiser Commission on Medicaid and the Uninsured, *The Uninsured: A Primer—Key Facts About Health Insurance and the Uninsured in the Era of Health Reform*, Kaiser Family Foundation (Jan. 2015) at 1, 11–15, http://files.kff.org/attachment/primer-the-uninsured-a-primer-key-facts-about-health-insurance-and-the-uninsured-in-the-era-of-health-reform ("The access barriers facing uninsured people mean they are less likely to receive preventive care, are more likely to be hospitalized for conditions that could have been prevented, and are more likely to die in the hospital than those with insurance."); Institute of Medicine of the National Academies, *America's Uninsured Crisis: Consequences for Health and Health Care* (National Academies Press 2009), at 49, http://www.ncbi.nlm.nih.gov/books/NBK214966/pdf/Bookshelf_NBK214966.pdf ("Without health insurance, adults have less access to effective clinical services including preventive care and, if sick or injured, are more likely to suffer poorer health outcomes, greater limitations in quality of life, and premature death.").

[145] W. Va. Code § 16-29B-28(f)(5)(C).

"reduced product quality, reduced product variety, reduced service, or diminished innovation."[146] These non-price effects may coexist with price effects, or arise even when there are no price effects.[147] Courts have recognized that enhanced market power can harm consumers through non-price effects.[148]

The potential loss of quality or service competition is particularly important when evaluating hospital mergers. Health plan members typically face similar out-of-pocket costs when choosing among in-network hospitals. Thus, hospitals attract a higher volume of patients primarily by competing with each other on non-price features, such as quality and service. Hospitals also have an incentive to compete on quality because health plans that have high-quality hospitals in their networks are more attractive to their members, and so those hospitals are able to negotiate higher reimbursement rates. Indeed, the economic literature provides strong evidence that increased competition is associated with better quality.[149] Notably, competition on the basis of quality benefits *all* patients, not just those with commercial health insurance. Thus, if a hospital merger reduces quality competition, it harms all patients, including Medicare, Medicaid, and TRICARE patients.

Cabell and St. Mary's compete vigorously on non-price dimensions, particularly patient service and clinical quality, and patients benefit substantially from this competition. The hospitals have also added new services and improved quality of care in response to competition from each other. As St. Mary's CEO acknowledged, competition among hospitals creates "incentives for investing dollars into their operations to provide and improve quality to expand services for patients." But the proposed cooperative agreement will eliminate competition between Cabell and St. Mary's, and thus will substantially lessen the combined entity's incentive to continue adding outcome- and patient-satisfaction-enhancing services and to improve the quality of care. The following examples illustrate the benefits of competition between Cabell and St. Mary's.

Competition has driven Cabell and St. Mary's to add new technologies and service lines. For example, after St. Mary's purchased a new da Vinci robot for surgical services, Cabell was concerned about losing surgical patients because of its older, limited-capacity da Vinci model. In response, Cabell expanded its da Vinci services and acquired two new da Vinci models. Da Vinci robots benefit patients by permitting "much less invasive" surgery.

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[146] Merger Guidelines § 1.
[147] Merger Guidelines § 1.
[148] *Rockford*, 717 F. Supp. at 1285 (recognizing that a merger enhancing market power can "eliminate 'quality competition'"); *United States v. H & R Block, Inc.*, 833 F. Supp. 2d 36, 82 (D.D.C. 2011) (explaining merged firm could "accomplish what amounts to a price increase" by limiting product functionality, reserving special features or innovation, or limiting marketing efforts).
[149] This is true in environments in which prices are negotiated, and in environments in which prices are fixed by regulation. Gaynor, Ho, & Town, Industrial Organization at 249 ("[T]he evidence indicates that increases in competition [when prices are market-determined] improve hospital quality."); Gaynor and Town, Impact of Hospital Consolidation at 3 ("While it is not possible to draw direct conclusions about the United States based on evidence from the United Kingdom, these studies add to the growing evidence base that competition leads to enhanced quality under administered prices.").

Additionally, with the approval of the Authority, both Cabell and St. Mary's have added or expanded service lines in order to compete with the other hospital's areas of strength and take patient volume. For example, cardiac services are an area of traditional strength for St. Mary's. In 2012, however, Cabell overcame St. Mary's opposition to obtain CON approval to offer emergency PCI cardiac catheterization services.[150] Before Cabell received this CON, patients at Cabell requiring PCI services had to be transferred to St. Mary's. After the CON approval, patients needing this emergency service and presenting at Cabell could obtain this service right away. Over the past several years, Cabell has developed plans to further expand and enhance its cardiac program.

Cabell and St. Mary's have also competed fiercely in cancer services, another traditional strength of St. Mary's. In 2006, Cabell opened the Edwards Comprehensive Cancer Center, and its market share for cancer services increased at St. Mary's expense, meaning patients were attracted to and benefit from the Cancer Center. Consistent with this strategy of targeting St. Mary's service lines of traditional strength, recent Cabell documents identify cancer and cardiovascular as two "strategic service lines" for which Cabell has been looking to increase volumes.

Additionally, Cabell and St. Mary's each compare its quality and patient satisfaction metrics against the other's, and use the results to identify areas for improvement. For example, after a quality-ranking company released new, "disturbing" results showing that St. Mary's had scored much higher than Cabell on six service lines, Cabell's Director of Strategic Marketing sent an email to other executives asking, "Is this something we should look into from a quality perspective?" Similarly, St. Mary's benchmarked quality measures, such as average emergency room wait times and patient perceptions of cleanliness, responsiveness, staff and physician communication, pain management, and other factors, against Cabell.

Documents comparing emergency room ("ER") services at Cabell and St. Mary's illustrate close competition on quality. A St. Mary's executive boasted that patients' transition from the ER to inpatient beds at St. Mary's was "seamless," while "one very big issue at CHH is that [patients] would sit for hours." St. Mary's has also explored improvements to better compete with Cabell in this department.

In addition, Cabell and St. Mary's closely monitor each other's service line and quality-themed advertisements. For example, after a St. Mary's advertisement touted the superiority of its high-definition da Vinci robotic surgical system technology, Cabell's Marketing Director began "working on three different CHH da Vinci newspaper ads to strike back," which would "hammer hard on the lack of da Vinci experience of St. Mary's surgeons." In turn, St. Mary's objected to a Cabell advertisement stating that "more people turn to the Medical Oncology team at the Edwards Comprehensive Cancer Center for Cancer Treatment than any other program in the region" on the grounds that St. Mary's treats more cancer patients than Cabell. Cabell then expressed concern internally that, to retaliate, St. Mary's would "produce a commercial saying that [St. Mary's] ER volume is nearly double ours." Cabell's and St. Mary's responses to each

[150] *In re Cabell Huntington Hospital*, West Virginia Health Care Authority, CON File #11-2-9445-H (July 26, 2012) at 4, 31.

other's quality advertisements reflect the hospitals' intense head-to-head competition on service and quality, and how that competition disciplines them to back up their quality claims.

Health plans and local employers described how Cabell and St. Mary's compete vigorously today by adding services and improving quality. One health plan stated that Cabell and St. Mary's "compete to attract patients by offering high quality services and amenities."[151] An employer described how competition between Cabell and St. Mary's "has led to better quality, increased services, and new technology that has greatly benefited our employees and the Huntington community."[152] Similarly, another employer described how competition between Cabell and St. Mary's "has encouraged each of them to expand into the other's 'niche' areas."[153] Such competition results in a virtuous cycle of improved quality and services.

The proposed cooperative agreement would eliminate Cabell's and St. Mary's incentives to add services and improve quality in order to attract patients. The merged hospitals would no longer be spurred by each other to improve the quality of their services, add service lines, obtain new technologies, recruit new physicians, and increase patient safety, comfort, and convenience. Understandably, local employers have testified to their concern that the acquisition will eliminate quality and service competition between Cabell and St. Mary's, to the detriment of local residents.[154]

E. Coordination Between Cabell and St. Mary's Demonstrates Closeness of Competition and Previews Likely Competitive Harm from the Proposed Cooperative Agreement

Cabell and St. Mary's have periodically attempted to mitigate their intense head-to-head competition through coordination on various aspects of their business. These attempts at coordination—including service line allocation, joint contracting, and marketing agreements—are indicative of the close competition that exists between Cabell and St. Mary's, and preview the competitive harm that will occur if the proposed cooperative agreement is approved.

As noted previously in Section IV.C.1, the merging parties have coordinated by allocating service lines. A health care marketing firm retained by St. Mary's wrote in 2013 that the hospitals had maintained a "gentlemen's agreement," which allocated certain services to each hospital. Under this agreement, St. Mary's allocated services included cardiac care and cancer services. Fortunately, competition between Cabell and St. Mary's ended this gentlemen's agreement, as Cabell became very aggressive in growing cardiac care and cancer services. In short, competition between Cabell and St. Mary's led to new, high-quality health care services for the community.

Additionally, Cabell and St. Mary's, along with other regional hospitals, have jointly negotiated health plan contracts through a physician hospital organization ("PHO") called Tri-

[151] Humana Decl. ¶ 17; *see also* Aetna (June 4) Decl. ¶ 14.
[152] Steel of WV Decl. ¶ 15.
[153] Adams Trucking Decl. ¶ 4; *see also* Energy Services Decl. ¶ 12; Wooten Machine Decl. ¶ 7.
[154] Wooten Machine Decl. ¶ 7; Energy Services Decl. ¶¶ 13–14; Steel of WV Decl. ¶ 28; Adams Trucking Decl. ¶ 6.

State Health Partners ("Tri-State"). Through the PHO, Cabell and St. Mary's jointly negotiated contracts with multiple health plans. These contracts are all favorable for Cabell and St. Mary's, with identical, low discounts of 5% off charges. They are all "evergreen," meaning they have no termination date and automatically renew.

In or about 2003, Tri-State ceased to function and was "administratively dissolved" by the State of West Virginia for failure to file annual reports. Nonetheless, and despite the absence of any clinical integration or other efficiencies that might have once justified the PHO (if such integration or efficiencies ever did exist), Cabell and St. Mary's maintained Tri-State as a "shell" corporation, which kept their favorable, jointly negotiated health plan contracts in place. As a Cabell employee wrote in 2012, "Tri-State Health Partners has ceased ongoing operations. The entity has zero employees, zero revenues and . . . has also been administratively dissolved by the State. My understanding is that the only reason Articles of Dissolution have not been filed is to ensure that a few [health plan] PPO network contracts entered into roughly ten-fifteen years ago remain in place." To this day, contracts negotiated through Tri-State remain in effect for Cabell and St. Mary's, despite efforts by health plans to renegotiate the contract terms.

In 2013, as competition between them intensified, St. Mary's and Cabell had multiple meetings in an effort to "resurrect" Tri-State and "look for opportunities for this PHO with other contracts." Although they were intense competitors, Cabell and St. Mary's also communicated with each other in recent years about their individual health plan contract negotiations, including prospective rates and contract termination.

Cabell and St. Mary's have also reached marketing agreements regarding each hospital's advertising activities. Prior to 2009, the hospitals maintained a "friendly agreement" whereby each hospital agreed not to put up billboards in the other's "backyard." In 2009, St. Mary's broke this agreement by placing a billboard near Cabell. Cabell responded with the "'nuclear option,' buying up as many available billboards in [St. Mary's] backyard as we could." In 2011-2012, the hospitals reached a new agreement to allocate billboard locations, and, in 2013-2014, they continued their pattern of negotiation and competitive retaliation on advertising.

These efforts reflect the close competition between Cabell and St. Mary's, and they belie the notion that the hospitals are "complement."

F. Review of Statutory Factors in W. Va. Code § 16-29B-28(f)(5)

The WVCAL sets out four factors that the Authority must consider in its evaluation of the proposed cooperative agreement's impact on competition. Collectively, these factors demonstrate that the proposed cooperative agreement will result in a substantial reduction in competition and ultimately significant disadvantages for the community.

W. Va. Code § 16-29B-28(f)(5)(A) requires the Authority to consider "[t]he extent of any likely adverse impact of the proposed cooperative agreement on the ability of health maintenance organizations, preferred provider organizations, managed health care organizations or other health care payors to negotiate reasonable payment and service arrangements with hospitals, physicians, allied health care professionals or other health care providers." As explained in Section IV.C above, Cabell and St. Mary's are each other's closest competitors with respect to

pricing terms and reimbursement rates negotiated with health plans. By acquiring St. Mary's, Cabell will end this competition and substantially increase its bargaining leverage with health plans. This increased leverage will, in turn, enhance the combined entity's ability to command higher reimbursement rates from health plans. And any increase in rates will be passed on to employers and ultimately the community at large in the form of higher health insurance premiums, higher deductibles, higher co-pays, and potentially reduced insurance coverage. Multiple health plans have expressed concern about potentially higher reimbursement rates stemming from the cooperative agreement.[155]

W. Va. Code § 16-29B-28(f)(5)(B) requires the Authority to consider "[t]he extent of any reduction in competition among physicians, allied health professionals, other health care providers or other persons furnishing goods or services to, or in competition with, hospitals that is likely to result directly or indirectly from the proposed cooperative agreement." In this case, both Cabell and St. Mary's employ physicians, and the cooperative agreement will reduce competition between their employed physicians. Additionally, both hospitals seek and compete for referrals from independent physicians and physician groups, such as the Huntington Internal Medicine Group ("HIMG"). The cooperative agreement will eliminate competition for those referrals. Finally, as described above in Section IV.B.3, the cooperative agreement will eliminate competition between Cabell and St. Mary's for the provision of outpatient surgical services.

W. Va. Code § 16-29B-28(f)(5)(C) requires the Authority to consider "[t]he extent of any likely adverse impact on patients in the quality, availability and price of health care services." Again, as explained in Section IV.C above, the proposed cooperative agreement will substantially increase Cabell's bargaining leverage with health plans, which will enhance the combined entity's ability to command higher reimbursement rates from health plans, which will in turn be passed on to employers and the community. Further, as explained in Section IV.D above, Cabell and St. Mary's vigorously compete on quality and service. They continually add new services and improve quality in order to maintain and grow their own patient volume, increase patient satisfaction, and improve patient outcomes. But the proposed cooperative agreement will eliminate this beneficial competition between Cabell and St. Mary's, and thus will substantially lessen the combined entity's incentive to continue adding services (subject to approval under the State's CON law) and to improve quality of care.

Finally, W. Va. Code § 16-29B-28(f)(5)(D) requires the Authority to consider "[t]he availability of arrangements that are less restrictive to competition and achieve the same benefits or a more favorable balance of benefits over disadvantages attributable to any reduction in competition likely to result from the proposed cooperative agreement." As described above in Section II.B, a number of other hospital systems submitted bids to acquire St. Mary's. Still

[155] *See* Aetna (June 23) Decl. ¶ 12 ("I recognize that the Proposed Acquisition will provide Cabell with increased bargaining leverage vis-à-vis Aetna, which will give Cabell the ability to demand higher rates from Aetna if Cabell so chooses. Aetna would need to consider paying these higher rates in order to keep these facilities in our product."); Humana Decl. ¶ 16 ("If the Cabell/St. Mary's merger occurs, the combined Cabell/St. Mary's will have increased bargaining leverage, and it may be more challenging for Humana to negotiate contract terms with the combined entity.").

today, multiple hospital systems, such as LifePoint Health, Bon Secours, and CAMC remain interested in acquiring St. Mary's if it is not acquired by Cabell.[156] Further, most of the benefits the merging parties claim they will achieve through the proposed cooperative agreement can be obtained other ways—either through alternative acquisitions or through the hospitals' individual efforts—and with a more favorable balance of benefits over disadvantages. Section VI below explains why this competitively harmful cooperative agreement is not necessary to achieve many of the merging parties' claimed benefits.

V. CONDUCT RESTRICTIONS WILL NOT PREVENT SUBSTANTIAL REDUCTION IN COMPETITION

Recognizing the strong presumption of illegality and evidence of competitive harm, the Applicant has put forth "conduct restrictions" that it claims will limit the proposed acquisition's anticompetitive effects. These conduct restrictions include the Assurance of Voluntary Compliance ("AVC") agreed to with the West Virginia Attorney General and the rate regulation provisions in recently enacted W. Va. Code § 16-29B-28(g) and (i).[157] But these conduct restrictions will not "replac[e] the competitive intensity lost as a result of the merger," [158] and thus will not prevent the competitive harms described in Section IV.C and D.

Courts, antitrust enforcers, and economists are highly skeptical of such conduct restrictions and strongly prefer structural remedies such as divestiture or enjoining a merger entirely. The Supreme Court has long held that structural remedies are the "natural remedy" for unlawful mergers and acquisitions, because they are "simple, relatively easy to administer, and sure."[159] Conduct remedies are disfavored because they do not restore competition or remedy the competitive harm. Instead, they attempt to merely mitigate the harm for a limited period of time. Compared to conduct restrictions, enjoining a merger or a divestiture "is desirable because, in general, a remedy is more likely to restore competition if the firms that engage in pre-merger competition are not under common ownership," and there are "usually greater long term costs associated with monitoring the efficacy of a conduct remedy than with imposing a structural solution."[160] In rejecting similar conduct restrictions (as the Applicant points to here) between merging hospitals and the Massachusetts Attorney General, a Massachusetts state court explained that "so-called **'conduct-based' remedies" are "temporary and limited in scope—like putting a band-aid on a gaping wound that will only continue to bleed (perhaps even more profusely) once the band-aid is taken off**."[161]

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[156] OLBH Decl. ¶ 13; CAMC Decl. ¶ 18.
[157] In its application, the Applicant argues that a Letter of Agreement ("LOA") with Highmark will limit the proposed cooperative agreement's anticompetitive effects. While the Applicant has not made any details of the Highmark LOA public, FTC staff has had the opportunity to review and analyze the Highmark LOA during its investigation and in administrative litigation. FTC staff concludes that the Highmark LOA is unlikely to substantially reduce the competitive harm the proposed cooperative agreement is likely to cause, for reasons similar to those regarding the AVC.
[158] *Sysco*, 113 F. Supp. 3d at 72.
[159] *United States v. E.I. du Pont de Nemours & Co.*, 366 U.S. 316, 329–31 (1961).
[160] *ProMedica*, 2012 WL 2450574, at *66 (quoting *Evanston Nw.*, 2007 WL 2286195, at *77).
[161] *Commonwealth v. Partners Healthcare Sys.*, No. SUCV2014-0233-BLS2, 2015 WL 500995, at *1–2 (Sup. Ct. Mass. Jan. 30, 2015) (emphasis added).

For similar reasons, the merging parties cannot show that the AVC or rate regulation will replace the competition eliminated by the proposed acquisition or prevent harm to consumers. Consequently, these conduct restrictions highlight that the proposed cooperative agreement will lead to anticompetitive harm.[162]

A. Assurance of Voluntary Compliance

In July 2015, the West Virginia Attorney General, Cabell, and St. Mary's agreed to an "Assurance of Voluntary Compliance" that places certain limits on their post-acquisition conduct for a period of time. But the AVC's terms are flawed and will likely not prevent post-acquisition price increases. Even if it works as intended, the AVC will merely be a *temporary limit* on the combined entity's ability to raise reimbursement rates to health plans and their members. The AVC does not restore competition between Cabell and St. Mary's—the primary source of health plans' ability to restrain rate increases. Nor does the AVC do anything to restore the beneficial service and quality competition that the cooperative agreement eliminates.

Paragraph 2(a) of the AVC states that the combined entity will not "seek an increase in Hospital Rates beyond Benchmark Rates established by the West Virginia Health Care Authority."[163] As an initial matter, West Virginia recently abolished the Authority's rate review function.[164] Since the Authority will no longer be calculating the benchmark rates referenced in this provision, there will be no benchmark rate to serve as a cap. It is thus unclear how Paragraph 2(a) will function in the absence of rate review.

Moreover, to the extent that a benchmark rate for Cabell can still be calculated based on peer hospitals' average charge per discharge and average charge per outpatient visit, the elimination of rate review means that peer group hospitals can increase *their* average charges. This will enable the merged Cabell system to increase its charges, which in turn will increase the actual rates all but one health plan pays under discount-off-charges contracts. Meanwhile, health plans will not be able to effectively renegotiate their contracts because they will no longer have the leverage to threaten to drop Cabell or St. Mary's from their health plan networks—that is, there is no meaningful alternative to contracting with the merged system—so health plans will be stuck with higher rates.

Further, the AVC term "hospital rates" is vaguely defined as "the prices set by CHH and SMMC's hospitals for their individual inpatient and outpatient services."[165] Presumably, the term "hospital rates" refers to the hospital's average list charges. Importantly, list charges are *not* the rates paid by commercial health plans. The rates paid by commercial health plans are determined through negotiations between hospitals and health plans and are always lower than

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[162] *See FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 67 (D.D.C. 1998) (enjoining merger despite promise not to raise prices and to share cost savings with customers because "the mere fact that such representations had to be made strongly supports the fears of impermissible monopolization").
[163] *In re Cabell Huntington Hospital, Inc.'s Acquisition of St. Mary's Medical Center*, Assurance of Voluntary Compliance, Nov. 4, 2015, at 7 [hereinafter "AVC"].
[164] West Virginia Legislature, "Senate Bill 68," *available at* http://www.legis.state.wv.us/Bill_Status/bills_history.cfm?INPUT=68&year=2016&sessiontype=RS.
[165] AVC at 3.

list charges. Placing a cap on list charges thus merely sets a ceiling on negotiated rates between hospitals and health plans, but does not necessarily prevent price increases. The actual price to health plans, and ultimately to commercially insured patients, is still a function of competition and bargaining leverage.[166] And even if the term "hospital rates" refers to actual negotiated rates paid by health plans, the elimination of competition means that rates will not go down from their currently high levels (as they otherwise might without the proposed cooperative agreement) and there will be no protection from rate increases under the AVC once it expires.

Paragraph 2(b) of the AVC states that the combined entity's operating margins are limited to an average of 4% over a three-year period.[167] But it is unclear how restricting margins will effectively constrain reimbursement rates. The margin ceiling creates an incentive for the combined entity to bring its margins into compliance by increasing its own costs (for example, by increasing executive compensation). And the penalty for exceeding the margin ceiling appears to be a reduction in chargemaster rates, which do not necessarily lead to lower contracted prices with health plans (for example, if the reimbursement rate methodology is not discount-off-charges), so the penalty may not be a deterrent.

Paragraph 2(c) prevents the combined entity from terminating "evergreen" contracts (i.e., contracts subject to automatic renewal absent notice of termination) currently in place with health plans.[168] While this provision might temporarily protect health plans' current terms with Cabell and St. Mary's, it limits the best case for health plans to the status quo. Absent the proposed cooperative agreement, health plans might realistically be able to negotiate more favorable terms with Cabell and St. Mary's in the future. This is particularly likely here because several of the evergreen contracts in place today were negotiated jointly by Cabell and St. Mary's through Tri-State Health Partners and contain relatively small discounts off charges. So today, if the contracts were terminated, health plans could take advantage of competition to negotiate more favorable rates with Cabell and St. Mary's. But the proposed cooperative agreement—even with the AVC—will prevent health plans from negotiating more favorable terms because it eliminates health plans' bargaining leverage by eliminating competition between Cabell and St. Mary's, and the AVC does nothing to restore that competition.

Paragraph 2(d) states that, if a health plan terminates a contract or a contract expires, the combined entity will not negotiate "for a reduction in the amount of the discount off charges contained in the prior third party payor contact [sic]" for a period of five years after the acquisition.[169] During the following three years (i.e., years six through eight post-acquisition), if negotiations stall for more than 60 days, the health plan may request mediation and, if needed, binding arbitration.[170] The arbitration is to be "baseball style," meaning that each side makes an offer and the arbitrator must select one of the two offers.[171] But, again, even assuming that this

[166] Even when there was rate review to limit the charge ceiling, if the pre-acquisition negotiated rate was below the charge ceiling set by the Authority, the combined entity would have had the ability to exercise its newfound bargaining leverage and impose a price increase up to the amount of the ceiling.
[167] AVC at 7–8.
[168] AVC at 8.
[169] AVC at 8.
[170] AVC at 8–9.
[171] AVC at 3, 8–9.

provision might protect health plans from getting a worse rate for the initial five years, by eliminating competition, the proposed cooperative agreement all but guarantees that health plans cannot get better rates. The mediation/arbitration provision effective in years six through eight provides no meaningful protection because Paragraph 2(d) appears to require health plans to terminate their contracts or decline to renew an existing contract to enter arbitration.[172] Health plans are not likely to take the risk of terminating their contracts because they have no meaningful hospital alternatives and doing so would leave them exposed to paying significantly higher rates demanded by Cabell/St. Mary's if the arbitrator rules in the hospitals' favor.

Even if the AVC's rate-related provisions keep prices from increasing for some period of time, the AVC will not restore the beneficial quality and service competition that would be eliminated by the proposed cooperative agreement. In fact, economic theory and research predict that the AVC makes it more likely that the cooperative agreement will harm quality and service competition. In situations where hospital prices are fixed by regulation, as they (temporarily) would be if the AVC's restrictions on price were fully effective, more hospital competition significantly improves quality.[173] Indeed, empirical research finds that, in a regulated price environment, greater hospital competition has statistically and economically significant positive effects on quality.[174] When prices are fixed, hospital competition takes on elevated importance in driving quality, because higher quality is the primary way hospitals can attract patients from rivals. The cooperative agreement sharply reduces Cabell's and St. Mary's incentives to improve quality and add services by eliminating the competition between them. To the extent that regulating pricing through the AVC successfully caps their rates and margins, it may reduce the Applicant's ability and incentive to invest in quality, services, facilities, and equipment.

Paragraph 3 of the AVC sets out several generalized quality-related commitments relating to quality of care, population health, and community wellness plans.[175] It also requires the merging parties to undertake the integrated medical record system set forth in their initial post-acquisition efficiencies plan.[176] Finally, Paragraph 4 requires the combined entity to submit a "statement of proposed activities" that it will perform to achieve projected efficiencies and quality enhancements from the proposed acquisition to the Attorney General for review and

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[172] AVC at 8.

[173] *See* Gaynor, Ho, & Town, Industrial Organization at 243 ("A standard result in models with administered prices is that non-price (quality) competition gets tougher in the number of firms, so long as the regulated price is set above marginal cost. Firms facing tougher competition will increase their quality in order to attract (and retain) consumers.").

[174] Gaynor, Consolidation and Competition ("There is strong evidence that reduced competition harms quality when prices are administered (as for the Medicare program or in the English National Health Service)."); Martin Gaynor, Rodrigo Moreno-Serra & Carol Propper, *Death by Market Power: Reform, Competition, and Patient Outcomes in the National Health Service*, 5 Am. Econ. J: Econ. Pol'y, no. 4, 2013, at 134; Martin Gaynor, Carol Propper & Stephan Seiler, *Free To Choose? Reform And Demand Response in the English National Health Service*, (National Bureau of Econ. Research, Working Paper No. 18574), http://www.nber.org/papers/w18574; Zack Cooper, Stephen Gibbons, Simon Jones & Alistair McGuire, *Does Hospital Competition Save Lives? Evidence from the English NHS Patient Choice Reform*s, 121 Econ. J., no. 554, 2011, at F228.

[175] AVC at 9–10.

[176] AVC at 10.

approval.[177] It will report annually to the Attorney General on its implementation of the statement of proposed activities.[178] These vague and undefined goals and activities provide no details or assurance that the cooperative agreement will actually achieve benefits, or when.

Numerous problems plague the AVC's quality commitments. It is extremely difficult to design an agreement that will *require* the merging parties to achieve the level of quality that would have existed but for the proposed cooperative agreement, or any other specific level of quality. This is partly due to measurement problems—there is no single measure or set of measures that can represent the overall quality of all of a hospital's services. Unsurprisingly, many of the AVC's quality provisions are vaguely defined. For example, "quality goals" are defined as "goals developed annually in conjunction with CHH's hospital board and the medical staff."[179] But nothing in the AVC provides details regarding the content or format of these quality goals, requires the Applicant to actually achieve these goals, or requires that they be achieved in any reasonable timeframe. Further, the AVC's quality-related provisions do nothing to restore the beneficial quality and service competition eliminated by the proposed acquisition. Today, Cabell and St. Mary's compete fiercely to attract patients by improving their quality of care and adding new services and technologies. But the AVC does nothing to incentivize the combined entity to adopt new medical technology, or add new services or procedures.

Further, it is unclear how the combined entity's compliance with the AVC's price and quality provisions will be measured and enforced. Essentially, the AVC requires the combined entity to submit an annual written report to the Attorney General detailing its compliance with the AVC's terms.[180] But the AVC sets out no details as to how the combined entity's compliance will be measured. As for enforcement, the AVC says only that violations will be "determined solely by the Attorney General" and that the Attorney General "may pursue a civil action" to address the violation.[181] Further, the AVC is a static document, which cannot account for inevitable changes in the market, changes in payment incentives, or obstacles that the merging parties might face in attempting to comply. Finally, even if all the AVC's provisions work as intended, they will be in force for only a limited period of time.[182] After the AVC expires, the combined entity will be free to exercise its enhanced bargaining leverage to demand and obtain higher reimbursement rates from health plans and their members and will face no meaningful ongoing requirements—or meaningful competition—with respect to quality.[183]

B. Rate and Quality Regulation Provisions in the WVCAL

Certain provisions of the recently enacted WVCAL, W. Va. Code § 16-29B-28, address inpatient and outpatient "rates" and "reimbursement agreements" with health plans and quality metrics. The Applicant asserts that these provisions ensure that the proposed cooperative agreement cannot harm competition. But these provisions are vague, leave room for the

[177] AVC at 10–11.
[178] AVC at 11.
[179] AVC at 4.
[180] AVC at 11–12.
[181] AVC at 13.
[182] AVC at 6–11.
[183] The Applicant has not made any additional commitments in its application beyond what is contained in the AVC.

combined entity to implement anticompetitive price increases, and do nothing to restore the beneficial quality and service competition eliminated by the cooperative agreement.

Rate Regulation under WVCAL § 28(g)(1)(D)—Although its terms are unclear, W. Va. Code § 16-29B-28(g)(1)(D) suggests that the Authority *could* require parties to a cooperative agreement to rebate to health plans the amount by which their reimbursement rates for "hospital inpatient services or hospital outpatient services" in a given year exceed the annual increase in the Consumer Price Index ("CPI") plus two percent (or more), unless the parties justify the increase. Not only does this provision put the onus on the Authority to examine whether a rate increase is justified and order a rebate, but, at best, this provision puts a *ceiling* on the combined entity's ability to raise rates. It does not necessarily limit rate increases to what they would have been were Cabell and St. Mary's still competing.[184]

Moreover, this provision seems to apply only to inpatient rates and hospital-based outpatient rates. It does not appear to limit the Applicant's ability to significantly increase outpatient rates at its freestanding outpatient facilities, or the rates charged for employed physician services, and it is unclear whether it limits the Applicant's ability to charge significantly higher prices for ancillary services, such as lab and pharmacy services. That presents a potentially significant loophole for the Applicant to raise rates even if the Authority exercises the right to limit rates for "hospital inpatient services or hospital outpatient services." Rate increases for freestanding outpatient facilities, employed physician services, and ancillary services would be a significant "disadvantage" under the statute that should be considered in weighing the harms of the cooperative agreement against any purported benefits.

Rate Regulation under WVCAL § 28(i)(1)(B)—Under W. Va. Code § 16-29B-28(i)(1)(B), parties to a cooperative agreement must submit to the West Virginia Attorney General any "proposed increase in rates for inpatient and outpatient hospital services and any [ ] reimbursement agreement" with a health plan. If the Attorney General determines that the proposed rates "may inappropriately exceed competitive rates for comparable services in the hospital's market area which would result in unwarranted consumer harm or impair consumer access to health care," the Attorney General may ask the Authority to "evaluate" the proposed rate increase and provide a recommendation to the Attorney General. The Attorney General may then "approve, reject, or modify the proposed rate increase." Additionally, if the Attorney General determines that a "reimbursement agreement with a third party payor includes pricing terms at anti-competitive levels," the Attorney General may reject the reimbursement agreement.

There are several problems with the statutory language that open the door to significant harm to consumers from this cooperative agreement, even if the Authority and Attorney General exercise all their authority under this provision. First, it is unclear what "rates for inpatient and outpatient hospital services" means because that term is undefined. We assume it means list

[184] This effect can add up. To see why, suppose that, absent the proposed cooperative agreement, prices would have increased by CPI plus 1% per year, but the merged entity has enough bargaining power to command a price equal to the statutory ceiling of CPI plus 2% per year. That difference would accumulate every year, so that after ten years prices would be more than 10% higher (because of compounding) than they would have been but for the cooperative agreement.

charges, given the distinction from a "reimbursement agreement with a third party payor [that] includes pricing terms." Regardless, it is not clear how the Attorney General will assess whether such rates "*inappropriately* exceed *competitive* rates for *comparable services* in the hospital's *market area*" since none of those terms are defined. One concern with this provision is whether rates could "*appropriately*" exceed competitive rates and, if so, how such rates would not cause harm to patients. Moreover, the Attorney General also must determine whether such rates would cause "unwarranted consumer harm," raising the question of whether there are instances where the Applicant could increase rates and cause consumer harm that would be "warranted." The failure to define these terms—which would be difficult to define in any event—raise the real possibility that rate increases will cause consumer harm, despite the best efforts of the Authority and the Attorney General.

Second, as with W. Va. Code § 16-29B-28(g)(1)(D), this provision seems to apply only to inpatient rates and hospital-based outpatient rates. It does not appear to limit the Applicant's ability to increase rates significantly at its freestanding outpatient facilities or the rates charged for employed physician services. It is also unclear whether this provision limits the Applicant's ability to charge significantly higher prices for ancillary services, such as lab and pharmacy services. That presents a potentially significant loophole for the Applicant to raise rates, which the merged entity could exploit by exercising its market power to raise rates on "price-unregulated" services rather than "price-regulated" services. This is a significant "disadvantage" under the statute that should be considered in weighing the harms of the cooperative agreement against any purported benefits.

Third, there are similar problems with the provision regarding reimbursement agreements. This provision provides the Attorney General with no definition of, or guidance as to what constitutes, an "anti-competitive" reimbursement rate. Especially because the cooperative agreement eliminates the very competition that determined prices to third party payors, it will be difficult, if not impossible, for the Attorney General to determine what rates would have prevailed absent the cooperative agreement in order to conclude whether the actual rates are "anti-competitive." Likewise, the fact that the Attorney General agrees to the rate does not necessarily mean that it is a competitive rate.

In sum, it is impossible to predict how this provision will be implemented going forward, or whether it will provide any meaningful restraint on anticompetitive price increases. Further, even if both provisions work as intended in restraining anticompetitive price increases, they do nothing to restore the quality and service competition that is lost as a result of the proposed cooperative agreement.

Quality Regulation Under WVCAL § 28(g)(1)(B) and (C)—The WVCAL requires each of the merging parties to provide the Authority with a representative sample of quality metrics selected annually by the Authority from the most recent quality metrics published by the Centers for Medicare and Medicaid Services ("CMS").[185] It then requires that a "corrective action plan" be implemented if the combined entity's performance on these metrics falls below the fiftieth

[185] W. Va. Code § 16-29B-28(g)(1)(B).

percentile for all United States hospitals.[186] But there are several problems with this provision that undermine its effectiveness. While CMS's metrics are fairly broad, they do not include certain helpful measures.[187] Additionally, it is unclear how broad or limited the Authority will be in selecting a "representative sample of quality metrics," or on what basis the Authority will determine that the sample is "representative," as the Authority has not yet promulgated implementing regulations. Finally, the statute requires only that action be taken if the merged entity's performance falls below the fiftieth percentile for all United States hospitals. It is possible that the merging hospitals are already far above the fiftieth percentile in these metrics, meaning that regulation of the cooperative agreement would not be very meaningful in practice.

VI. THE CLAIMED BENEFITS OF THE PROPOSED COOPERATIVE AGREEMENT ARE SPECULATIVE, ACHIEVABLE BY EACH HOSPITAL ON ITS OWN OR THROUGH LESS RESTRICTIVE ARRANGEMENTS, AND ARE UNLIKELY TO OUTWEIGH THE PROPOSED COOPERATIVE AGREEMENT'S LIKELY HARM

When analyzing mergers that raise competitive concerns, antitrust agencies assess the potential benefits, or efficiencies, that may result from the transaction. The agencies, and many courts, analyze these efficiencies under the framework of the Merger Guidelines. In health care provider mergers, the antitrust agencies assess many of the potential benefits that the WVCAL, W. Va. Code § 16-29B-28(f)(4), requires the Authority to consider.

Under the Merger Guidelines, the antitrust agencies' policy is to not challenge a merger if it will result in efficiencies likely to reverse the merger's potential to harm customers in the relevant market.[188] The greater the potential anticompetitive effects from a merger, the greater the efficiencies need to be to outweigh the harm from the merger, and the more they must be passed through to consumers.[189] Proof of "extraordinary efficiencies" is required to offset anticompetitive concerns in highly concentrated markets, like the markets at issue here.[190] Consequently, "[e]fficiencies almost never justify a merger to monopoly or near-monopoly."[191]

For the antitrust agencies to credit efficiencies claims, they must be cognizable, meaning that they "are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service."[192] "Merger-specific" efficiencies are those that are "likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects."[193] The Merger Guidelines' requirement that efficiencies be merger-specific dovetails with the Authority's statutory obligation to consider "[t]he availability of arrangements that are

[186] W. Va. Code § 16-29B-28(g)(1)(C).
[187] For example, CMS compiles measures of 30-day mortality rates for only six conditions. *See* Medicare.gov Hospital Compare, *Measures displayed on Hospital Compare*, https://www.medicare.gov/hospitalcompare/Data/Measures-Displayed.html#.
[188] Merger Guidelines § 10.
[189] Merger Guidelines § 10.
[190] *St. Luke's*, 778 F.3d at 790; *Sysco*, 113 F. Supp. 3d at 81–82.
[191] Merger Guidelines § 10.
[192] Merger Guidelines § 10.
[193] Merger Guidelines § 10.

less restrictive to competition and achieve the same benefits or a more favorable balance of benefits over disadvantages attributable to any reduction in competition likely to result from the proposed cooperative agreement."[194] The requirement of merger specificity codifies the common-sense principle that only the *incremental* efficiencies, beyond those that would be achieved with alternative partners (or by the hospitals independently), are to be credited.

Under the Merger Guidelines, the merging parties bear the burden of substantiating efficiencies claims so that it is possible to "verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific."[195] Further, cognizable efficiencies are "assessed net of costs produced by the merger or incurred in achieving those efficiencies."[196]

As an initial matter, recent scholarship explains that there is good reason to be generally skeptical of claims that hospital mergers result in lower costs and increased quality. As a recent article in the *New England Journal of Medicine* describes:

> The harsh reality is that it's difficult to find well-documented examples of mergers that have generated measurably better outcomes or lower overall costs—the greater value that is publicly touted as the motivation underlying these combinations. The most consistently documented result of provider mergers is higher prices, particularly when the merging hospitals are in close proximity.[197]

This documented track record of the limited benefits from hospital mergers in general strongly suggests that any such benefits in this case are unlikely to be large enough to counterbalance the large anti-competitive harm, and so the Authority should view the Applicant's claims with skepticism.

The Applicant claims that the proposed cooperative agreement will help to achieve eight of the nine benefits that the Authority is required to consider by W. Va. Code § 16-29B-28 (f)(4).[198] FTC staff—both attorneys and economists—reviewed the Applicant's claimed efficiencies during its thorough investigation and determined that they did not offset the likely competitive harm from the proposed cooperative agreement.

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[194] W. Va. Code § 16-29B-28(f)(5)(D).
[195] Merger Guidelines § 10.
[196] Merger Guidelines § 10. There are several reasons for this. If the cost to achieve the efficiency outweighs the benefit, it is less likely that the merged firm will undertake the activity producing the claimed efficiency. Second, if the cost outweighs the benefit, particularly any cost-saving benefit, then the merged firm may seek to raise prices to compensate for the net expenditure/loss. Finally, if there is no net benefit because costs-to-achieve exceed the cost-saving benefit, then there will be no financial benefits to pass on to consumers.
[197] Leemore S. Dafny & Thomas H. Lee, *The Good Merger*, 372 New Eng. J. Med. 2077, 2079 (2015) [hereinafter "Dafny and Lee, The Good Merger"]. This article is attached to this public comment as Attachment 5. *See also* Kocher and Emanuel, Overcoming Pricing Power at 1213 ("Hospital consolidations have not created high-quality and low-cost integrated delivery systems.").
[198] Application at 12.

Additionally, Dr. Respess, a highly regarded cost-efficiencies expert, and Dr. Romano, a distinguished quality expert, were retained to examine the Applicant's cost savings and quality benefits claims. Dr. Respess and Dr. Romano prepared detailed, exhaustive expert reports analyzing the Applicant's efficiencies claims, including those contained in The Camden Group's Business Plan of Operational Efficiencies ("BPOE") and analysis by Deloitte Consulting LLP. Dr. Respess concluded that virtually all of the Applicant's cost-saving claims were not specific to the merger (that is, they could be achieved independently or through alternative arrangements), were too vague to be credited, or would be offset by the costs to achieve the claimed efficiencies, and he ultimately concluded that no net efficiencies should be credited to the proposed cooperative agreement. Dr. Romano concluded that virtually all of the Applicant's quality-improvement claims, including claims relating to population health management, were too vague to be credited or were unlikely to be realized, and that even those quality efficiencies that are likely to occur could be achieved independently or through alternative mergers or affiliations.

Overall, the Applicant's claims suffer from several serious and common flaws. First, many of the claimed benefits are merely aspirational and lack substantiation. They are not supported by firm plans or evidentiary support. Indeed, the cooperative agreement application itself provides virtually no details on what the specific benefits are or when and how they will be achieved. The Merger Guidelines instruct that "[e]fficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means."[199]

Further, the merging parties' vague and aspirational claims present a problem of enforceability. The WVCAL states that the Authority "may reasonably condition approval upon the parties' commitments" to achieve benefits in a variety of areas, including population health, access to health care, quality and cost efficiencies, or any other commitments.[200] The law gives the Authority power to fully enforce these conditions.[201] Without firm commitments or detailed plans in the Applicant's cooperative agreement application, however, the Authority cannot be expected to enforce the merging parties' claimed benefits. There is no indication in the cooperative agreement application how and when the claimed benefits will be achieved. Simply put, there is very little, if anything, specific for the Authority to enforce in this proposed cooperative agreement application. Because of the complex and multi-dimensional nature of clinical quality, creating a practical means of ensuring that quality would remain at the level that would have prevailed but for the acquisition would be extremely challenging, at best.

In addition, many of the Applicant's claimed benefits are not merger-specific. The Applicant does not explain why many of its claimed benefits could not be achieved through an alternative acquisition or affiliation or through the hospitals' independent initiatives. Indeed, even assuming the Applicant planned to pursue the general goals indicated in the statute, many of those goals are things that hospitals generally, and these hospitals in particular, already do and

[199] Merger Guidelines § 10; *see also* Dafny and Lee, The Good Merger at 2079 ("[T]he absence of detail on [efficiencies claims] should arouse concern about whether the goal of a given merger is truly to better serve the community.").
[200] W. Va. Code § 16-29B-28(f)(6)(B).
[201] W. Va. Code § 16-29B-28(f)(6)(B).

strive for. There is no indication in the application how and why the proposed cooperative agreement is necessary to achieve these goals and the claimed benefits.

Indeed, as discussed in Section II.B above, St. Mary's had other suitors, including major hospital systems, such as LifePoint Health, Bon Secours, and CAMC, that remain interested in acquiring St. Mary's if Cabell does not.[202] Any efficiencies that might be achieved through the cooperative agreement would likely be achieved through one of these alternative acquisitions as well. The only efficiencies that are likely to be unique and specific to the proposed cooperative agreement are those that are rooted in geographic proximity, as Cabell is proximate to St. Mary's. But the vast majority of the claimed efficiencies do not depend on the proximity of the hospitals, so these other bidders'—which include non-profit and Catholic health care systems—acquisition of St. Mary's would be less restrictive to competition and achieve the same benefits or a more favorable balance of benefits over disadvantages as the Applicant. In addition, many of the Applicant's claimed benefits could be achieved by Cabell and St. Mary's independently. The Applicant dismisses the availability of these alternatives without explanation; it has not explained why only this cooperative agreement achieves the claimed benefits; nor does it explain why other alternatives could not achieve the same or comparable benefits.

Finally, the Applicant has put forth no meaningful remedies that the Authority may implement should the Applicant fail to live up to its quality claims. Most notably, the Applicant has put forth no plan of separation that would allow the Authority to break up Cabell and St. Mary's in the event the Authority later determines that the benefits from the proposed cooperative agreement no longer outweigh the disadvantages from a reduction in competition.[203] As a result, it may be challenging, perhaps impossible, for the Authority to remedy any breach of the proposed cooperative agreement if the merging parties fail to keep their commitments.

Even if a plan of separation were proposed, the Authority should be leery of approving the cooperative agreement based on such a promise given the FTC's experience in trying to break up health care mergers after they are consummated. In the *Evanston* case,[204] the FTC successfully challenged the consummated merger of two hospitals in the Chicago area, but did not believe it could order the acquired hospital to be divested because too much integration had occurred and there were significant risks to patient safety. In the *ProMedica* case, the FTC successfully challenged ProMedica Health System's acquisition of St. Luke's Hospital in Lucas County, Ohio. But nearly a year after the Supreme Court declined to overturn a divestiture order and more than *five years* after a federal court granted a preliminary injunction to the FTC, the Commission is *still* trying to effectuate the divestiture of St. Luke's. Finally, in the *St. Luke's/Saltzer* case, the FTC and State of Idaho successfully challenged St. Luke's acquisition of the Saltzer physician group after it was consummated and obtained a divestiture order in January 2014. But effectuating that divestiture after the merger's consummation—even where the parties represented to the court that little integration would occur during the trial—has been extremely difficult. Indeed, it remains to be determined whether St. Luke's will divest all of the Saltzer

[202] OLBH Decl. ¶ 13; CAMC Decl. ¶ 18.
[203] W. Va. Code § 16-29B-28(f)(3).
[204] *Evanston Nw.*, 2007 WL 2286195, at *77–79.

assets it acquired.[205] In any case, the divestiture is still not complete more than *four years* after the preliminary injunction was denied and more than *two years* after the district court ordered divestiture.

Below, FTC staff responds to each of the Applicant's claims and demonstrates that the Applicant's claimed benefits from the proposed cooperative agreement are generally not substantiated or merger-specific, and thus should not be credited by the Authority. Further, whatever modest cognizable benefits the proposed cooperative agreement may achieve, they are dwarfed by the competitive harm that the proposed cooperative agreement will cause.

A. Enhancement and Preservation of Existing Academic and Clinical Educational Programs

The Applicant claims that the proposed cooperative agreement will provide assurance of continued support for medical education in the Huntington region.[206] In particular, both Cabell and St. Mary's provide support to the Marshall University School of Medicine ("MUSOM").[207] The Applicant argues that, were St. Mary's to be acquired by a hospital system other than Cabell, the level of support provided by St. Mary's to the medical school might be reduced or even eliminated.[208]

This claim is pure speculation. Significantly, the Applicant can point to no evidence that an alternative purchaser of St. Mary's would not be willing to continue supporting medical education. Certainly, Cabell's and St. Mary's financial support for MUSOM is important and MUSOM's residency programs with the hospitals are important to each of them. But there is simply no evidence that any of this would change if St. Mary's was acquired by another health care system. Indeed, the Authority should not assume any changes from an alternative acquirer of St. Mary's *because* the MUSOM relationship is so important to St. Mary's. Thus, the Authority should not credit this claim as a benefit of the proposed cooperative agreement.

B. Enhancement of the Quality of Hospital and Hospital-Related Care, Including Mental Health Services and Treatment of Substance Abuse Provided to Citizens Served by the Authority

The Applicant claims that the proposed cooperative agreement will enable the combined entity to provide higher-quality care to the community. However, many of the Applicant's claimed quality improvements lack any substantiation and are not merger-specific. Further, as discussed in Section IV.D above, the proposed cooperative agreement eliminates quality competition between Cabell and St. Mary's, likely leading to a substantial reduction in the

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[205] Jeff Zalesin, *Health Cos. Spar with FTC, Idaho AG Over Divestiture Order*, Law360 (June 22, 2015), http://www.law360.com/articles/670748/health-cos-spar-with-ftc-idaho-ag-over-divestiture-order?article_related_content=1; Audrey Dutton, *FTC, Idaho attorney general: St. Luke's not complying with court order in Saltzer deal*, Idaho Statesman (June 17, 2015), http://www.idahostatesman.com/news/business/health-care/article40864167.html.

[206] Application at 11.

[207] Application at 11.

[208] Application at 11.

quality of care provided by the combined entity compared to what would have resulted without the cooperative agreement. Thus, even if the Applicant's modest quality improvement claims are realized, the negative effect of the proposed cooperative agreement on quality will still likely exceed the positive effect, leading to a net *reduction* in the combined entity's quality of care.

In its application, the Applicant claims that the cooperative agreement "makes possible the adoption at both facilities of uniform protocols and best practices."[209] But, as Dr. Romano concludes, there is nothing unique to *this* cooperative agreement that facilitates the adoption of uniform protocols or best practices. Any other acquirer or affiliation partner of St. Mary's could do this. In fact, Cabell and St. Mary's could do this together without the cooperative agreement because antitrust law would not bar that type of collaboration. Adoption of uniform protocols or best practices does not require this cooperative agreement (or indeed any merger) to be accomplished, as there are many other widely-used resources to enable such processes.[210]

Second, the Applicant claims that the proposed cooperative agreement will enable the merging parties to "establish a modern database and a fully integrated and interoperable medical records system."[211] But the benefits of this are likely to be modest. Cabell and St. Mary's already each have an EHR system. The proposed cooperative agreement is not necessary to make Cabell's and St. Mary's EHR systems compatible. Also, Cabell and St. Mary's already have various mechanisms in place to exchange health information, and the absence of a fully-integrated system does not seem to have negatively affected their quality of care.

The Applicant also claims that the combined entity will be better able to adopt wellness and education programs to tackle community health issues, and that the proposed cooperative agreement will make it possible for the combined entity to launch new service lines. While these goals are laudable, the Applicant's claims on this point are purely speculative, as there is simply no connection between the cooperative agreement and the merging parties' ability to undertake these activities. The Applicant has put forth no concrete plans to implement new wellness, prevention, or education programs. Nor can it point to any concrete plans to implement new service lines. Thus, there are no firm commitments to introduce new services that the Authority

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[209] Application at 9.

[210] A recent article in the *Journal of the American Medical Association* explains why hospital consolidation is unnecessary to implement best practices and improve quality:

> [A]dvocates of hospital consolidation maintain that larger hospital systems will be better equipped to make investments in quality measurement and improvement. While this notion is attractive, there is little evidence to suggest that smaller institutions cannot make the investments needed to make care better. Quality improvement does not necessarily depend on expensive technologies but rather results from engaged leadership that prioritize quality and works to achieve better care. Many quality improvement interventions, such as checklists, are relatively inexpensive, although they require a commitment to effective implementation, data collection, and focusing on monitoring and evaluation.

Thomas T. Tsai & Ashish K. Jha, *Hospital Consolidation, Competition, and Quality: Is Bigger Necessarily Better?*, 312 *JAMA* 29, 29–30 (2014) [hereinafter "Tsai and Jha, Is Bigger Necessarily Better"]. This article is attached to this public comment as Attachment 6.

[211] Application at 9.

will be able to enforce. Notably, St. Mary's already provides a host of community wellness and outreach programs,[212] and there is no evidence that the cooperative agreement is needed to continue these programs or offer new programs.

Finally, the Applicant claims that after the acquisition it will consolidate certain services at one hospital or the other. The Applicant claims that the medical literature supports the proposition that this consolidation will improve outcomes, as higher volume is associated with better health outcomes across a wide range of procedures and conditions.[213] Dr. Romano confirms that there are several problems with this line of argument. First, there are important reasons for skepticism that the consolidations will ever occur. Second, Dr. Romano's review of the research literature concludes that the available evidence does not support a general "volume-outcome" relationship for all procedures and services. Rather, the evidence is strongest for certain specific (usually complex) procedures and services, many of which are already consolidated at either Cabell or St. Mary's. For many other services, no consolidation is proposed. Finally, it should be noted that service-line consolidations can affect other services, and that consolidation claims should be scrutinized to ensure that any cognizable benefits are not offset by the cost of consolidation and reductions of efficiency in other services.[214] Thus, little clinical benefit could be expected from any planned consolidation of clinical services.

C. Enhancement of Population Health Status Consistent with the Health Goals Established by the Authority

The Applicant claims that the proposed cooperative agreement will enable healthcare delivery in the Huntington community to move towards more efficient and integrated population health management by creating a single health system that will be better able to coordinate care. While population health management is a worthwhile goal, the Applicant has put forth no concrete plans by which the cooperative agreement will achieve population health management goals. Nor has the Applicant articulated why these goals cannot be achieved if the hospitals remained independent or found alternative partners.

The Applicant claims that the AVC includes a commitment by the parties to developing "population health goals." However, the AVC provides no details regarding the merging parties' plans for population health management. It commits the parties to submit to the West Virginia Attorney General a "Statement of Proposed Activities" that will include "Population Health Goals, including Quantitative Benchmarks that may be used to assess whether those goals have been met."[215] In turn, the AVC defines "Population Health Goals" as "those goals incorporated into a community health needs assessment as required by the Affordable Care Act."[216] But nothing in the AVC provides any detail regarding the specific population health goals the parties will pursue, how they will go about pursing them, or a timeframe for pursing them. Thus, there are no concrete plans for the Authority to enforce regarding population health management.

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[212] *See, e.g.*, St. Mary's Medical Center, "Community Wellness," https://www.st-marys.org/centers-services/wellness/.
[213] Application at 9.
[214] Dafny and Lee, The Good Merger at 2078.
[215] AVC at 11.
[216] AVC at 4.

Further, the goals of population health management are best achieved through coordination across the *vertical* continuum of care, i.e., across physicians, acute-care hospitals, and post-acute providers.[217] Put another way, the emphasis is on coordination among organizations that provide *different* services to the *same* patient. The Applicant agrees—its application states that "[d]elivering care using a team of coordinated, aligned providers *at all levels of care*, and communicating and tracking care through a single EHR, provides the cornerstones for implementing PHM."[218] But the proposed cooperative agreement contemplates the *horizontal* merger of two acute-care hospitals in Huntington, both of which provide the *same* services to *different* patients.[219] Thus, this specific cooperative agreement will do little to further the aim of greater coordination for the purposes of population health management. And even if coordinating care between Cabell and St. Mary's leads to significant quality benefits, there are ways to accomplish that short of an acquisition, such as through partnerships or collaborations. There is also evidence that other health care systems, including single hospitals no larger than Cabell and St. Mary's, can engage in population health management and risk-based contracting on their own, in communities comparably sized to Huntington.[220]

D. Preservation of Hospital Facilities in Geographical Proximity to the Communities Traditionally Served By Those Facilities to Ensure Access to Care

The Applicant does not directly address this statutory goal, but instead claims that the combined hospitals will continue to provide support to small community hospitals—including the provision of tertiary services, training and educational programs—as well as support for the Marshall University School of Medicine, and air transportation capabilities.[221] But the application does not articulate any reason why these programs were at risk without the proposed cooperative agreement or demonstrate that the proposed cooperative agreement will improve access to these programs. In fact, the application repeatedly states that the combined entity will

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[217] *See, e.g.*, CMS, *Comprehensive Care for Joint Replacement Model*, https://innovation.cms.gov/initiatives/cjr ("This model tests bundled payment and quality measurement for an episode of care associated with hip and knee replacements to encourage hospitals, physicians, and post-acute care providers to work together to improve the quality and coordination of care from the initial hospitalization through recovery."); Rural Policy Research Institute, *Medicare Value-based Payment Reform: Priorities for Transforming Rural Health Systems*, Nov. 2015, http://www.rupri.org/wp-content/uploads/FORHP-comments-km-DSR-PANEL-DOCUMENT_PRD_Review_112315.clean-4_sn-3.pdf, at 9 (rural providers need to develop care integration models that "encompass the full continuum of care, including skilled nursing, nursing facility, home health, and home- and community-based social support services"); Health Research & Education Trust, *Managing Population Health: The Role of the Hospital*, Apr. 2012, http://www.hpoe.org/Reports-HPOE/managing_population_health.pdf, at 11 ("Collaborations with other sites of care such as clinics, long-term care providers, urgent care centers, and *even* other hospitals can ensure that the population is receiving the appropriate level of care.") (emphasis added).

[218] Application at 7 (emphasis added).

[219] It is important to note that this does not mean that all vertical health care mergers provide meaningful benefits in terms of coordinated care delivery. The point is that horizontal mergers among organizations that provide mostly the same services are particularly unlikely to do so.

[220] *See* Tsai and Jha, Is Bigger Necessarily Better at 29 (explaining claims that mergers lead to greater clinical integration are overstated because "consolidation is not integration. Clinical integration requires meaningful data sharing, systems for effective handoffs, and streamlined care transitions. These processes can be achieved through other mechanisms, such as participating in health information exchanges.").

[221] Application at 13.

merely continue doing what the hospitals are already doing separately today.[222] Furthermore, there is no evidence that either hospital was in financial trouble, planned to close facilities, planned to move facilities, or otherwise planned to decrease geographic proximity to the community it services. Thus, the proposed cooperative agreement does nothing to advance this statutory goal.

E. Gains in the Cost-Efficiency of Services Provided by the Hospitals Involved

The Applicant claims that the proposed cooperative agreement will result in cost savings. It cites The Camden Group's BPOE, which estimated annual recurring cost savings arising from the proposed cooperative agreement.[223] The BPOE was admitted into evidence and relied on by Cabell at the CON hearing.[224] After that hearing, however, the Applicant had Lisa Ahern of Deloitte Consulting LLP prepare a new efficiencies analysis (the "Deloitte Report"), which estimates merger-specific savings resulting from the proposed cooperative agreement.[225] The Applicant has withheld much of the information regarding its cost savings claims from public view, but FTC staff can provide an overview of the numerous problems plaguing the Applicant's claims.

Although the Application references the Deloitte Report, it fails to acknowledge that the Deloitte Report is a major departure from the BPOE. Due to the numerous differences between the two analyses, the Authority should be wary of relying on either analysis in evaluating the proposed cooperative agreement. The Deloitte Report uses entirely different methodologies to project cost savings, and it makes different recommendations in several significant areas. This stark departure from the BPOE is unsurprising, given that the BPOE relies heavily on speculative and unsubstantiated estimates of cost savings. Further, the merging parties acknowledge that the BPOE did not estimate *merger-specific* cost savings. But the Merger Guidelines instruct that only merger-specific efficiencies should be credited, and, we respectfully submit, that is the standard the Authority should apply in evaluating the proposed cooperative agreement.[226] As a result, the two estimates are significantly different, which raises questions about the reliability of these estimates.

Even the Deloitte Report's cost savings estimate rests on speculation and, in many important areas, is unsupported by ordinary-course business documents demonstrating that the claimed savings are likely to be achieved. Further, the Deloitte Report provides no evidence or analysis showing that significant components of its savings estimate, components that do not appear to rely on geographic proximity or on any other factors unique to these two hospitals, could not be achieved through an alternative transaction or by the two hospitals independently. Nor does it properly account for significant offsetting costs. Dr. Respess's expert analysis shows that there are no significant cognizable net cost savings to be achieved by the cooperative agreement. Notably, the merging parties have only provided the Authority with a brief summary

[222] Application at 13.
[223] Application at 10.
[224] Application at 10.
[225] Application at 10.
[226] Merger Guidelines § 10.

of the Deloitte Report's claims.[227] They have not provided the Authority with evidence or analysis that would substantiate the Deloitte Report's claimed cost savings or demonstrate that they are indeed merger-specific. Nor have the merging parties provided any evidence that their estimates fully account for any offsetting costs that must be incurred to obtain the claimed cost savings, as the Merger Guidelines require.[228]

F. Improvements in the Utilization of Hospital Resources and Equipment

The Applicant claims that the proposed cooperative agreement will enable the two hospitals to avoid purchasing "unnecessarily duplicative equipment" because each hospital will no longer have to acquire "costly equipment to compete with the other."[229] But the Applicant provides no evidence regarding how much "unnecessarily duplicative equipment" the hospitals are separately purchasing today. Nor has it identified the specific investments that it believes to have been wasteful or duplicative. Consequently, there is no way to assess how much the merging parties will save as a result of the cooperative agreement, and thus no way to weigh these savings against the likely harm to competition resulting from the cooperative agreement. And, perhaps more importantly, the hospitals have not demonstrated how or why this spending is wasteful or duplicative, rather than evidence of beneficial competition that improves quality, access to care, and patient satisfaction. Indeed, any significantly costly equipment would have required CON approval; if the expense was incurred by Cabell or St. Mary's, it would have been pursuant to a determination of need in the community for the equipment and a CON approval.

The Applicant further claims that the proposed cooperative agreement will result in significant savings by combining the hospitals' purchasing power and enhancing each hospital's access to necessary capital. But there is nothing merger-specific about these claims. St. Mary's could enhance its purchasing power or access to capital through any alternative acquisition. In any case, the Applicant provides no evidence or estimate regarding the magnitude of these claimed savings, so it is not possible to weigh them against the likely harm to competition resulting from the cooperative agreement.

G. Avoidance of Duplication of Hospital Resources

The Applicant claims that Cabell intends to implement the BPOE's recommendations in order to eliminate unnecessary duplication of hospital services, and it notes that the BPOE's recommendations are projected to result in cost savings. But, for the reasons outlined in Section VI.E above, the Authority should not rely on the BPOE in evaluating whether the proposed cooperative agreement will eliminate unnecessary duplication of hospital resources. The BPOE's estimates are largely speculative and unsubstantiated. Further, the merging parties admit that the BPOE's claimed efficiencies are not merger-specific, as the Merger Guidelines require. As noted previously, the merging parties put forth a separate analysis, the Deloitte Report, which claims to estimate merger-specific cost savings. The Deloitte Report uses entirely different methodologies to estimate cost savings and arrives at a significantly different estimate.

[227] Application Exhibit G-1.
[228] Merger Guidelines § 10.
[229] Application at 14.

As noted above, the Applicant has only provided the Authority with a brief summary of the Deloitte Report's conclusions, with no evidence or analysis explaining why its cost savings estimates are substantiated, merger-specific, or reduced to account for offsetting costs. A deeper examination of the Deloitte Report reveals that its analysis is speculative and fails to demonstrate why many of the claimed cost savings are merger-specific. Further, the Applicant has not accounted for the benefits of their independent investments, such as increased access to care, increased patient satisfaction, shorter wait times, and assurance of adequate capacity to maintain access to care, which would be eliminated by the proposed cooperative agreement.

H. Participation in the State Medicaid Program

The Applicant makes no claim that the proposed cooperative agreement will facilitate hospital improvement in the state Medicaid program. The application notes that both hospitals have participated and will continue to participate in the state Medicaid program. Thus, the cooperative agreement does nothing to advance this statutory goal.

I. Constraints on Increases in the Total Cost of Care

The Applicant argues that the AVC and the WVCAL's rate regulation provisions will prevent increases in the cost of care. But these conduct restrictions are unlikely to prevent anticompetitive price increases. As discussed in Section V.A above, the AVC's price control provisions are deeply flawed. The AVC limits hospital rate increases to the benchmark rates calculated by the Authority for purposes of rate regulation—but West Virginia recently abolished the Authority's rate review function, making it unclear how this provision will operate. The AVC's margin ceiling provision is easily circumvented. The AVC provision preventing the combined entity from terminating evergreen contracts merely preserves the status quo while the cooperative agreement eliminates competition, which thereby effectively prevents health plans from negotiating more favorable terms for contracts. Finally, the AVC is a temporary agreement—once it expires, the combined entity's ability to raise prices will increase as a result.

Similarly, as discussed in Section V.B above, the rate regulation established by the new cooperative agreement statute will be unable to prevent significant price increases. W. Va. Code § 16-29B-28(g)(1)(D) merely creates a ceiling on rate increases, giving the combined entity room to exercise its enhanced leverage and increase rates. W. Va. Code § 16-29B-28(i)(1)(B) gives the West Virginia Attorney General the power to reject reimbursement agreements that are "anti-competitive"—but provides no guidance as to what constitutes an "anti-competitive" reimbursement agreement. Thus it is impossible to predict how this provision will be implemented going forward, or whether it will provide any meaningful restraint on anticompetitive price increases.

VII. CONCLUSION

In conclusion, FTC staff respectfully submits that the Authority should deny the proposed cooperative agreement, as the reduction in competition resulting from the proposed cooperative agreement far outweighs the claimed benefits.

Respectfully submitted,

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Attachment 1

SUMMARY OF OPINIONS

EXPERT REPORT OF CORY S. CAPPS, PHD

February 17, 2016

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I. Summary of opinions

(1) The FTC has asked me to analyze the likely effects of the proposed acquisition of St. Mary's Medical Center (St. Mary's) by Cabell Huntington Hospital (CHH) on competition and consumers.

(2) CHH and St. Mary's are the only two hospitals in the area including and surrounding Huntington, West Virginia. Although there are some differences in the services they offer, both are general acute care hospitals that offer a broad array of inpatient and outpatient services. Moreover, St. Mary's and CHH are direct and strong competitors—each is the other's closest competitor. CHH's proposed acquisition of St. Mary's would eliminate that competition. Because other hospitals are not comparably close competitors to the two Huntington hospitals, the likely ultimate effect of CHH's acquisition of St. Mary's will be to substantially lessen competition, both with respect to inpatient services and to outpatient surgical services.

(3) Economic research has established that competition among hospitals promotes higher value healthcare, meaning lower prices and higher quality. The prices that hospitals receive from commercial insurers are determined in negotiations between hospitals and insurers, a process commonly referred to as "selective contracting." When an insurer and a hospital reach a negotiated agreement, the hospital will be included in the insurer's "provider network." Insurers provide patients with financial incentives to use in-network providers for most services, so in-network status typically provides the hospital with a substantially higher volume of patients from an insurer. The threat of exclusion from an insurer's provider network is one key factor that limits the prices that a hospital can demand. The stronger the competition among hospitals, the more powerful and credible the threat of network exclusion, and the lower prices are likely to be. Through the mechanism of selective contracting, competition among hospitals promotes higher value healthcare by creating an incentive for hospitals to negotiate lower prices with insurers.

(4) In addition, competition provides hospitals with an economic incentive to provide high quality care, whether through efforts to improve clinical quality, to improve patient satisfaction, to improve other aspects of service, or to pursue innovative healthcare delivery models. Higher quality provides two categories of competitive advantages to hospitals. First, all else equal, a higher-quality hospital will be able to negotiate higher prices in selective contracting negotiations with commercial health insurers, because insurers' customers—firms and health plan enrollees—will place greater value on a network that includes a higher quality hospital. Second, by offering higher quality, a hospital can expect to receive a higher volume of patients. This is true for commercially insured patients and for patients covered by other programs such as Medicare, Medicaid, and TRICARE. Both incentives to provide high quality care are generally stronger when competition among hospitals is stronger. As a

result, all else equal, a significant reduction in the degree of competition a hospital faces will lower its incentive to invest in providing higher quality care.

(5) The conclusion that the proposed acquisition will substantially lessen competition is based on multiple, consistent analyses, which I place into two broad categories: structural and direct. In antitrust cases, the term "structural analysis" refers to the process of formally defining relevant product and geographic markets and drawing conclusions regarding likely competitive effects based on market shares and concentration within those defined markets. Direct analysis entails evaluating the likely competitive effects of a proposed combination based on economic modeling and econometric analysis, as well as testimony and evidence in contemporaneous business documents. Both structural analysis and direct analysis are standard and widely used to analyze competition, including competition among hospitals. The two approaches are complementary and, in this case, lead to the consistent conclusion that CHH's acquisition of St. Mary's will lessen competition and harm consumers.

(6) The Respondents have entered into two agreements that they claim will, in conjunction with "rate review" of hospitals' list charges (but not actual, negotiated prices) by the West Virginia Health Care Authority (WVHCA), prevent the combined entity from increasing price post-acquisition.[1] The first is a Letter of Agreement (LOA) between CHH and Highmark West Virginia (HMWV), the largest health insurer in West Virginia, [redacted]. The second is the Assurance of Voluntary Compliance (AVC) between CHH, St. Mary's, and the West Virginia Attorney General (WVAG).

(7) My methodology for evaluating the effects of the merger in the presence of these agreements proceeds as follows. First, I evaluate the effects of the acquisition on competition and consumers in the absence of the LOA and the AVC. From this evaluation, I conclude that the merger is highly likely to substantially lessen competition and harm consumers. I then examine whether the LOA and the AVC, along with WVHCA rate review, would be effective in preventing harm—the harm from the substantial lessening of competition caused by the acquisition—from materializing. I conclude

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1 [redacted]

All hospitals maintain a set of list charges, known as the "chargemaster," for each good or service that they offer. List charges are also commonly referred to as billed charges. Commercial insurers, when they enter into a contract with a hospital, negotiate pricing that reflects a discount relative to list charges. This is akin to the difference between the sticker price of a car and the actual purchase price.

The WVHCA reviews the "average [list] charge per discharge and average [list] charge per visit ('allowed rates')" for each hospital annually in West Virginia. It does not set the actual prices paid by commercial insurers; those prices are the result of negotiations between hospitals and insurers. [redacted]; PX0225 (Declaration of [redacted] (West Virginia Health Care Authority), Sept. 1, 2015, ¶¶ 4, 11–13) [hereinafter PX0225 ([redacted] (WVHCA) Decl., Sept. 1, 2015)]; West Virginia Health Care Authority, "Rate Review," http://www hca.wv.gov/ratereview/Pages/default.aspx.

that, while the proposed remedies could reshape the ways in which harm to consumers manifests, substantial harm remains likely.

I.A. CHH and St. Mary's will have a 76% combined inpatient market share, far above the threshold at which mergers are presumed likely to enhance market power

(8) CHH and St. Mary's each provide a wide range of general acute care (GAC) inpatient hospital services, which are acute care hospital services that require at least an overnight stay. CHH and St. Mary's are the only GAC hospitals located in Huntington or the surrounding Four County Area, which consists of the West Virginia counties of Cabell, Wayne, and Lincoln, as well as Lawrence County in Ohio. As of July 1, 2014, the Four County Area had a total population of about 220,000.[2] In 2014, among commercially insured patients residing in that area and receiving an acute inpatient service offered by both hospitals (i.e., services over which CHH and St. Mary's compete directly), CHH accounted for about 41% of discharges and St. Mary's accounted for about 35% . The combined entity would have a post-acquisition market share above 76% . See Figure 1.

(9) Of the remainder, King's Daughters Medical Center (KDMC) is the only other hospital with more than a 5% share of patient discharges. With a share of about 9.1%—less than one-third of CHH or St. Mary's alone—KDMC is a distant third. The remaining 15% is accounted for by a combination of Our Lady of Bellefonte Hospital (OLBH), Charleston Area Medical Center (CAMC), and various other hospitals that each account for a very small percentage of admissions of patients from the Four County Area. None of these other hospitals is comparable in terms of market share to CHH or St. Mary's. As I will show, testimony, the Respondents' own strategic documents, and econometric analysis also confirm that the outlying hospitals are not close substitutes to the two Huntington hospitals.

(10) Figure 1 also reports the level of the Herfindahl-Hirschman Index (HHI), a standard and widely used measure of market concentration, before and after the acquisition. Under the DOJ and FTC *Horizontal Merger Guidelines*, mergers that increase the HHI by more than 200 points and result in a post-merger HHI above 2,500 are (rebuttably) presumed "likely to enhance market power."[3] In this

[2] This includes 97,109 residents of Cabell County, 41,122 residents of Wayne County, 21,561 residents of Lincoln County, and 61,623 residents of Lawrence County (Ohio). US Census Bureau, "QuickFacts Beta," http://www.census.gov/quickfacts/table/PST045214/54011,54099,54043,39087.

[3] DOJ and FTC, *Horizontal Merger Guidelines,* issued Aug. 19, 2010, § 5.3, *available at* http://www.justice.gov/atr/public/guidelines/hmg-2010 html [hereinafter *Merger Guidelines*]. The HHI is defined as the sum of the squared market shares of the firms in a relevant market. Higher values of the HHI indicate greater market concentration, i.e., less competition. For example, a market with a monopolist, whose market share is 100%, has an HHI of $100^2 = 10{,}000$, the highest possible value. In the case of a duopoly in which the firms split the market, so that each firm's share is 50%, the HHI equals $(50^2 + 50^2) = 5{,}000$. The change in the HHI can be calculated as two times the

case, the acquisition will cause the HHI to increase from an already high level of 3,049 to 5,932, a 2,883 point increase. Thus, the post-acquisition HHI is more than double the level at which a merger is presumed likely to enhance market power. This HHI increase and post-acquisition HHI are comparable to or well above the levels at which courts and the Federal Trade Commission (Commission) have determined that mergers or acquisitions are unlawful under Section 7 of the Clayton Act.[4] In addition, the combined entity would control the only two GAC hospitals physically located within the Four County Area.

Figure 1. The proposed acquisition would substantially increase concentration in the already highly concentrated Four County Area

Hospital	Share of discharges		Share of inpatient days	
	Pre-acquisition	Post-acquisition	Pre-acquisition	Post-acquisition
Cabell Huntington Hospital	41.3%	76.2%	35.7%	75.9%
St. Mary's Medical Center	34.9%		40.2%	
King's Daughters Medical Center	9.1%	9.1%	8.8%	8.8%
Our Lady of Bellefonte Hospital	4.9%	4.9%	4.7%	4.7%
Charleston Area Medical Center[A]	3.7%	3.7%	4.1%	4.1%
All other	6.1%	6.1%	6.4%	6.4%
HHI	3,049	**5,932**	3,011	**5,879**
Change in HHI		**+2,883**		**+2,868**

Source: 2014 hospital discharge data for KY, OH, and WV.

Notes: Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in KY, OH, or WV, in overlapping diagnoses related groups (DRGs) offered by CHH and St. Mary's (See Appendix F for the definition of overlapping DRGs). The sample excludes newborns, transfers, court-ordered admissions, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis.

[A] Includes all CAMC-owned hospitals (CAMC General, CAMC Memorial, CAMC Teays Valley, and CAMC Women and Children's).

(11) The market shares and HHIs reported above are derived from my analysis of the relevant product market and relevant geographic market in which CHH and St. Mary's compete. Below, I summarize my analyses of relevant markets in this case; I provide full details in the body of this report.

product of the merging firms' market shares; for example, if a 40% share and a 30% share firm merge, the HHI increase is $2 \times 40 \times 30 = 2{,}400$.

4 *Saint Alphonsus Med. Ctr.-Nampa v. St. Luke's Health Sys.*, 778 F.3d 775, 786 (9th Cir. 2015) (post-merger HHI of 6,219, with an increase of 1,607); *ProMedica Health Sys. v. FTC*, 749 F.3d 558, 569 (6th Cir. 2014) (for general acute-care hospital services, the post-merger HHI was 4,391, with an increase of 1,078); *FTC v. OSF Healthcare System*, 852 F. Supp. 2d 1069, 1079–80 (N.D. Ill. 2012) (post-merger HHI of 5,406, with an increase of 2,052). *See also*, *In re ProMedica Health Sys., Inc.*, No. 9346, 2011 FTC LEXIS 294 (F.T.C. Dec. 12, 2011).

I.A.1. Inpatient general acute care hospital services sold to commercial health insurers is a relevant product market

(12) The majority of my analysis is focused on the likely effects of the proposed acquisition on the market for the sale of inpatient general acute care (GAC) hospital services to commercial health insurers and their members. This inpatient GAC services market has been widely recognized by health economists and courts as a relevant product market in which to analyze hospital mergers.[5]

(13) To define a relevant market, the FTC, DOJ, and courts typically apply the "hypothetical monopolist test." In the context of determining whether a candidate set of goods or services ("products") constitutes an appropriate relevant market, the test evaluates whether "a hypothetical profit-maximizing firm . . . that was the only present and future seller of those products ('hypothetical monopolist') likely would impose at least a small but significant and non-transitory increase in price ('SSNIP') . . . ."[6] The basis for focusing on whether a price increase would be profitable for a hypothetical monopolist is as follows: if a SSNIP would *not be profitable*, the candidate market must exclude products that impose a substantial competitive constraint on (i.e., are close substitutes for) the included products. If so, the candidate product market should be expanded and the test repeated. Once the hypothetical monopolist test indicates that a SSNIP would be profitable, the excluded products are those that do not materially constrain the pricing of the included products. At that point, the market definition exercise is complete.

(14) Each individual acute inpatient medical service, or the inpatient treatment of each individual acute medical condition, could, in theory, by repeated application of the hypothetical monopolist test, be identified as a distinct relevant product market. After all, a patient requiring a hip replacement cannot receive an appendectomy instead. Although in principle it would be possible to define relevant product markets and analyze inpatient hospital competition on a service-by-service basis, when competitive conditions are sufficiently similar for most offered services, it is appropriate and more analytically straightforward to analyze competition across the full "cluster" of inpatient GAC services.[7]

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5 *See, e.g., In re ProMedica Health Sys., Inc.*, No. 9346, 2011 FTC LEXIS 294, **68–71, *459 (F.T.C. Dec. 12, 2011); *FTC v. ProMedica Health Sys.*, No. 3:11 CV 47, 2011 WL 1219281, ¶ 68 (N.D. Ohio, Mar. 29, 2011); *ProMedica Health Sys. v. FTC*, No. 12-3583, 749 F.3d 559, 566–67 (6th Cir. 2014); *FTC v. OSF Healthcare Sys.*, 852 F. Supp. 2d 1069, 1075–1076 (N.D. Ill. 2012); *United States v. Rockford Memorial Corp.*, 717 F. Supp. 1251, 1259–1260 (N.D. Il. 1989); *United States v. Rockford Memorial Corp.*, 898 F.2d 1278, 1284 (7th Cir. 1990); and *In re Evanston Northwestern Healthcare Corp. and ENH Med. Group*, No. 9315, Opinion of the Commission by Chairman Majoras, 56–57 (Aug. 6, 2007) [hereinafter *In re Evanston*, Opinion of the Commission (Aug. 6, 2007)]. *See also*, American Bar Association, *Antitrust Health Care Handbook*, 4th ed. (Chicago: ABA, 2010), ch. 3.

6 *Merger Guidelines*, § 4.1.1.

7 As I detail in section III.F, St. Mary's and CHH largely offer overlapping inpatient GAC services: over 90% of commercially insured patients treated at one of the two hospitals receive a service offered by *both* hospitals.

(15) Outpatient services are not properly included in the same relevant product market as inpatient GAC services. Although some services are offered on both an inpatient and outpatient basis, there is little *economic* substitutability between inpatient and outpatient services, because the decision to treat a given condition on an inpatient or outpatient basis is primarily driven by clinical considerations, rather than price. Because clinical considerations are the primary, if not sole, determinant of whether patients are treated on an inpatient or outpatient basis, neither health plans nor patients are likely to switch to outpatient services in response to an inpatient services SSNIP. Therefore, substitution to outpatient services would not make a price increase of 5% to 10% by a hypothetical monopolist of all inpatient services (i.e., a SSNIP) unprofitable, and, therefore, outpatient services should not be included in the same product market as inpatient services.

(16) Another reason for analyzing outpatient services separately from inpatient services is that the competitive structure of the outpatient services market, particularly the number and identity of competitors, typically differs from the competitive structure of the inpatient GAC services market. For example, outpatient services are also provided by outpatient facilities, such as Three Gables Surgery Center.[8] As a result, the rationale for clustering inpatient services together does not indicate that outpatient services should be clustered with inpatient GAC services.

(17) In addition to analyzing acute inpatient services sold to commercial health insurers, I also analyze the effects of the proposed acquisition on a second relevant product market, the sale of outpatient surgical services to commercial health insurers. The rationale for clustering outpatient surgical services mirrors that for clustering inpatient services. I summarize my analysis of outpatient surgery competition in section I.G.

I.A.2. The relevant geographic market is no larger than the Four County Area around Huntington

(18) The relevant geographic market in which to analyze the effects of the proposed acquisition on market shares and market concentration is no broader than the area comprising the three West Virginia counties of Cabell, Wayne, and Lincoln, as well as Lawrence County, Ohio (the "Four County Area"). Both CHH and St. Mary's routinely analyze this area in their ordinary course of business. For example, a [redacted]

[8] Three Gables Surgery Center has four operating rooms and offers "outpatient surgical services in the fields of anesthesiology, ENT (ear, nose, and throat), gastroenterology, orthopedic surgery, pain management, plastic and reconstructive surgery, and podiatry." It also renders a "limited set of inpatient services" to a small number of patients. PX0211 (Declaration of [redacted] (Three Gables), June 24, 2015, ¶ 2) [hereinafter PX0211 ([redacted] (Three Gables) Decl., June 24, 2015)]; Three Gables Surgery Center, "About Us," http://www.threegablessurgery.com/aboutus.cfml. Three Gables is managed by St. Mary's Medical Management, which is also a minority owner of the center. PX0211 ([redacted] (Three Gables) Decl., June 24, 2015, ¶¶ 11–12).

[redacted]

(19) The hypothetical monopolist test, described in the previous section, also shows that the Four County Area is an appropriate relevant geographic market. The key reason is that, in most circumstances, patients have a strong preference for receiving care at a local hospital. This preference is apparent in a wide variety of evidence in this case, including testimony, documents, and my econometric analyses. Consider a demand for a 5% to 10% price increase, or SSNIP, by a hypothetical monopolist of all GAC hospitals in the Four County Area. A health insurer active in the Four County Area would need to reach an agreement with the hypothetical monopolist in order to offer its customers access to a local hospital on an in-network basis. If the health insurer does not give in to the hypothetical monopolist's demand for a SSNIP, then *all* of the insurer's Four County Area enrollees would either have to leave their home area entirely for *all* GAC inpatient services (contrary to consumers' strong preference for local care) or pay much more out-of-pocket for out-of-network care (contrary to consumers' financial interests). Either way—high patient out-of-pocket costs or patients having to leave their local area for all GAC inpatient services—the result of not accepting the SSNIP would be a health plan product that is unattractive to the large majority of employers and enrollees in the Four County Area. This explains why an insurer would instead give in to a demand for a 5% to 10% SSNIP by a hypothetical monopolist of all Four County Area hospitals: the alternative of having no local hospital is even less attractive. Because insurers would give in to the SSNIP, the SSNIP would be profitable and the Four County Area is, therefore, an appropriate relevant geographic market.

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9 [redacted]

10 [redacted] CHH and St. Mary's also sometimes analyze market shares in broader geographic areas, often referenced as "secondary" service areas.

11 [redacted]

12 [redacted] One St. Mary's executive testified that the hospital's primary service area consisted of [redacted] PHS is the sole member of St. Mary's, meaning that PHS is the entity that controls St. Mary's.

(20) Market participants, including executives from CHH and St. Mary's, clearly recognize that, for most services, patients strongly prefer to obtain care from local providers. For example, [redacted]

(21) Figure 2 illustrates patients' strong preference for local healthcare providers (here, hospitals). Each pie chart in Figure 2 corresponds to a zip code located within the Four County Area (shaded in beige) and a broad set of surrounding zip codes. The shading of the pie charts indicates the extent to which commercially insured patients in each zip code selected (1) a hospital in Huntington (i.e., CHH or St. Mary's), (2) a hospital in Charleston, (3) a hospital in Ohio, (4) a hospital in Kentucky, or (5) some other hospital. The size of each pie chart is proportional to the total number of inpatient discharges from each zip code.

(22) The general preference for local care is evident in the visual distinctions between the hospital choices of patients in the Four County Area (i.e., the relevant geographic market) and patients in the surrounding areas. In the area including and around the City of Huntington, *nearly all* patients select a Huntington hospital, as indicated by red and pink shading. In and around the City of Charleston, the large majority of patients selects a hospital in Kanawha or Boone County, as indicated by green shading. In Kentucky, most patients choose a Kentucky hospital, as indicated by light blue shading. In the areas of Ohio north of Lawrence County, a majority of patients opts for an Ohio hospital, as indicated by yellow shading. This pattern is a direct reflection of patients' general, strong preference for local hospitals. That is, if patients were relatively indifferent between nearby hospitals and hospitals located 25 or 50 minutes away, then the shading of the various pie charts would consistently reflect a more even mixture of blue, red, green, and yellow. However, with the exception of a small number of zip codes on the fringes of the Four County Area, they do not.[15] The overall pattern shows a geographical separation between the four areas and highlights patients' preference for local providers.[16]

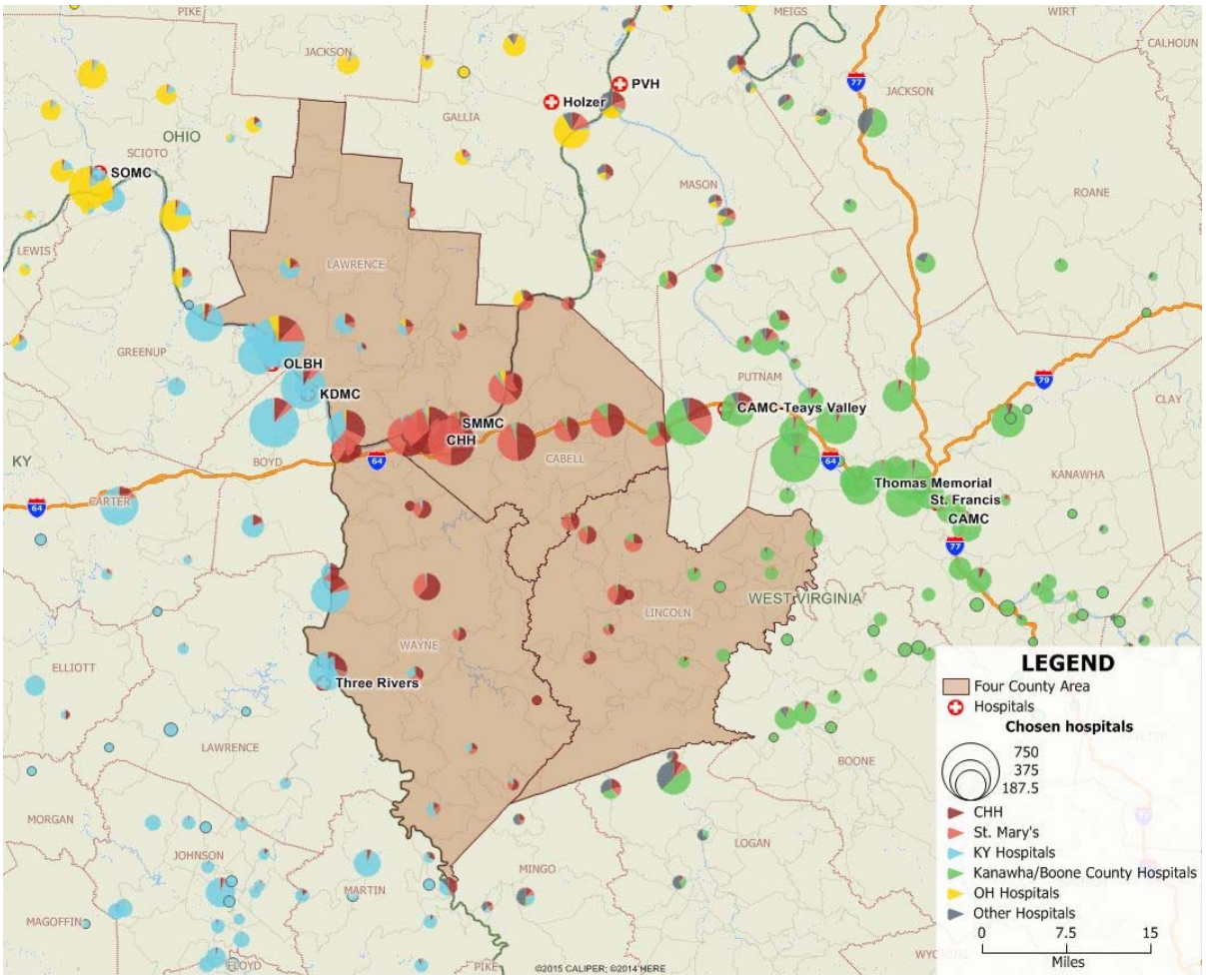
[13] [redacted]

[14] [redacted]

[15] In fact, there are no zip codes with significant amounts of blue, red, *and* green shading. Instead, a small number of zip codes around the outer boundary of the Four County Area reflect a split between two geographic areas. This is entirely consistent with the conclusion that patients prefer local providers. Only the minority of patients in intermediate areas that are similarly distant from two cities show a pattern of splitting their admissions. If one of the three urban areas—Ashland, Huntington, or Charleston—is closer to a given zip code than the other two, then the large majority of patients from that zip code will select a hospital in the closer area.

[16] There are some minor exceptions in the fringes of the Four County Area, such as in eastern Lincoln County. My inclusion of these zip codes in the relevant geographic market is conservative in that it results in lower estimated market shares.

Figure 2. Locations of chosen hospitals, by patient zip code



Source: 2014 hospital discharge data for KY, OH, and WV.

Notes: Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in KY, OH, or WV, in overlapping DRGs offered by CHH and St. Mary's (See Appendix F for the definition of overlapping DRGs). The sample excludes transfers, court-ordered admissions, newborns, patients with ungroupable DRGs 981–999, and records with gender or age inconsistent with the diagnosis.

(23) Figure 2 also shows that my analysis of market shares and concentration is not qualitatively sensitive to the precise boundaries of the relevant geographic market. If a small number of peripheral zip codes were added or removed, market shares would not change significantly. For example, zip codes in the easternmost part of Lincoln County could be removed, and/or the westernmost zip codes in Putnam County could be included, and market shares would remain similar.

(24) My basic conclusion that the combined entity would have a very high market share is robust to any economically sound alternative market definition. Indeed, even if the market were expanded to include Ashland, Kentucky—which it should not be, as the Ashland hospitals are not reasonably interchangeable with the two Huntington hospitals—the combined post-acquisition market share

would still exceed 60%. Market shares would only decline significantly if the geographic market were improperly expanded to include both Ashland, Kentucky, and Charleston, West Virginia. The core reason these areas are properly excluded from the relevant geographic market is that patients strongly prefer local healthcare providers. From the perspective of an insurer seeking to offer an attractive network to employers and individuals in the Four County Area, providers in outlying areas (i.e., outside the Four County Area) are not reasonably interchangeable with local providers, and so those outlying areas should not be included in the relevant geographic market.

(25) An insurer that attempted to market a network without *any* local hospital would be at a substantial competitive disadvantage: it would be offering potential customers a product that requires *all* patients to leave their local areas for *all* inpatient hospital services (or to face much higher payments for out-of-network care). Health insurers have testified that they could not offer a viable health plan to Huntington-area residents if their network lacked both Huntington hospitals, CHH and St. Mary's.[17] For example, [redacted] at Aetna, stated, "Aetna would not have a viable, marketable health insurance product to offer Huntington-area residents if our network excluded both Cabell and St. Mary's, even if that plan were significantly less expensive. To market a viable health insurance product in the Huntington area, we need either Cabell or St. Mary's in our network."[18] This aligns with the empirical evidence showing that relatively few patients leave the Four County Area for inpatient GAC services, and especially so for patients residing in the interior of the Four County Area.

(26) Returning to the SSNIP test, a hypothetical monopolist of all Four County Area hospitals negotiating with area commercial insurers would be able to threaten, if its SSNIP demand were not met, to preclude access to any local hospital on an in-network basis. If the threat were executed, then *all* area enrollees would be forced to leave their home area for inpatient care. Because hospitals located outside the Four County Area are not closely substitutable with the hospitals inside that area, this would result in a very low value health insurance product. Consequently, a commercial insurer would give in to the hypothetical monopolist's demand for a SSNIP rather than force all of its Four County Area enrollees to leave the area for all inpatient services. That is, a hypothetical monopolist of all Four County Area hospitals would be able to profitably impose a SSNIP. Therefore, the Four County Area is a relevant geographic market.

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[17] PX0210 (Declaration of [redacted] (Aetna), June 23, 2015, ¶ 10) [hereinafter PX0210 ([redacted] (Aetna) Decl., June 23, 2015)]; [redacted] PX0203 (Declaration of [redacted] (Cigna), Apr. 27, 2015, ¶ 16) [hereinafter PX0203 ([redacted] (Cigna) Decl., Apr. 27, 2015)]; [redacted].

[18] PX0210 ([redacted] (Aetna) Decl., June 23, 2015, ¶ 10). [redacted]

I.B. Direct analysis of competition between CHH and St. Mary's corroborates the conclusion that the acquisition is likely to substantially enhance market power and harm consumers

(27) The likelihood of anticompetitive effects indicated by the structural evidence on market concentration and market shares is reinforced by a substantial body of direct evidence that the proposed acquisition would substantially lessen competition. By "direct evidence" I mean evidence that (1) provides insight into whether a merger is likely to substantially lessen competition but (2) does not require or depend upon a particular relevant market definition or inferences from market shares and HHIs.

(28) Analytic tools that do not require market definition in order to evaluate the competitive effects of a merger provide an important complement to structural analysis of market shares and concentration. First, in some cases, market participants exist along a continuum such that it is difficult to identify a single, sharp boundary. In these cases, direct analysis provides reliable evidence of a merger's likely competitive effects that does not depend on how the market is defined. Second, it is possible in some cases for market shares and HHIs to change significantly in response to a relatively small change in the defined market. The results of a direct analysis—because they are not based upon a defined market—are not subject to similarly large changes when the boundaries of the relevant market change. Third, when the appropriate boundaries of the relevant geographic market are in debate, the results of direct analyses can inform the question of which boundaries are more appropriate (i.e., whether the boundaries are constructed so as to include sellers who are close substitutes, or reasonably interchangeable, with the merging parties and exclude sellers who are not).[19] Fourth, direct analysis is squarely focused on the central question in a merger case: whether the merging parties are close competitors and whether other firms are sufficiently close competitors to make anticompetitive effects unlikely.

(29) Direct analysis and structural analysis are complementary approaches. Where, as in the case at hand, both approaches generate consistent conclusions, the result is an even greater degree of confidence in those conclusions than either approach would yield by itself.

(30) As noted, direct analysis of competitive effects does not require defining a relevant geographic market in order to evaluate the closeness of competition between CHH and St. Mary's, or the closeness of competition (or lack thereof) between those hospitals and other hospitals such as KDMC and CAMC-Teays Valley. These questions can be answered directly by evaluating documents and

[19] "Evidence of competitive effects can inform market definition, just as market definition can be informative regarding competitive effects. For example, evidence that a reduction in the number of significant rivals offering a group of products causes prices for those products to rise significantly can itself establish that those products form a relevant market. Such evidence also may more directly predict the competitive effects of a merger, reducing the role of inferences from market definition and market shares. Where analysis suggests alternative and reasonably plausible candidate markets, and where the resulting market shares lead to very different inferences regarding competitive effects, it is particularly valuable to examine more direct forms of evidence concerning those effects." *Merger Guidelines,* § 4.

testimony in the record and through econometric analysis of data on the actual hospital choices of patients. Both sources of evidence show that (1) CHH and St. Mary's are, by far, each other's closest substitutes in the eyes of customers (health plans, employers, and patients/enrollees) and (2) other hospitals (all located outside the Four County Area) are not close substitutes for CHH or St. Mary's. The high degree of substitutability between CHH and St. Mary's is a clear indicator that the current competition between them is strong. Combined with the evidence showing that other hospitals are not similarly close substitutes, this provides strong evidence that the proposed acquisition will substantially lessen competition and result in enhanced market power. The likely effects are to substantially lessen both price and quality competition.

I.B.1. Diversion analysis shows that CHH and St. Mary's are close competitors to each other, but other hospitals are not

(31) I use diversion analysis to measure the degree of substitution between CHH, St. Mary's, and hospitals in the surrounding areas. Diversion analysis is a standard tool for evaluating the degree of substitutability among firms.[20] Generally, the diversion from Hospital A to Hospital B is measured as the estimated proportion of Hospital A's patients who, were Hospital A to become unavailable, would choose Hospital B. As the diversion between two firms is higher, those firms are more closely substitutable, meaning they are closer competitors.

(32) As shown in Figure 3, my analysis of diversions for commercially insured inpatient GAC patients residing in a broad area corresponding to a 90-minute drive-time radius around Huntington highlights the close substitution between the two Huntington hospitals:

- If St. Mary's were to become unavailable to its patients, 54% of them would instead select CHH.
- If CHH were to become unavailable to its patients, 48.5% of them would instead select St. Mary's.

[20] "In some cases, the Agencies may seek to quantify the extent of direct competition between a product sold by one merging firm and a second product sold by the other merging firm by estimating the diversion ratio from the first product to the second product . . . . Diversion ratios . . . can be very informative for assessing unilateral price effects, with higher diversion ratios indicating a greater likelihood of such effects." *Merger Guidelines*, § 6.1.

Courts and the Commission have also cited diversion analysis as evidence indicating likely anticompetitive effects. In the FTC's recent challenge to a healthcare provider merger in Idaho, for example, the District Court relied on testimony from the government's economic expert on diversion rations between the two merging providers. *Saint Alphonsus Med. Ctr. – Nampa, Inc. v. St. Luke's Health Sys.*, Nos. 12-cv-560, 13-cv-116 , 2014 WL 407446, at **9–10 (D. Idaho Jan. 24, 2014). Similarly, in a hospital merger case in Ohio, the Commission found that diversion ratios and other record evidence indicated that ProMedica was St. Luke's closest substitute for many customers. *In the Matter of ProMedica Health System, Inc.*, Opinion of the Commission by Commissioner Brill, 46–47, *available at* https://www ftc.gov/sites/default/files/documents/public_statements/promedica-opinion-commission-commissioner-julie-brill/120328promedicaopinion.pdf.

- The next closest substitute to CHH and St. Mary's is KDMC in Ashland, Kentucky. Diversions to KDMC are *less than one-third* of the diversions between the Respondents: 15.2% from CHH to KDMC and 13% from St. Mary's to KDMC.
- Diversions to other hospitals are lower still. Diversion to Teays Valley Hospital and CAMC's three Charleston hospitals, *taken together*, are 13.5% from CHH and 11.8% from St. Mary's. Diversions to the two Thomas Health hospitals, taken together, are about 5%.

(33) These results show that CHH and St. Mary's are close competitors, by far each other's closest competitor.[21] In contrast, all other hospitals are far less close competitors.

Figure 3. Diversion analysis shows that CHH and St. Mary's are each other's closest competitors

Diversions TO	Distance to Huntington in min.	Diversions FROM	
		CHH	St. Mary's
Cabell Huntington Hospital	**4**	**--**	**54.0%**
St. Mary's Medical Center	**7**	**48.5%**	**--**
King's Daughters Medical Center	24	15.2%	13.0%
CAMC (Charleston)	56	11.2%	9.2%
CAMC (Teays Valley Hospital)	36	2.3%	2.6%
Our Lady of Bellefonte Hospital	27	4.3%	3.8%
THS-Thomas Memorial Hospital	49	4.0%	3.3%
Pleasant Valley Hospital	57	1.2%	1.4%
THS-St. Francis Hospital	53	1.1%	1.7%
Holzer Gallipolis	57	1.3%	1.4%
All other hospitals	-	10.9%	9.6%

Source: 2012–2014 hospital discharge data for KY, OH, and WV.

Notes:

[A] Diversions are based on all patients residing within 90 minutes of the Huntington City Hall (i.e., are not limited to Four County Area patients).
[B] Data reflect commercially insured general acute care patients receiving inpatient treatment at short-term acute care hospitals located in KY, OH, or WV. The sample excludes newborns, transfers, court-ordered admissions, patients with ungroupable DRGs 981-999, and records with gender or age inconsistent with the diagnosis.
[C] CAMC (Charleston) includes CAMC's General, Memorial, and Women and Children's hospitals.

(34) Other measures of diversion further highlight the close competition between the two Huntington hospitals. For example, among residents of the Four County Area, diversions between the two hospitals are higher: above 65% in each direction (see [redacted] Figure 22). Thus, nearly two-thirds of area patients who have one Huntington hospital as their preferred hospital have the other Huntington hospital as their second choice. This is as expected, given patients' strong preference for local providers. In contrast, the diversion ratios show that more distant hospitals,

[21] These diversions are relatively high in comparison with diversions in other healthcare mergers and acquisitions that courts in recent years have found to violate Section 7 of the Clayton Act. *See infra* n.414.

such as KDMC and CAMC are less attractive—i.e., not close substitutes for CHH and St. Mary's—for patients who live in areas closer to Huntington.

(35) This diversion analysis is strongly consistent with evidence in the record indicating that CHH and St. Mary's view one another as their closest rivals. For example, in a September 2013 email to Standard & Poor's, Monte Ward, CFO of CHH, described St. Mary's as "**[CHH's] main competitor for all but [CHH's] exclusive services.**"[22] (Emphasis added.) Likewise, [redacted] **CHH is SMMC's [St. Mary's] strongest competitor for market share**."[23] (Emphasis added.) I discuss the direct competition between CHH and St. Mary's in more detail in section VI.C.

I.B.2. Willingness-to-pay analysis confirms that the acquisition will increase bargaining leverage

(36) The lack of local hospital competitors available to insurers post-acquisition highlights the source of increased bargaining leverage that a combined CHH and St. Mary's would obtain. As noted above, within the Four County Area, nearly two-thirds of area residents who have one Huntington hospital as their preferred hospital choice have the other Huntington hospital as their second choice. An insurance product that did not include either CHH or St. Mary's would be very unattractive to patients in the Four County Area: patients either would have to leave the area entirely for *all* GAC inpatient services (contrary to their clear preference for local care in most cases) or pay much more out-of-pocket for out-of-network care (contrary to their financial interests). For employers and individuals in the Four County Area, such a product would have limited appeal at best, especially in comparison with a product that does make one of the local hospitals available on an in-network basis. Post-acquisition, instead of each facing a next best alternative that is a close substitute (each other), CHH and St. Mary's together would only face a next best alternative that is a distant substitute (a hospital outside the Four County Area), resulting in a significant increase in their bargaining leverage post-acquisition.

(37) Reflecting consumers' preference for local healthcare, at present, every commercial insurer with nontrivial enrollment in the Four County Area includes at least one of the two Huntington hospitals in its network, and the large majority of enrollment is in plans that include both Huntington hospitals. Absent the acquisition, were either of the two Huntington hospitals to demand unacceptably high prices, insurers would still be able to provide local in-network access to hospital services by contracting with the other Huntington hospital. (In a negotiation, a party's best recourse is sometimes referred to as the Best Alternative to a Negotiated Agreement, or BATNA; the better party's BATNA,

[22] PX1007-001–002, at 001.

[23] [redacted]

the more bargaining leverage it will have. Pre-acquisition, insurers' BATNA in the event of an impasse with one Huntington hospital is to offer a network with the *other* Huntington hospital.) Offering a network with just one Huntington hospital would result in a product that is less attractive to consumers and employers than one that includes both hospitals. Nevertheless, the reduction in the value of a network from excluding *just one* Huntington hospital is mitigated, because, by contracting with the other hospital, a commercial insurer can still provide its enrollees with access to a local hospital for the large majority of services. This ability to exclude one hospital while still having a local alternative hospital in network provides insurers with a better alternative—i.e., a more attractive BATNA—in contract negotiations with each of the two Huntington hospitals, and thereby leads to lower prices.[24]

(38) The acquisition would change this. If the combined CHH-St. Mary's were to demand higher prices, insurers' only alternatives would be (1) to accept the demand for higher prices or (2) to offer a network that omits *both* hospitals.[25] Offering a network without either CHH or St. Mary's would require *all* Four County Area patients to travel to outlying hospitals in Ashland, Kentucky; Teays Valley; or Charleston for *all* in-network inpatient GAC care (or patients would have to make much higher out-of-pocket payments for out-of-network care). These outlying hospitals are all roughly 25 to 60 minutes away from Huntington, and, as both qualitative and quantitative evidence show, they are not close substitutes for the Huntington hospitals.

(39) Thus, excluding both Huntington hospitals would result in a health insurance product that most consumers would not find attractive, because it would not offer Four County Area residents in-network access to local hospitals. Offering no local in-network hospital would sharply reduce the value of commercial insurers' network; that is, the value of insurers' BATNA will decline sharply post-acquisition. Because having neither Huntington hospital is significantly worse for insurers than lacking just one Huntington hospital, the combined entity will have additional bargaining leverage to demand higher prices from commercial insurers, and ultimately from consumers, post-acquisition. In other words, the ability of the merged firm to force health plans into the unattractive position of having no local in-network hospital will increase the combined entity's bargaining power and allow it to charge higher prices.

[24] Although a health plan gains leverage from having a credible threat to exclude one hospital, negotiations need not, and commonly do not, result in the actual exclusion of either hospital. As I explain in section IV.C, where both sides to a negotiation have an interest in reaching agreement, the threat to exclude generally results in the health plan negotiating more favorable pricing (but still coming to agreement) than it would were that threat less credible. Thus, while there are in fact instances of a health plan excluding one of the two Huntington hospitals, the mere threat of exclusion generally provides a health plan with leverage to demand lower prices.

[25] In the current discussion, I put aside the pricing provisions and other language in the Assurance of Voluntary Compliance with the West Virginia Attorney General and the Letter of Agreement between CHH and Highmark West Virginia. I address both in detail in section VII.

(40) Economists have developed tools for quantifying the leverage that hospitals have in negotiations with health plans and how that leverage will change after a merger. One of the primary tools, which has been used in both the economic literature and a number of recent hospital merger cases, is based on measuring the "willingness-to-pay" (WTP) that a hospital or a set of hospitals (i.e., a hospital system) adds by joining a health plan's network.[26] Economic research has shown that hospitals and systems with higher WTP can charge higher prices and earn higher profits.[27]

(41) Consequently, I use WTP analysis as part of my evaluation of the likely competitive effects of the proposed acquisition. Specifically, I conduct an econometric analysis to estimate the WTP for CHH and St. Mary's separately and for the two taken together (i.e., post-acquisition). I find that the acquisition would increase WTP for the combined entity by approximately 60%. Peer-reviewed economic research has shown that substantial WTP increases of this sort are associated with an ability to increase prices.[28]

I.B.3. CHH and St. Mary's are competitors, not complements

(42) CHH and St. Mary's are located only three miles apart, and both are general acute care hospitals that offer a wide range of primary, secondary, and tertiary services. Over 90% of commercially insured patients who went to one of these two hospitals received a service that both hospitals offer. Nevertheless, the Respondents have argued, at least with respect to patients in the area in and around Huntington, that CHH and St. Mary's are each separately essential to commercial insurers' hospital networks, and that this makes them complements, not competitors.

(43) In effect, the Respondents argue, by focusing on the small minority of currently non-overlapping services, that each Huntington hospital is already a monopolist and, by extension, that neither is a competitor to the other. This "complementarity" claim is incorrect and contradicted by an array of evidence:

- CHH and St. Mary's offer similar services. Over 90% of commercially insured inpatients treated at CHH or St. Mary's receive a service offered by *both* hospitals. (See section III.F for details.) That is, more than 90% of patients are able to choose either CHH or St. Mary's. This makes the

[26] Cory Capps, David Dranove, and Mark Satterthwaite, "Competition and Market Power in Option Demand Markets," RAND Journal of Economics 34, no. 4 (2003): 737–58 [hereinafter Capps et al., "Competition and Market Power," (2003)]; Robert J. Town and Gregory Vistnes, "Hospital Competition in HMO Networks," *Journal of Health Economics* 20, no. 5 (2001): 733–53 [hereinafter Town and Vistnes, "Hospital Competition" (2001)]; Gary M. Fournier and Yunwei Gai, "What Does Willingness-to-Pay Reveal About Hospital Market Power in Merger Cases?" (working paper, Florida State University, Tallahassee, 2007).

[27] *Id*. Related research by Professor Katherine Ho of Columbia University has established that having a network of hospitals with higher WTP increases the demand for a health plan. Katherine Ho, "The Welfare Effects of Restricted Hospital Choice in the US Medical Care Market," *Journal of Applied Econometrics* 21, no. 7 (2006): 1039–1079.

[28] *Id.*

two hospitals substitutes, i.e., competitors, and not complements. Overall, they are in fact close substitutes, in terms of location, service offerings, and patients served.

- The Respondents' ordinary course-of-business documents recognize the high degree of service overlap and routinely refer to each other as *competitors* or otherwise make clear that they are competitors.
  - [redacted]
  - [redacted]
- CHH has targeted growing its cardiac and emergency volume, specifically at the expense of St. Mary's. [redacted] Attempting to gain market share at one another's expense is what competitors do.
- Over the years, CHH and St. Mary's have reached a number of agreements not to compete or to limit the competition between them, particularly as relates to marketing activities. Efforts to limit competition inherently show that competition exists.

(44) I discuss these points and other evidence showing that CHH and St. Mary's are in fact close competitors in section VI.C. I also discuss the point that, in addition to services in which they have similar shares, there are some service lines in which one hospital has a higher share than the other.

[redacted]

Such share asymmetries do not imply that the hospitals are not competitors. Indeed, the record shows that each hospital seeks to narrow such gaps when it is the one with the lesser share. That is competition. Finally, there are some services, a distinct minority of services (received by less than 10% of patients), that one hospital offers but the other currently does not. This fact does not make the two hospitals into complements instead of competitors. It simply makes them somewhat less close competitors, but still very close competitors, than they would be if they had an even higher degree of overlap.

I.C. Lessened quality competition and lessened price competition harm consumers

(45) The effects of reductions in quality competition on consumers, in their role as patients, is self-evident. Because patients directly experience the quality that hospitals offer, they benefit when hospital quality is higher and are harmed when hospital quality is lower. Record evidence confirms that CHH and St. Mary's compete strongly on the basis of quality. Each hospital routinely monitors multiple dimensions of quality, such as patient satisfaction metrics, patient safety metrics, and emergency department waiting times, and takes action to identify and address areas for improvement. Both CHH and St. Mary's also evaluate their quality relative to each other. Both hospitals routinely advertise the quality of care and service they offer. I review evidence on quality competition between CHH and St. Mary's in detail in section VII.C.1. This quality competition benefits all patients, whether commercially insured or covered by Medicare, Medicaid, or some other insurer.

(46) Although patients do not directly pay the majority of the price when they receive hospital services—that is instead paid by their insurer and/or their employer—price increases by hospitals do harm consumers. That harm accrues through a variety of channels:

- Hospital price increases are borne immediately by self-funded employers because these employers directly pay most of their employees' healthcare costs while relying on health plans and third-party administrators for the array of associated administrative services.
- Fully-insured employers will also suffer harm, because increased hospital prices cause the health insurance premiums they pay to rise.
- Higher healthcare costs harm employees and their dependents because they lead employers to reduce the share of the premium covered by the employer, reduce benefits by increasing cost-sharing, hire fewer workers, and/or offer coverage to fewer workers.[32]

[32] *See, e.g.*, [redacted]

- Economic research has also shown that, when insurance premiums rise, wages fall or grow more slowly than they would otherwise.
- At the margin, higher insurance premiums driven by increases in the prices of hospital services are likely to result in fewer individuals with insurance coverage.

(47) Local employers in the Huntington area have explained the effects of higher healthcare costs on their businesses and employees. For example, [redacted] of Adams Trucking & Supply, Inc., testified as follows:[33]

> Adams and our employees would be forced to pay any higher prices that result from the merger to keep the combined Cabell/St. Mary's in our health plan's network. This would likely come in the form of higher premiums for Adams and our employees, and higher deductibles, copayments, and out-of-pocket expenses for our employees. An increase in our employees' out-of-pocket expenses could lead them to drop supplemental health care coverage or delay routine medical care.

(48) [redacted] for Wooten Machine Company, echoed this concern:[34]

> If Cabell increased prices after the merger, I believe that Highmark would likely pass on its higher costs to us through higher premiums. Because there are no viable alternatives to Cabell and St. Mary's for our employees, we would simply have to pay the higher premiums. In turn, Wooten would have little choice but to pass on these increased healthcare costs to our employees through higher premiums, deductibles, co-payments, and out-of-pocket costs.

I.D. The likely effect of the acquisition is to substantially lessen both price and quality competition, and thereby to harm consumers

(49) Economic research has shown that competition among hospitals promotes higher value healthcare, which has both a price component and a quality component. CHH and St. Mary's are strong, close competitors to each other and no other hospital is a similarly close competitor. The proposed acquisition will, therefore, substantially lessen competition. This leads to the question of how, if at all, the substantial lessening of competition will be realized in the marketplace.

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[33] PX0217 (Declaration of [redacted] (Adams Trucking & Supply, Inc.), Aug. 20, 2015, ¶ 7) [hereinafter PX0217 ([redacted] (Adams Trucking) Decl., Aug. 20, 2015)].

[34] PX0212 (Declaration of [redacted] (Wooten Machine Company), July 10, 2015, ¶ 8) [hereinafter PX0212 ([redacted] (Wooten Machine) Decl., July 10, 2015)].

(50) In typical circumstances, when an acquisition substantially increases the market power of the combining hospitals, the additional bargaining leverage will result in higher prices to commercial health insurers. In the case at hand, the Respondents argue that three factors will restrict their ability to increase price post-acquisition, for a number of years: (1) regulation of *list charges* (but not negotiated *prices*) by the WVHCA, (2) the LOA between CHH and HMWV, and (3) the AVC between CHH and the West Virginia Attorney General. Collectively, I refer to these as the proposed "behavioral remedies." As I discuss in detail in Section VII.C, the proposed behavioral remedies are unlikely to prevent harm to competition through both price and non-price effects.

(51) I evaluate the proposed behavioral remedies by analyzing two questions:

- Will the behavioral remedies have the intended effect of restricting the Respondents' ability to increase prices post-acquisition?
- If so, will the behavioral remedies preclude other adverse effects on the marketplace and consumers, such as a lessening of non-price, or quality, competition?

(52) I first summarize the structure and main provisions of the behavioral remedies. I then explain why economists are generally skeptical of behavioral remedies. Then, I explain why, if they are in fact effective, the behavioral remedies will elevate the importance of quality competition such that the adverse quality effects from eliminating competition between CHH and St. Mary's are likely to be *greater* than they would otherwise be. I then explain that, in practice, the behavioral remedies are unlikely to replicate the benefits of competition even with respect to prices during the [redacted] year term of the remedies. Finally, I explain that, upon expiration of the remedies, the combined entity will face no substantial behavioral restriction on its ability to increase price to area employers and families. For these reasons, I conclude that the acquisition is likely to harm competition and consumers, even if the behavioral remedies function as intended.

I.D.1. The behavioral remedies

(53) There are three components of the behavioral remedies, which the Respondents argue will prevent price increases.[35] The first is long standing and not specific to the acquisition, while the other two are the results of agreements entered into by CHH. I address these in detail in section VIIA.

(54) **Regulation of list charges by the WVHCA**. All hospitals maintain a set of list charges, known as the "chargemaster," for each good or service that they offer. The list charges regulated by the WVHCA *do not reflect the actual prices* paid for services rendered to most patients treated by a hospital. In the commercial sector, actual payment amounts are determined in negotiations between health plans and providers. The average list charges approved by the WVHCA do represent a *ceiling*,

[35] [redacted]

or cap, on the prices that a hospital can charge a commercial insurer for inpatient or outpatient services. Because most insurers currently have negotiated prices that are below the cap, regulation of list charges does not preclude anticompetitive price increases.

(55) Even where current negotiated prices are near the cap, the efficacy of list charges regulation will erode over time if the WVHCA allows charges to grow sufficiently quickly over time.[36] The WVHCA has historically allowed CHH and St. Mary's to increase their list charges by 4.00% to 5.75% per year (see Figure 42 in Appendix H).[37]

(56) **The Letter of Agreement (LOA) between CHH and HMWV**. [redacted]

(57) [redacted]

[36] It is also possible that the WVHCA could be disbanded or lose some of its authority, as was proposed in legislation introduced in January of 2015. West Virginia Senate Bill No. 336, introduced on January 27, 2015, proposed to do just that. West Virginia Legislature, "Senate Bill No. 336," Jan. 27, 2015 ("A BILL to repeal [various sections of the West Virginia code] . . . eliminating authority of the Health Care Authority to conduct rate review and set rates for hospitals . . ."). *See infra* n. 526.

[37] The WVHCA does review contracts between commercial insurers and hospitals. However, an array of market participants, including the Chairman of the WVHCA, have indicated that this review ensures that negotiated rates are not *too low* (from the perspective of the hospital), and that the WVHCA does not review whether or not negotiated rates are too high. "WVHCA's review . . . helps **protect hospitals from agreeing to unfavorable contract rates that fall below their costs** . . . . If the negotiated rates are above the hospital's costs . . . the WVHCA will approve the fully-executed contract." (Emphasis added.) PX0225 ([redacted] (WVHCA) Decl., Sept. 1, 2015), ¶ 13). [redacted]

[38] [redacted]

[39] [redacted]

[40] [redacted]

[41] [redacted]

[42] [redacted]

[43] [redacted]

[redacted]

(58) [redacted]

(59) [redacted]

(60) **The Assurance of Voluntary Compliance (AVC) with the West Virginia Attorney General**. CHH and the Office of the West Virginia Attorney General (WVAG) signed the revised AVC on November 4, 2015.[48] Under the AVC, the WVAG agrees not to oppose CHH's acquisition of St. Mary's.

(61) The AVC includes several provisions that could restrict post-acquisition price increases. The AVC (1) allows, for a period of 10 years, commercial insurers that have an "evergreen" contract with CHH or St. Mary's to maintain whatever rate of annual price increases is specified in the applicable

44 [redacted]

45 [redacted]

46 [redacted]

47 [redacted]

48 PX1668-001–017 (*In re Cabell Huntington Hospital, Inc.'s Acquisition of St. Mary's Medical Center*, "Assurance of Voluntary Compliance," Circuit Court of Cabell County, West Virginia, Nov. 4, 2015 [hereinafter PX1668-001–017 (November AVC)]).

contracts;[49] (2) requires the combined entity to have an average operating margin of 4% or lower in each three year period;[50] (3) states that, during the first five years of the AVC, if an insurer's contract expires or is terminated, the combined entity cannot negotiate for a reduction in the discount off charges specified in the prior contract;[51] and (4) creates a mediation and arbitration process in years six through eight of the AVC.[52]

(62) In addition, CHH agreed that, for 10 years, the combined entity would develop quality goals, population health goals, community wellness programs, and a "Fully Integrated and Interactive" electronic medical records system.[53] It is to report to the WVAG annually on its efforts to achieve those goals. These are activities that hospitals throughout the country are already pursuing.[54]

(63) None of the provisions in the AVC extend beyond the specified 10-year period. Thus, at the end of [redacted], the HMWV LOA and the AVC will have expired and any restraint they imposed on the combined entity's pricing will have vanished.

(64) Below, I overview the reasons why the behavioral remedies will not prevent substantial harm to competition and consumers, even assuming they function as intended. I provide a detailed analysis of the behavioral remedies in section VII.

I.D.2. Economic and practical considerations generally favor structural remedies over behavioral remedies

(65) For a variety of reasons, economists are generally skeptical of behavioral (or "conduct") remedies. The most fundamental reason is the recognition among economists, backed by extensive empirical evidence, that competition outperforms regulation when it comes to promoting economic efficiency and benefitting consumers. Mergers and acquisitions that substantially lessen competition, such as the acquisition of St. Mary's by CHH, reduce these benefits. This represents a real cost to society and consumers that regulation cannot adequately remedy. See section VII.B.

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49 PX1668-001–017, at 008 (November AVC, § 2(c)).

50 PX1668-001–017, at 007–008 (November AVC, § 2(b)).

51 PX1668-001–017, at 008 (November AVC, § 2(d)).

52 PX1668-001–017, at 008–009 (November AVC, § 2(d)). ("Thereafter, [during years 6 through 8], CHH and SMMC agree that they will negotiate the terms of all third party payor contracts in good faith and in the event of an impasse in the contract negotiations lasting more than sixty (60) days that the third party payor may submit any disputes as to prices and terms: (1) first to mediation . . .").

53 PX1668-001–017, at 009–010 (November AVC, § 3). A "Fully Interactive Medical Record System" is defined as a system in which providers can "access patient health records electronically and instantaneously at either CHH or SMMC." PX1668-001–017 at 003 (November AVC, ¶ 9).

54 Both hospitals today set and measure themselves against quality goals. [redacted]

(66) Unlike divestitures, behavioral remedies *do not* maintain competition at pre-acquisition levels. Instead, behavioral remedies rely on regulation and supervision in an effort to mitigate adverse competitive effects that would otherwise result.

(67) However, behavioral remedies have a number of significant limitations. The market power created by a merger may, as is very likely for CHH and St. Mary's, outlast the duration of the remedy, meaning that harm is delayed and not eliminated. Enforcement can be a challenge. A remedy that appears promising may fail to identify loopholes, or the market may evolve in unexpected ways over the life of the remedy. A remedy may embed unintended incentives.[55] Future regulators may not be as informed as or share the same objectives as today's regulators.[56] In addition, some aspects of firm performance cannot readily be quantified, which necessarily makes them more challenging to monitor and modify through enforcement. Healthcare quality is more challenging to observe than price, and a behavioral provision mandating a particular level of quality would be especially difficult to specify and enforce. Consistent with this, the AVC does not include any quantitative quality-related metrics that the combined entity must attain.

(68) This is a central point: even if they succeed in restraining prices, the behavioral remedies cannot protect consumers from the reduction in quality competition caused by the acquisition. In fact, as I explain in section VII.C, when prices are restrained, the reduction in quality is likely to be greater than it would otherwise be.

(69) Moreover, putting aside these flaws, the behavioral remedies serve little real purpose in this case, because merger-specific efficiencies from the proposed acquisition of St. Mary's by CHH are likely to be very small. Most of the potential benefits of the acquisition can be achieved through, among other possible measures, a combination with one of a number of alternative buyers, none of whom are close competitors to the Huntington hospitals.

[55] For example, many states have applied rate of return regulation to public utilities. The basic logic of that approach was to allow the utilities to realize a reasonable rate of return on capital investments. This, however, created an artificial incentive for utilities to invest in capital. *See* Harvey Averch and Leland L. Johnson, "Behavior of the Firm Under Regulatory Constraint," *American Economic Review* 52, no. 5 (1962): 1052–1069, and the discussion in Dennis Carlton and Jeffrey Perloff, *Modern Industrial Organization*, 3rd ed. (Reading, MA: Addison-Wesley, 2000), 670–78.

[56] *See* Harvey Averch and Leland L. Johnson, "Behavior of the Firm Under Regulatory Constraint, "*American Economic Review* 52, no. 5 (1962): 1052-1069, and the discussion in Dennis Carlton and Jeffrey Perloff, *Modern Industrial Organization*, 4th ed. (Reading, MA: Addison-Wesley, 2005), 707–12.

I.D.3. Even assuming that the behavioral remedies forestall anticompetitive price increases, the acquisition remains likely to harm competition and consumers through lower quality, delayed price reductions, and eventual price increases

(70) Although far from certain, even assuming that the combined effect of the AVC, LOA, and WVHCA will be to forestall post-acquisition price increases for a period of [redacted] years, the acquisition is still likely to cause the following forms of harm to consumers:

- *Lessened quality competition*. The substantial reduction in quality competition is likely to reduce both the service and clinical aspects of healthcare quality relative to the levels that would otherwise prevail. In fact, the likelihood of reduced competition leading to reductions in quality is increased, not reduced, by the price-regulating aspects of the AVC, LOA, and WVHCA.
- *Reduced ability to negotiate more favorable contractual terms.* For reasons specific to the factual circumstances in Huntington, there is evidence that some insurers might be able to negotiate more favorable contracts if the acquisition does not occur. In particular, [redacted] insurers have contracts that were jointly negotiated with CHH and St. Mary's and that specify relatively high prices. These insurers have sought in recent years to renegotiate these contracts to obtain more favorable terms.
- *Price increases after expiry*. Prices are likely to rise substantially after [redacted] years, following the expiration of the LOA and the AVC. In fact, the more effective the LOA and AVC are at restraining prices prior during their respective terms, the greater will be the likely price increases post-expiry.

(71) I summarize these points below and I discuss each in detail in section VII.C.

I.D.3.a. Lessened quality competition

(72) In this discussion, I assume that the combined effect of the WVHCA, LOA, and AVC would be to maintain prices below the level that would prevail in the absence of any behavioral remedies—that is, I assume that there will be a meaningful cap on negotiated prices. Under this assumption, prices between the combined entity and commercial health insurers are essentially regulated.

(73) Economic theory and empirical evidence show that when prices are regulated, competition among hospitals generally results in higher quality.[57] Higher quality healthcare delivers tangible benefits to

[57] Martin Gaynor, Katherine Ho, and Robert J. Town, "The Industrial Organization of Health-Care Markets," *Journal of Economic Literature* 53, no. 2 (2015): 235–84; and Martin Gaynor and Robert Town, "The Impact of Hospital Consolidation—Update," The Synthesis Project, Robert Wood Johnson Foundation, June 2012, *available at* http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf73261 [hereinafter Gaynor and Town, "The Impact of Hospital Consolidation—Update"]

society through lower mortality rates, fewer hospitalizations, and better health outcomes. The core mechanism underlying this positive relationship between competition and quality is that, so long as the price fixed by regulation exceeds a hospital's incremental cost of treating additional patients, a hospital will earn profits by attracting more patients. With prices fixed, the primary way that a hospital can attract additional patients is to improve quality. Therefore, with regulated pricing, hospitals have a stronger financial incentive to provide high quality when they face more competition. Conversely, hospitals that face little competition have a weaker financial incentive to provide high quality because doing so is less necessary to maintaining or growing patient volume.

(74) **Regulated prices.** In a recent survey article, Gaynor, Ho, and Town (2015) explained the incentives that prevail under fixed pricing:[58]

> A standard result in models with administered prices is that non-price (quality) competition gets tougher in the number of firms, so long as the regulated price is set above marginal cost. Firms facing tougher competition will increase their quality in order to attract (and retain) consumers. This result is essentially the same as in models of industries with regulated prices (e.g. airlines, trucking) from a number of years ago.

(75) I review the empirical literature on hospital competition and quality in more detail in Section IV.C.4. Consistent with economic theory, most studies that examine this relationship find that, when prices are fixed by regulation, greater hospital competition is associated with *higher* quality. The proposed behavioral remedies, if they are effective, will be similar or tantamount to price regulation, making this result of particular importance. Specifically, insofar as prices are effectively regulated, the likely reduction in quality that will result from eliminating quality competition between CHH and St. Mary's will be greater, to the detriment of patients.

(76) **Market determined prices.** When prices are determined by market forces, the relationship between competition and quality is more complex. If firms can gain additional volume either by lowering price or by improving quality, economic theory does not provide a definitive prediction as to which will prevail: lower prices, higher quality, or some combination of the two.[59] Therefore, when prices are market determined, the net effect of competition on quality is an empirical question. A growing body of economic research has examined this question and the majority of that research finds that greater competition also increases quality when prices are market-determined.

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[58] Martin Gaynor, Katherine Ho, and Robert J. Town, "The Industrial Organization of Health-Care Markets," *Journal of Economic Literature* 53, no. 2 (2015): 243.

[59] Of course, where prices are market-determined, an anticompetitive merger will harm consumers through the mechanism of higher prices, in addition to potential adverse effects on quality.

(77) A 2006 survey article sponsored by the Robert Wood Johnson Foundation summarized the empirical literature on the relationship between hospital competition and quality when prices are market-determined:[60]

> Although the results of the literature are mixed, a narrow balance of the evidence and the evidence from the best studies indicates that **hospital consolidation more likely decreases quality than increases it**. (Emphasis added.)

(78) In 2012, the Robert Wood Johnson Foundation published an update that confirmed the finding of the 2006 survey:[61]

1. "At least for some procedures, hospital concentration reduces quality."
2. "Competition improves quality where prices are market determined, although the evidence is mixed."

(79) The aforementioned 2015 survey by Gaynor, Ho, and Town provided a further review of the economic literature and reached a consistent conclusion:[62]

> We now turn to econometric studies of competition and quality where prices are determined in the market. . . . The results from settings with market determined prices are decidedly more mixed than the literature that focuses on quality in administered price settings. Also, credible identification of the impact of competition on quality is more challenging. Nevertheless, **the evidence indicates that increases in competition improve hospital quality**. (Emphasis added.)

(80) Thus, empirical research indicates that a merger that substantially reduces competition is likely to reduce healthcare quality relative to the levels that would otherwise prevail. This is so whether prices are set by regulation or market determined, but the adverse effect quality is likely to be stronger when prices are regulated. Thus, if the proposed behavioral remedies succeed in constraining price, the reduction in quality competition caused by the acquisition is likely to be magnified, to the detriment of patients. On the other hand, if the proposed behavioral remedies do not succeed in constraining price, then the acquisition is likely to result in higher prices, as well as reduced quality (quality effects

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60 Wiliam B. Vogt and Robert J. Town, "How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?" *RWJF Research Synthesis Report No. 9*, Robert Wood Johnson Foundation, Feb. 2006, 11, *available at* http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2006/rwjf12056/subassets/rwjf12056_1 [hereinafter Town and Vogt, "How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?"]. In a 2012 update to this survey, Martin Gaynor and Robert Town reiterated the prior finding that most studies find evidence that hospital competition improves quality. *See*, Gaynor and Town, "The Impact of Hospital Consolidation—Update."

61 Gaynor and Town, "The Impact of Hospital Consolidation—Update," 3–4.

62 Martin Gaynor, Katherine Ho, and Robert J. Town, "The Industrial Organization of Health-Care Markets," *Journal of Economic Literature* 53, no. 2 (2015): 249.

may be smaller in magnitude in this circumstance). Likewise, the acquisition is likely to have adverse effects on both price and quality upon expiration of the LOA and AVC.

I.D.3.b. Reduced ability to negotiate more favorable contractual terms

(81) As explained above, the AVC contains a provision prohibiting CHH from terminating "evergreen" contracts in place with certain insurers. Although this may allow these insurers to maintain their current contracts for the 10-year duration of the AVC, that does not preserve the value of competition if some commercial insurers would have negotiated more favorable terms but-for the acquisition. In evaluating whether a merger is likely to cause anticompetitive price increases, the appropriate comparison is between (1) the price level that would prevail but-for the merger and (2) the price level that would prevail post-acquisition. In this case, there are specific reasons to expect that some insurers could negotiate more favorable pricing if CHH and St. Mary's remain competitors.

(82) Specifically, [redacted] contracts in place today were negotiated jointly in the late 1990s and early 2000s through a physician hospital organization (PHO) known as Tri-State Health Partners, whose largest hospital members were CHH and St. Mary's.[63] Under these contracts, members of Tri-State Health Partners are reimbursed on a percent-of-charges basis, and the percentage discount is relatively small, 5%.[64] Absent the acquisition, competition between CHH and St. Mary's may enable these insurers to negotiate more favorable terms. Before CHH and St. Mary's began discussing a potential merger, [redacted] insurers with these PHO contracts had sought to renegotiate their contracts and obtain better terms.[65]

63 [redacted]

64 All hospitals maintain a set of list charges for their services; this list is commonly known as a chargemaster. Under a percent-of-charges contract, the payment owed for a given patient's care is equal to specified percentage of those list charges. For example, if list charges are $20,000 and a "percent-of-charges" contract specifies payment equal to 75% of charges (i.e., a discount of 25%), then the actual payment owed is $15,000. The various [redacted] contracts, which are percent of charges contracts, are listed in *infra* n. 467.

65 [redacted]

(83) Even though previous attempts by these insurers to negotiate better contractual terms have not succeeded to date, absent the acquisition that possibility remains an ongoing threat to CHH and St. Mary's. With the acquisition, that threat is substantially reduced, if not eliminated entirely: as noted, when they negotiated together in the past through the Tri-State Health Partners PHO, CHH and St. Mary's were able to negotiate contracts with very low discounts (i.e., high negotiated prices). The acquisition generates similar relative bargaining positions as the PHO (i.e., CHH and St. Mary's negotiating together as a unit) and, accordingly, makes price improvements less likely. The AVC does not prevent this mechanism—that is, higher prices through the maintenance of contracts with small discounts—of harm from lessened competition.

I.D.3.c. Price increases after the expiration of the AVC and the LOA

(84) After the [redacted] year term of the AVC and LOA, customers will face the combined entity with no behavioral constraint except that imposed by the WVHCA's regulation of list charges. However, the WVHCA regulates hospitals' list charges, not their actual, negotiated prices. Thus, when the AVC and LOA expire, there will be little to prevent the combined entity from exercising its market power and increasing prices to commercial insurers. At that time, it is very likely that the combined entity will still possess a substantial degree of market power because it is very unlikely that, even [redacted] years from now, there will be an additional general acute care hospital in Huntington or even the Four County Area. Thus, even if they are fully effective during their terms, the AVC and LOA would only serve to delay price increases, not eliminate them.

I.E. Entry into the inpatient hospital services market sufficient to offset the harm of the proposed acquisition is unlikely in the short term and for the foreseeable future

(85) In order for entry to mitigate anticompetitive harm, it must be "timely, likely, and sufficient in its magnitude, character, and scope."[66] However, entry into the inpatient GAC services market generally requires extensive planning and is time consuming, difficult, and costly.

(86) As an example of the high degree of entry barriers, CAMC has undertaken expansion projects, but those "required several years and many millions of dollars to complete." In one instance, CAMC Memorial Hospital received state approval to add 48 inpatient beds in 2012. Construction began in 2015, and the hospital expects to complete the project in 2016 at a total cost of $30 million. The time span between receipt of state approval and the projected opening was about four years, and CAMC

[66] *Merger Guidelines,* § 9.

likely expended significant time and effort in order to receive that approval, meaning that the total time from conception to completion was likely substantially longer than four years.[67]

(87) In addition to the intrinsic time and expense required to plan and construct a new hospital, the state approval process in West Virginia further decreases the likelihood that a new hospital would be constructed in or near Huntington. Specifically, West Virginia is a Certificate of Need (CON) state, which means that healthcare facilities must receive state approval for expansions of, or investments in, services entailing expenditures in excess of $3.1 million.[68]

(88) For these reasons, entry that is timely and sufficient to replace the competition the proposed acquisition would eliminate is extraordinarily unlikely. I am not aware of any evidence or testimony indicating that any entity has started the process of entering the GAC hospital services market in the Four County Area, or even expressed an intention to do so.[69] Thus, not only is entry in the Four County Area by a new GAC hospital unlikely over the next several years, entry is unlikely for the foreseeable future.

(89) This means that, when the agreements with HMWV and the WVAG expire in [redacted] years, it is unlikely that there will be an additional, new hospital competitor in the Four County Area. From that point onward, there will likely be only a single hospital in the Four County Area—the combined CHH and St. Mary's—and it will not be constrained by the HMWV and WVAG agreements.

I.F. Efficiencies

(90) I was not asked to evaluate potential cost savings or quality improvements that might be associated with the proposed acquisition. Other experts have analyzed the Respondents' claimed cost and quality efficiencies. Both experts focus in large part on the analyses and claims presented in a study performed on behalf of the Respondents by a consulting firm, The Camden Group. That study is titled, "Business Plan of Operational Efficiencies" (BPOE).[70]

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67 PX0214 (Declaration of [redacted] (CAMC Health System, Inc. and Charleston Area Medical Center), Aug. 19, 2015, ¶ 16) [hereinafter PX0214 ([redacted] (CAMC) Decl., Aug. 19, 2015)].

68 W.Va. Code §16-2D; West Virginia Health Care Authority, "Certificate of Need," http://www.hca.wv.gov/certificateofneed/Pages/default.aspx.

69 [redacted]
In 2012, St. Mary's opened a location in Ironton, Ohio, that provides emergency services, as well as outpatient laboratory and imaging services, but this location does not offer inpatient services. St. Mary's Medical Center, "Ironton Campus," https://www.st-marys.org/centers-services/st.-marys-ironton-campus; [redacted]

70 PX3000-001–142 (The Camden Group, "Business Plan of Operational Efficiencies, Final Working Report," Nov. 12, 2014).

(91) With respect to cognizable cost savings, I understand that Dr. Thomas Respess, a Principal Economist at Baker & McKenzie Consulting, has reached the following central conclusions:[71]

- Many of the Respondents' claimed savings are speculative and unsubstantiated.
- Many claimed cost savings are not merger-specific because they could be achieved by each hospital on its own or through a different acquisition, affiliation, or combination.
- The Respondents' claimed costs savings omit important sources of expenditures that would likely be incurred over the course of the acquisition and beyond. [redacted]

(92) Dr. Respess' overall conclusion is that "cognizable net recurring annual savings from the proposed transaction will likely be exceeded by the offsetting costs, and no net efficiencies should be credited to the proposed transaction."[72]

(93) With respect to cognizable quality improvements, I understand that Dr. Patrick Romano, Professor of Medicine and Pediatrics at the University of California Davis School of Medicine, has reached the following high level conclusions:[73]

- There is no basis in the empirical literature on hospital competition and quality or hospital mergers and quality to support a presumption that hospital mergers are likely to enhance quality and it is also possible for hospital mergers to lower quality.
- CHH and St. Mary's do not provide systematically different levels of quality such that the acquisition would be likely to improve the lower performing hospital's quality.
- Claimed efficiencies related to improvements from consolidating services, sharing electronic medical record systems, or [redacted] are "largely speculative, unsubstantiated, and potentially attainable without the merger."[74]
- Many of the Respondents' claimed quality improvements are activities that do not require a merger or acquisition or that each hospital could achieve through an alternative merger or affiliation.
- Some potential benefits that derive from service consolidations and related volume increases in those services could be facilitated by the two hospitals' proximity and, thus, could be dependent upon the acquisition. However, several factors limit these potential benefits. First, in the specific

[71] *In re Cabell Huntington Hospital, Inc.*, No. 9366, Expert Report of Dr. Thomas S. Respess III (Feb. 2016).

[72] *Id.*, ¶ 14.

[73] *In re Cabell Huntington Hospital, Inc.*, No. 9366, Expert Report of Dr. Patrick Romano (Feb. 2016).

[74] *Id.*, ¶ 11.

> service lines with a demonstrated volume-outcome relationship, existing asymmetries between CHH and St. Mary's reduce the size of potential benefits. Second, the proposed service consolidations may not occur and may not deliver benefits if they do. Third, there are alternative measures to "increase program volume or to ensure that clinical team members maintain their skills and experience."[75]

(94) Dr. Romano's overall conclusion with respect to quality is that "[i]n general . . . the claims in the BPOE are speculative and not well substantiated."[76]

(95) Although I do not analyze cost savings or quality effects in detail, I do review economic principles that should apply in weighing (1) the likely harms from a merger that creates or enhances market power against (2) potential efficiencies, including cost and/or quality enhancements, from the acquisition.

I.F.1. Merger-specificity

(96) In some cases, a specific merger or acquisition may be likely to result in cost savings, quality improvements, or other efficiencies. However, any such efficiencies that could reasonably be obtained through means that do not lessen competition to the same extent are not properly considered as an offset to any competitive harm from a merger. The *Merger Guidelines* explain this as follows:[77]

> The Agencies credit only those efficiencies likely to be accomplished with the proposed merger and **unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects**. These are termed merger-specific efficiencies. (Emphasis added.)

(97) The logic behind this is straightforward: crediting efficiencies that are not merger-specific could result in illogically incurring a loss of competition for the purpose of facilitating cost savings that would likely occur even without the proposed merger. Generally, there are two ways that an efficiency could be not merger-specific. The first is an efficiency that could be achieved by one or both of the combining parties without a merger—for example, creating private rooms or changing nurse staffing policies likely would not be merger-specific. The second is an efficiency that could be

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75 *Id*., ¶ 15.

76 *Id*., ¶ 12.

77 *Merger Guidelines*, § 10. Another consideration is that any improvements must be sufficiently large in comparison to the anticompetitive effects, because trading a large reduction in competition for a minor improvement is unlikely to be socially efficient. *Id.* ("The greater the potential adverse competitive effect of a merger, the greater must be the cognizable efficiencies, and the more they must be passed through to customers, for the Agencies to conclude that the merger will not have an anticompetitive effect in the relevant market. . . . In the Agencies' experience, efficiencies are most likely to make a difference in merger analysis when the likely adverse competitive effects, absent the efficiencies, are not great.").

achieved by combining with some other entity that does not present the same degree of harm to competition.

(98) I discuss merger-specificity and alternatives to the proposed acquisition by CHH in section VIII. I focus primarily on alternative purchasers, because in the specific case at hand it is near certain that St. Mary's will experience a change in control (the Pallottine Missionary Sisters, the sponsors of St. Mary's, no longer wish to operate the hospital) and because there are multiple suitors.

I.F.2. There are multiple credible and willing alternative acquirers of St. Mary's who would not similarly lessen competition

(99) In the case of St. Mary's, there are other means to achieve the claimed efficiencies that would not have comparable anticompetitive effects. In response to the request for proposals (RFP) issued by the Pallottine Health Services (PHS), PHS received bids from [redacted], LifePoint Health, and [redacted], as well as bids from Bon Secours Health System (the parent of OLBH), Cabell Huntington Hospital, Charleston Area Medical Center, and Thomas Health System for St. Mary's [redacted].[78] Although [redacted] bidders operate hospitals that serve a small number of patients from the Four County Area, they are not close competitors to St. Mary's, as indicated by their low market shares, small diversion ratios, and other record evidence. Thus, none of these alternative bidders presents comparable anticompetitive effects.

(100) [redacted][79] As of the time of their declarations, CAMC and Bon Secours indicated that they may still be interested in acquiring St. Mary's should the acquisition by CHH not close.[80] [redacted]

[78] St. Joseph's Hospital has already been acquired by United Hospital Center. United Hospital Center, "St. Joseph's," news release, Oct. 6, 2015, http://www.uhcwv.org/news-detail.php?pr_id=250.

[79] [redacted]

[80] PX0223 (Declaration of [redacted] (Our Lady of Bellefonte Hospital), Aug. 10, 2015, ¶ 13) [hereinafter PX0223 ([redacted] (OLBH) Decl., Aug. 10, 2015)]. ("I expect that Bon Secours may possibly be interested in purchasing St. Mary's should the proposed acquisition by Cabell fall through."); PX0214 ([redacted] (CAMC) Decl., Aug. 19, 2015, ¶ 18). ("CAMC remains interested in purchasing St. Mary's and would consider renewing its offer should the proposed acquisition by Cabell fall through.")

[81] [redacted]

I.G. The acquisition is also likely to substantially lessen competition with respect to outpatient surgical services

(101) Outpatient surgery, or ambulatory surgery, refers to surgical procedures that do not require an overnight stay in a hospital. Outpatient surgery is provided in hospital outpatient departments (HOPDs) as well as in free-standing ambulatory surgery centers (ASCs).[82] Outpatient surgical services sold to commercial health insurers constitute a second relevant product market in which to assess the competitive effects of the proposed acquisition of St. Mary's by CHH.[83]

(102) As with inpatient services, the hypothetical monopolist test shows why this is an appropriate relevant product market. A SSNIP by a hypothetical monopolist of all outpatient surgery services would not be thwarted by substitution to inpatient care or by substitution to lower acuity care sites, such as physician offices or urgent care centers. Inpatient services would not constrain the hypothetical monopolist, because the price difference between inpatient services and outpatient surgery is substantially greater than the hypothesized 5% to 10% SSNIP. Thus, it would not be rational for a commercial insurer, in response to such a SSNIP, to substitute towards inpatient care because doing so would only further increase its expenditures. In other words, inpatient care is not an economic substitute for outpatient surgery services.[84]

(103) Substitution to lower acuity care sites would also not render a SSNIP unprofitable, because such providers are not clinically appropriate care sites for most or all outpatient surgery services. Specifically, I analyze services that meet the "narrow" definition of outpatient surgical services as defined by the Healthcare Cost and Utilization Project (HCUP): "[a]n invasive therapeutic surgical procedure involving incision, excision, manipulation, or suturing of tissue that penetrates or breaks the skin; typically requires use of an operating room; and also requires regional anesthesia, general anesthesia, or sedation to control pain."[85] Among other factors, lower acuity sites of care generally do not have operating rooms.

(104) Accordingly, outpatient surgical services constitute a relevant product market, because other services are, whether for economic or clinical reasons, not reasonably interchangeable.

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[82] Karen A. Cullen, Margaret J. Hall, and Aleksandr Golosinskiy, *Ambulatory Surgery in the United States, 2006*, vol. 11 National Health Statistics Reports, Revised (National Center for Health Statistics, 2009), 1–2.

[83] Centers for Medicare and Medicaid Services, "Are you a Hospital Inpatient or Outpatient?" May 2014, *available at* https://www medicare.gov/Pubs/pdf/11435.pdf. In addition to surgery, outpatient services include emergency room visits, laboratory tests and pathology services, radiology services, endoscopy, and other ancillary services. In my analysis in this section, I focus solely on outpatient surgery.

[84] As discussed above, another reason to analyze outpatient services separately from inpatient services is that the competitive structure of the outpatient services market, particularly the number and identity of competitors, typically differs from the competitive structure of the inpatient GAC services market.

[85] Healthcare Cost and Utilization Project, "Surgery Flag Software," 2015, https://www.hcup-us.ahrq.gov/toolssoftware/surgflags/surgeryflags.jsp.

(105) As with inpatient services, the appropriate relevant geographic market in which to analyze the effects of the acquisition is no broader than the Four County Area. Most commercially insured patients who reside in the Huntington area receive routine outpatient care close to where they work or live and generally do not travel outside of the Huntington area to receive that care.[86] [redacted] at Three Gables Surgery Center (Three Gables, which is located across the Ohio River from Huntington, in Proctorville, Ohio), testified that "patients generally prefer to receive routine inpatient and outpatient care close to their home or workplace" and that patients who seek care at Three Gables typically live or work near the hospital.[87]

(106) Consequently, a hypothetical monopolist of all outpatient surgery providers in the Four County Area would be able to profitably impose a SSNIP because a commercial insurer's only alternative to acceding to the SSNIP would be to send *all* patients to facilities located outside the area for all outpatient surgery (or to pay much more out-of-pocket for out-of-network care). Doing so would directly contravene patients' general strong preference for receiving care locally and would result in a sharply less attractive health insurance product, which is worse for the insurer than acceding to the SSNIP.

(107) As with inpatient services, the proposed acquisition will substantially increase concentration in the already concentrated outpatient surgery market:

- In 2014, the most recent year for which data are available, CHH and St. Mary's had respective shares of 34.8% and 30.4%, respectively, for a 65.2% post-acquisition market share.
- The HHI would increase by more than 2,000 points, from 2,309 to 4,425. This far exceeds the level at which a market is deemed to be highly concentrated. Both the increase in concentration and the post-acquisition level of concentration significantly exceed the threshold at which mergers are presumed likely to substantially lessen competition.[88]

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86 PX0209 ([redacted] (Aetna) Decl., June 4, 2015, ¶ 5) ("members typically receive primary and secondary inpatient, outpatient, and physician services close to their home or work"); [redacted] PX0212 ([redacted] (Wooten Machine) Decl., July 10, 2015, ¶ 5) ("people in Huntington prefer to seek routine hospital care, such as general surgery or delivering a baby, close to home"); [redacted] PX0203 ([redacted] (Cigna) Decl., Apr. 27, 2015, ¶ 17) ("patients prefer to receive inpatient and outpatient services close to home because doing so is more convenient for them and their families"). In a subsequent declaration, Mr. [redacted] clarified that this observation was based on his general experience in the industry and not on any specific analysis or data related to CHH or St. Mary's. PX4162 (Declaration of [redacted] (Cigna), Feb. 16, 2016, ¶ 6) [hereinafter PX4162 ([redacted] (Cigna) Decl., Feb. 16, 2016)].

87 PX0211 ([redacted] (Three Gables) Decl., June 24, 2015, ¶ 10).

88 *Merger Guidelines*, § 5.3. "Mergers resulting in highly concentrated markets [(i.e., with an HHI above 2,500)] that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power."

- The post-acquisition share of 65.2% is based on conservatively treating Three Gables as an independent competitor. In fact, St. Mary's and Three Gables have a "close business relationship."[89]
- If I treat Three Gables as part of St. Mary's, and thus part of the combined entity, St. Mary's pre-acquisition share would be 38.5% and the post-acquisition share would be 73.3%, closely in line with the post-acquisition share of 76.2% for general acute care inpatient services. The HHI would be nearly 6,000.

(108) Regardless of whether Three Gables is properly viewed as part of St. Mary's, the combined entity would own the two largest outpatient surgery facilities physically located within the Four County Area, and would exert significant control over the only other facility in that area, the much smaller Three Gables. Given Three Gables' close relationship with St. Mary's, CHH and St. Mary's will face little or no independent competition in the market for outpatient surgical services in the Four County Area after the acquisition. As with GAC inpatient services, CHH and St. Mary's are each other's closest competitor and no other facility is a similarly close competitor. Thus, CHH's bargaining leverage in negotiations with commercial health plans is likely to increase substantially after it acquires St. Mary's. Consequently, the acquisition is likely to substantially lessen price and quality competition with respect to outpatient surgical services.

(109) Finally, it is unlikely that outpatient surgery entry into the Four County Area would occur in a timely manner or at a sufficient scale to replace the competition eliminated by the acquisition. Although not as extensive as opening a general acute care hospital, opening an outpatient surgery center also requires substantial time and capital resources. As [redacted] testified, it took four years for the comparatively small Three Gables to enter the market, including two years of pre-planning and two years of construction, and the owners borrowed $6 million to finance the project.[90] In addition, CON laws in West Virginia apply to outpatient facilities and services, including ambulatory surgery centers.[91]

[89] That relationship includes the following: (1) a St. Mary's entity, St. Mary's Medical Management ("SMMM"), manages Three Gables; (2) the CEO of Three Gables is employed by SMMM; (3) SMMM owns 10% of Three Gables; (4) SMMM appoints one of Three Gables Board of Managers; and (5) SMMM "negotiates contracts with health plans on behalf of Three Gables." PX0211 ([redacted] (Three Gables) Decl., June 24, 2015, ¶¶ 11–13).

[90] PX0211 ([redacted] (Three Gables) Decl., June 24, 2015, ¶ 8).

[91] W. VA Code §§ 16-2D-2(j), 16-2D-3.

Attachment 2

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The impact of hospital consolidation —Update

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SUMMARY OF KEY FINDINGS

> **Hospital consolidation generally results in higher prices.** This is true across geographic markets and different data sources. When hospitals merge in already concentrated markets, the price increase can be dramatic, often exceeding 20 percent.

> **Hospital competition improves quality of care.** This is true under both administered price systems, such as Medicare and the English National Health Service, and market determined pricing such as the private health insurance market. The evidence is more mixed from studies of market determined systems, however.

> **Physician-hospital consolidation has not led to either improved quality or reduced costs.** Studies find that consolidation was primarily for the purpose of enhanced bargaining power with payers, and hence did not lead to true integration. Consolidation without integration does not lead to enhanced performance.

Introduction

In 2006, the Synthesis Project published a research synthesis on the impact of hospital mergers on prices, costs and quality of care (38). Since that time, the literature has expanded a great deal. We review those subsequent findings in this Synthesis Update. In particular, we focus on the impact of hospital mergers on prices and quality, and introduce a review of the evidence on physician-hospital consolidation (absent from the 2006 synthesis). The Patient Protection and Affordable Care Act (ACA) promotes Accountable Care Organizations (ACOs) and the bundling of payments across providers for an episode of care ("bundled payments"). Both of these features of the ACA encourage consolidation between hospitals and physician practices, which in fact has recently accelerated.

What is the relationship between hospital consolidation and prices?

Increases in hospital market concentration lead to increases in the price of hospital care.[1] This finding is consistent with the conclusion of the 2006 synthesis. Since the 2006 report, several econometric studies have revisited the relationship between price and hospital concentration, using data from a variety of sources, thereby expanding the geographic scope of the evidence base. The prior evidence came almost exclusively from California. The more recent evidence comes from more states (Florida, Massachusetts) and from the entire United States (see Table 1). Ultimately, increases in health care costs (which are generally paid directly by insurers or self-insured employers) are passed on to health care consumers in the form of higher premiums, lower benefits and lower wages (see, e.g., Baicker and Chandra (4)).

Table 1: Summary of hospital concentration studies since 2006

Author/ Year	Location of data	Time frame of analysis	Results
Akosa Antwi et al. (2009)	CA	1999–2005	Prices increased twofold over period and growth is highest in monopoly markets; however, changes in market concentration are not associated with differential price growth.
Dranove et al. (2008)	CA & FL	1990–2003	The association between hospital concentration and price increased during the 1990s and leveled off during the 2000s.
Melnick and Keeler (2007)	CA	1999–2003	Hospital concentration is positively associated with price growth; hospitals in large systems experienced higher price growth.
Moriya et al. (2010)	US	2001–2003	Insurer concentration is negatively associated with hospital prices; hospital price/concentration relationship is insignificant.
Wu (2008)	MA	1990–2002	Hospitals for which a rival hospital closed experienced a price increase relative to controls.

[1] Hospital concentration measures the extent to which a market is dominated by a few (or one) hospitals. All else equal, the higher the market concentration, the less vigorous is the resulting price competition. Consolidation within a market (e.g., via mergers) reduces independent market participants and by doing so increases market concentration.

Price increases exceeded 20% when mergers occurred in concentrated markets.

ANTITRUST ENFORCEMENT

In recent years, the Federal Trade Commission (FTC) has become more aggressive in challenging cases and has had dramatically more success than during the 1980s and 1990s. At the time of the 2006 synthesis, after a decade and a half long series of unsuccessful attempts to block hospital mergers, the Federal Trade Commission (FTC) had just successfully litigated its first hospital merger case. In this case, the FTC challenged a consummated merger and the court found that the merger between Evanston-Northwestern Hospital and Highland Park Hospital (both located in Evanston, Ill.) led to an increase in prices. The decision in this case is important because it established that proximate not-for-profit hospitals in urban areas can increase market power by merging. Importantly, the case also established that, post-acquisition, hospitals are willing to use their increased market power to raise prices.

The findings in the Evanston-Northwestern case gave the FTC a firm footing for litigation of hospital merger cases. Since 2006, the FTC has successfully brought suit to stop several hospital mergers. Of particular note is the ProMedica case, in which a federal judge granted the FTC an injunction in its antitrust challenge of ProMedica's acquisition of a hospital.[2] It is the first prospective merger court victory for the enforcement agencies in decades.[3]

[2] United States of America Federal Trade Commission Office of Administrative Law Judges, Docket No. 9346, In the Matter of ProMedica Health System, Inc., December 12, 2011 *(http://www.ftc.gov/os/adjpro/d9346/120105promedicadecision.pdf).*

[3] Prospective merger analysis seeks to assess the competitive harm from a transaction principally based on information available prior to the consummation of the transaction.

Prices paid to hospitals by private health insurers within hospital markets vary dramatically (22). The evidence points to differences in hospital bargaining leverage as a principal driver of the difference between relatively expensive and inexpensive hospital systems within the same hospital market.

Some evidence suggests that growth in prices is related to market concentration. An important policy question is whether, in addition to leading to a one-time price increase, hospital mergers increase the rate of growth of hospital prices. A few studies have addressed this issue (see Table 1), with the most recent studies giving somewhat conflicting answers to this question. Melnick and Keeler find a positive correlation between price growth and market concentration (28). On the other hand, Akosa Antwi et al. find that monopoly markets experienced the highest rates of growth, but there was little relationship between changes in concentration and the growth of prices (2).

Hospital mergers in concentrated markets generally lead to significant price increases. Several studies have taken a retrospective look at the impact of recent hospital mergers on prices paid to hospitals by health insurers. This research focuses on a "case study" merger and examines the change in inpatient prices after the merger compared with a set of "control" hospitals (see Table 2). The magnitude of price increases when hospitals merge in concentrated markets is typically quite large, most exceeding 20 percent. Analyses that use data spanning large geographic regions that encompass many hospital mergers also find that, for the most part, hospital mergers in concentrated markets result in significant price increases.

Table 2: Summary of hospital merger event studies since 2006

Author/ Year	Location of mergers	Time frame of analysis	Results
Dafny (2009)	US	1999–2005	Merging hospitals had 40% higher prices than non-merging hospitals.
Haas-Wilson and Garmon (2011)	Evanston, IL Mergers of Evanston-NW & Highland Park and St. Therese & Victory Memorial	1990–2003	Post-merger, Evanston-NW hospital had 20% higher prices than control group; no price effect at St. Therese–Victory.
Tenn (2011)	SF Bay Area, CA Sutter/Summit merger	1999–2003	Summit prices increased 28.4% to 44.2% compared with control group.
Thompson (2011)	Wilmington, NC New Hanover-Cape Fear merger	2001–2003	3 of 4 insurers experienced a large price increase; 1 insurer experienced a decrease in prices.
Town et al. (2006)	US	1990–2002	Aggregate hospital merger activity increased the uninsured rate by .3 percentage points.

Hospital competition improves quality.

What is the relationship between hospital consolidation and quality?

At least for some procedures, hospital concentration reduces quality. Since the 2006 synthesis report, many new econometric studies have examined the impact of hospital competition on quality of care, using data from a variety of sources, including studies from outside the United States. The new econometric studies can be divided into two types: those that examine markets with administered prices and those that examine markets with market determined prices.

Hospital competition improves quality under an administered pricing system. Studies of the impact of competition on hospital quality under an administered price regime are based on the U.S. Medicare program and the English National Health Service (NHS), which made a transition to administered prices in a 2006 reform. The evidence presented in the 2006 synthesis was entirely from the Medicare program. The findings from those studies were mixed, but the strongest evidence was that tougher competition led to enhanced quality of care. Those results are reinforced by newer studies from the NHS, which uniformly show a positive impact of competition on the quality of care. The 2006 reform in the NHS was intended to create competition among hospitals for patients, by allowing patients to choose their hospital, while setting regulated prices in a manner very similar to the Medicare DRG-based system.[4] The studies all show a substantial impact of the introduction of hospital competition in the NHS on reducing mortality rates (see Table 3). While it is not possible to draw direct conclusions about the United States based on evidence from the United Kingdom, these studies add to the growing evidence base that competition leads to enhanced quality under administered prices.

Table 3: Summary of hospital quality-competition studies with administered prices since 2006 (continued on next page)

Author/ Year	Location of data	Time frame of analysis	Does competition increase quality?	Results
Cooper et al. (2011)	England	2002–08	Yes	Acute myocardial infarction (AMI) mortality fell significantly faster after the reforms in less concentrated markets. This led to 300 fewer AMI deaths per year.
Gaynor et al. (2010)	England	2003–04, 2007–08	Yes	All-cause and AMI mortality fell significantly faster after the reforms in less concentrated markets. There were no effects on length of stay, expenditures or productivity. This led to 4,791 life years saved from deaths from all-causes averted, and 1,527 AMI life years saved. Benefits outweigh costs.
Bloom et al. (2010)	England	2006	Yes	Hospitals in less concentrated markets have better management, and better management leads to reduced mortality. Adding an additional hospital close by improves management quality and thereby reduces heart attack mortality by 10.7%.

[4] The NHS reforms introduced: patient choice among hospitals, regulated prices, and performance incentives for hospital managers. Previously a local public entity selectively contracted with hospitals (often sole source) to provide care for their patients. Contract negotiations focused on price, not quality. Patients had little choice and hospital managers had little incentive to compete for patients on quality. See Cooper et al. (13), Gaynor et al. (20) for more details.

PHYSICIAN-HOSPITAL CONSOLIDATION

It is important to distinguish between consolidation and integration. Consolidation is simply bringing together two (or more) previously independent entities. Integration implies more—in particular, elimination of unnecessary duplication, creating systems to bring the previously separate entities together, and comprehensive management of the organization as a whole.

Limited data show that consolidation between physicians and hospitals is increasing. Increasing numbers of physicians are working as hospital employees and increasing numbers of physician practices are owned by hospitals. The number of physicians working as employees grew from around 31 percent in 1996–97 to 36 percent in 2004–05 (26). Another survey found that the percentage of primary care physicians employed by hospitals rose from under 20 percent in 2000 to over 30 percent in 2008 and the percentage of specialists employed by hospitals rose from just over 5 percent to 15 percent (25). The percentage of physician practices owned by hospitals rose from around 20 percent in 2002 to over 50 percent by 2008 (25). On the other hand, the percentage of hospitals with other kinds of physician-hospital relationships, such as physician hospital organizations (PHOs) and independent practice associations (IPAs), has fallen steadily from 2000 through 2010 (3).

Physician-hospital consolidation studied so far did not involve true integration.

PHYSICIAN-HOSPITAL CONSOLIDATION, CONT.

Consolidation between physicians and hospitals is of great interest both because of the potential consolidation has for creating integration, and the impetus created by the ACA's push towards creating Accountable Care Organizations (ACOs) and emphasis on bundled payments. In theory, there are substantial gains to be made from consolidation. However, there are also concerns that consolidation may have adverse impacts on competition. Consolidation can simply be an attempt by providers to enhance bargaining power vis à vis insurers.

The research evidence on physician-hospital consolidation does not find evidence supporting either clinical gains or cost reductions (9, 27). The most likely reason is that most consolidation did not lead to true integration. Evidence on this topic comes from examination of physician-hospital organizations in the 1990s. Current consolidation is too recent to allow for studies of its effects. While the successes of certain prominent integrated organizations, such as Geisinger Health System, InterMountain Healthcare, or the Mayo Clinic, are frequently mentioned as support for gains from consolidation, these are ad hoc examples, selected for their positive results. They do not constitute research evidence.

Table 3: Summary of hospital quality-competition studies with administered prices since 2006 (continued from previous page)

Author/ Year	Location of data	Time frame of analysis	Does competition increase quality?	Results
Beckert et al. (2012)	England	2008–09	Yes	Hip replacement patients are significantly more likely to choose higher-quality hospitals. A 5% increase in a hospital's mortality rate decreases demand by 6.9%. Hospital mergers substantially reduce the responsiveness of demand to mortality.
Gaynor et al. (2011)	England	2003–04, 2007–08	Yes	Coronary artery bypass graft surgery (CABG) patients' responsiveness to hospital mortality rates is substantially higher after the reforms. A 1% increase in a hospital's mortality rate reduces its market share by over 4% after the reforms. The change in elasticity due to the reform led to a significant reduction in mortality.

Competition improves quality where prices are market determined, although the evidence is mixed (Table 4). There have also been substantial additions to this literature since the 2006 synthesis. The findings from these studies are more mixed than the findings of recent studies of markets with administered prices. This stands to reason: if hospitals can compete on both price and quality, then when they face tougher competition they will choose to compete by whichever means is most effective. If buyers are considerably more responsive to price than quality (for example, if price is easier to measure), then enhanced competition can lead to lower prices, but also less attention to quality. On the other hand, if quality is particularly salient, then tougher competition can enhance quality.

All of the U.S. studies except for one find that competition improves quality, while the English studies uniformly find negative effects.[5] The difference appears to most likely be due to differences in the possibility of patient choice between the United States and England (in the 1990s).

In the United States, prices are negotiated by price-sensitive insurers. These insurers have strong incentives to obtain lower prices, since their customers, typically employers, are responsive to price differences. Insurers, however, do not engage in sole-source contracting. They contract with sets, or "networks," of hospitals. Patients are thus free to exercise choice of hospital within a network (which is often quite broad). Hospitals have an incentive to compete on quality in order to attract patients within a network. As a consequence, there are both price and quality incentives in play.

In contrast, in England in the 1990s, negotiation was done by a single local public entity (Primary Care Trust, or PCT) for all individuals in a geographic area, and contracts were sole source. Purchasers could use savings obtained via lower prices to purchase more care (particularly elective care). Hospitals' operating incomes came from contracts with purchasers. Information on quality was not publicly available. This led to negotiations focused on price, not quality. As a consequence, patients had little or no choice of hospital, and there was far less incentive for hospitals to compete on quality to attract patients.

[5] The English studies are of a prior reform in the 1990s which emphasized price competition (see Propper et al. (31) for more details).

Physician-hospital consolidation is often motivated by enhanced bargaining power.

A major next step for research in this area is sorting out the factors that determine whether competition will lead to increased or decreased quality. Whether competition leads to increased or decreased quality depends on its relative impacts on how responsive hospital choice is to price versus quality. Future research can focus on trying to recover estimates of these key elements, as well as understanding institutional and policy factors that affect the competitive environment.

Table 4: Summary of hospital quality-competition studies with market determined prices since 2006

Author/ Year	Location of data	Time frame of analysis	Does competition increase quality?	Results
Sohn and Rathouz (2003)	California	1995	Yes	Competition reduced angioplasty mortality.
Encinosa and Bernard (2005)	Florida	1996–2000	No	Low hospital operating margin (possibly due to competition) led to more patient safety events.
Propper et al. (2004)	England	1995–98	No	Hospitals facing more competitors had higher mortality rates in a deregulated environment.
Capps (2005)	New York	1995–2000	Yes	Hospital mergers had no impact on many quality indicators, but did lead to increases in mortality for AMI and heart failure patients.
Propper et al. (2008)	England	1991–99	No	Mortality increased at hospitals with a larger number of competitors following deregulation.
Howard (2005)	US	2000–02	Yes	Demand for kidney transplants is responsive to graft failure. As demand becomes more responsive, hospitals have to compete harder to attract or retain patients.
Abraham et al. (2007)	US	1990	Yes	Quantity increases with the number of hospitals. This will happen only if quality increases or price falls. This therefore implies that an increase in the number of hospitals increases competition.
Cutler et al. (2010)	Pennsylvania	1994–95, 2000, 2002–03	Yes	Removing barriers to entry in the form of certificate of need laws led to entry and increased market shares for low mortality rate CABG surgeons.
Escarce et al. (2006)	California, New York, Wisconsin	1994–99	Yes	Mortality for patients with a variety of conditions is lower in less concentrated markets in California and New York. There are no effects in Wisconsin.
Rogowski et al. (2007)	California	1994–99	Yes	Mortality for patients with a variety of conditions is lower where hospitals have more competitors.
Romano and Balan (2011)	Chicago Primary Metropolitan Statistical Area (PMSA)	1998–99, 2001–03	Yes	A hospital merger in the Chicago suburbs had no effect on some quality indicators, and harmed some others.

PHYSICIAN-HOSPITAL CONSOLIDATION, CONT.

Consolidation is often motivated by a desire to enhance bargaining power by reducing competition. Burns et al. (10) find that hospital-physician alliances increase with the number of HMOs in the market. They infer that providers may be consolidating in order to achieve or enhance market power. More recently, Berenson et al. (6) conducted 300 interviews with health care market participants, and reported that increased bargaining power through joint negotiations is one of several reasons for hospital-physician alliances.

Ciliberto and Dranove (12) and Cuellar and Gertler (14) are econometric studies that examine the impact of physician-hospital consolidation. Both papers look at the effects of physician-hospital consolidation on hospital prices. The two studies find opposite results—Cuellar and Gertler find evidence consistent with anticompetitive effects of physician-hospital consolidation, while Ciliberto and Dranove find no such evidence.

It appears that consolidation is often motivated by a desire to enhance bargaining power by reducing competition, but the limited evidence on whether this leads to higher hospital prices is mixed.

Conclusions and Policy Implications

Additions to the evidence base since the 2006 research synthesis reinforce the findings that hospital competition leads to lower prices. The expanded evidence on competition and quality shows that competition leads to higher quality when there are administered prices. The evidence is less straightforward when prices are market determined, although the majority of studies show that competition improves quality. Our review of the research on physician-hospital consolidation does not suggest that such consolidation (absent true integration) will lead to cost reductions or clinical improvement, and may lead to enhanced market power for providers.

Policy developments since the 2006 synthesis give policy-makers both some cause for optimism and some cause for concern.

- **The FTC's recent successes in blocking horizontal hospital mergers should prevent further consolidation, thereby constraining price increases and likely improving the quality of care.**
- **Nonetheless, many hospital markets remain highly concentrated and noncompetitive. And, the prospect that the ACA could encourage greater physician-hospital consolidation gives some cause for concern.**
- **While the current evidence base is not very supportive of initiatives to encourage physician-hospital integration, given the current interest in this kind of consolidation and the promotion of ACOs and bundled payments, more evidence is clearly needed on the impacts of consolidation on costs, quality and prices.**

THE SYNTHESIS PROJECT (Synthesis) is an initiative of the Robert Wood Johnson Foundation to produce relevant, concise, and thought-provoking briefs and reports on today's important health policy issues.

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Attachment 3

New Health Care Symposium: Consolidation And Competition In US Health Care

Martin Gaynor

March 1, 2016

Editor's note: *This post is part of a* Health Affairs *Blog symposium stemming from "The New Health Care Industry: Integration, Consolidation, Competition in the Wake of the Affordable Care Act," a conference held recently at Yale Law School's Solomon Center for Health Law and Policy. Links to all posts in the symposium will be added to Abbe Gluck's introductory post as they appear, and you can access a full list of symposium pieces here or by clicking on the "Yale Health Care Industry Symposium" tag at the bottom of any symposium post.*

Virtually all health care in the United States is delivered through markets, with a few small exceptions for specific groups, such as the Veterans Administration. This means that the health care system will work only as well as the markets upon which it relies. However, there is growing concern that those markets do not work as well as they should: prices are high and rising, there are quality problems, and there is too little organizational innovation.

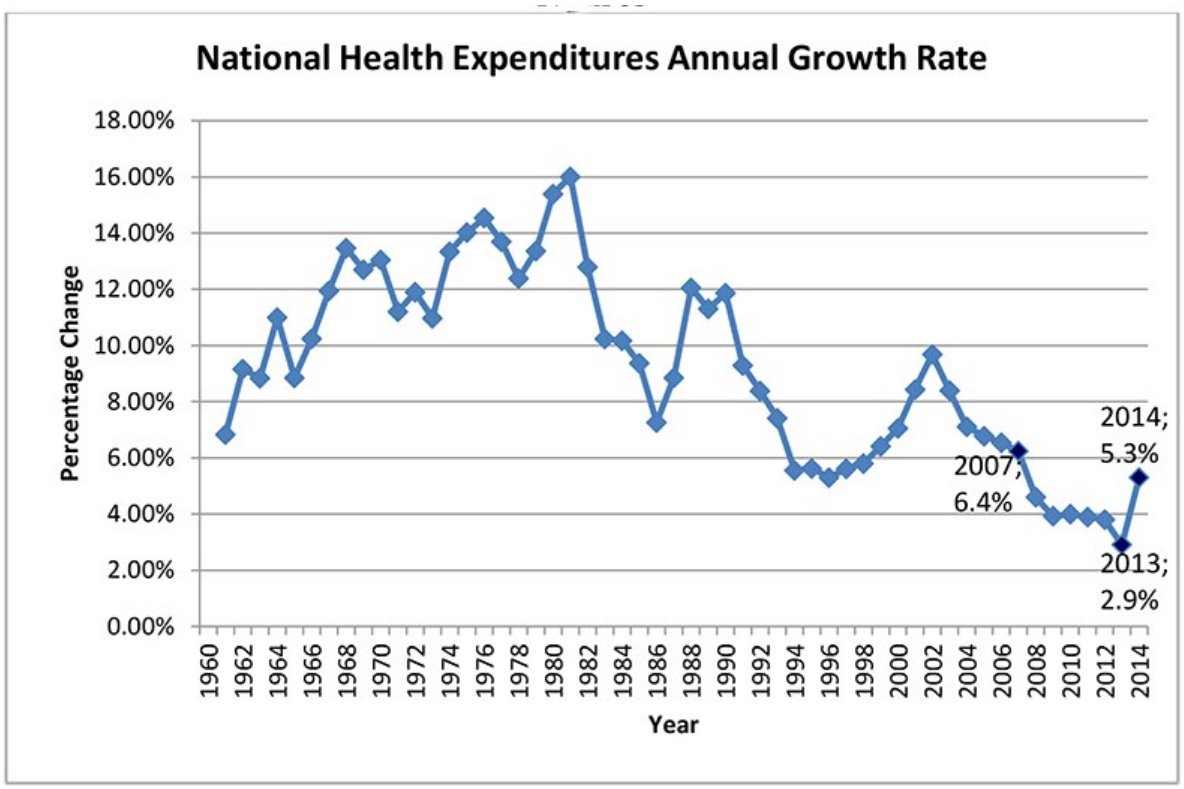
In my opinion, consolidation, concentration, and market power have a great deal to do with these problems. Many health care markets in the country are already highly concentrated, and more consolidation is happening. This isn't good for patients and their families, either for their pocketbooks or for the quality of care they receive. Moreover, what happens in health care markets matters for the success of the Affordable Care Act (ACA) specifically, and for all health reform generally. Markets are the chassis upon which the health care system runs — and if the chassis is broken, the car won't run, no matter how elegant or well designed the reforms designed to act upon it.

In what follows I describe what's happening in health care markets, with regard to health spending, prices, and consolidation. In particular, I focus on the potential benefits and potential harms of consolidation and what research evidence we have on both. I then turn to briefly discuss directions for policy, given the problems with markets I have described.

What's Happening?

The US has experienced high and growing health spending for decades, until very recently. Figure 1 illustrates the annual growth rates of national health expenditures from 1961-2014. As can be seen, growth in health spending has fluctuated substantially over the years, but has always been positive; health spending has grown every year since 1960, it's just a question of how fast.

Figure 1: Health Care Cost Growth 1961-2014



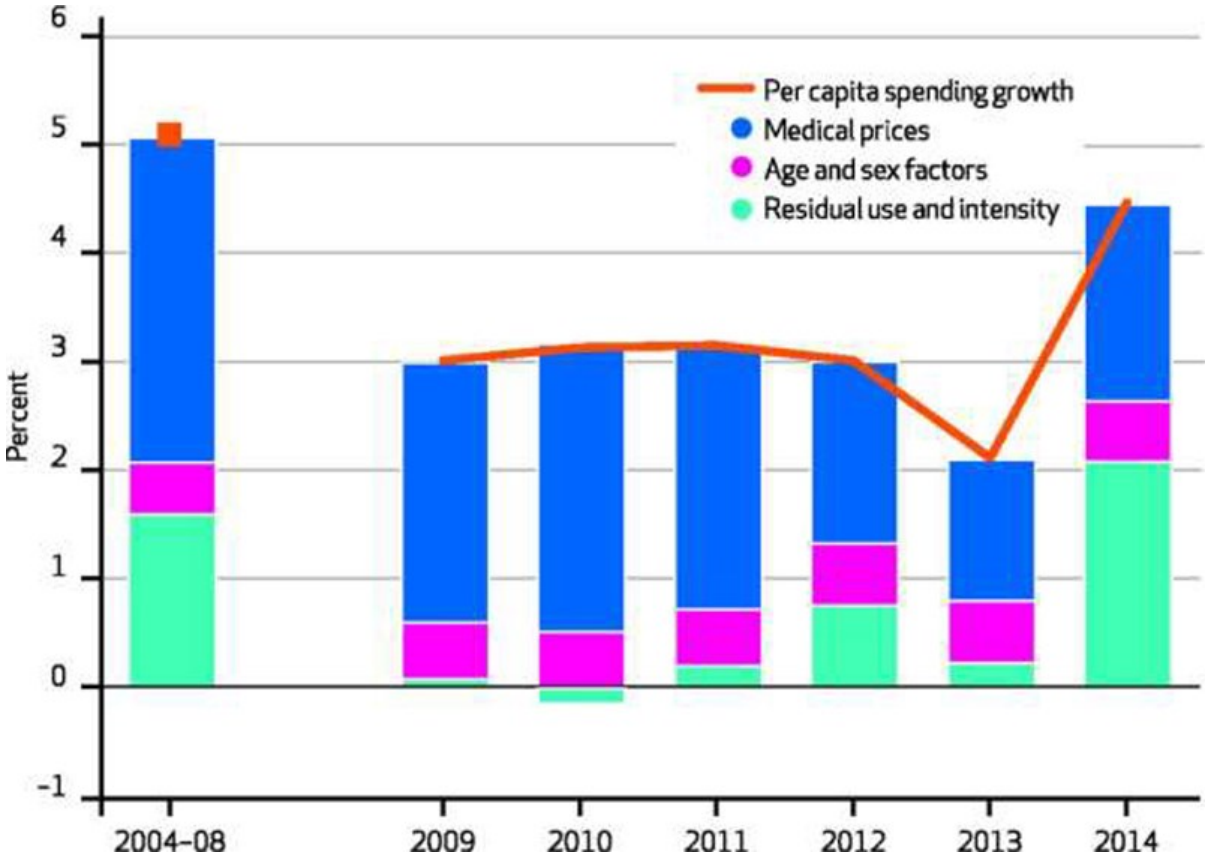
Source: Historical National Health Expenditure Data, National Health Expenditure Accounts, Centers for Medicare and Medicaid Services, US Department of Health and Human Services,

As many have noted, there has been substantial slowing of the rate of growth in recent years (one can see a marked downward trend since 2002), although the rate of growth increased again in 2014. It's nearly impossible to forecast the future (at least with accuracy), but it seems likely that health care spending will grow at a high enough rate that it will remain an important policy issue for the US.

Given that, it's critical to understand what's driving the growth in health spending. The first cut is to decompose spending into its constituent components. Spending is price times quantity, which is simple enough. In addition, health care prices or quantities could also increase due to intensity of service. The Centers for Medicare and Medicaid Services (CMS) national expenditure accounts team decomposes per capita growth in health spending into prices, age, and sex factors, and residual use and intensity. As can be seen from Figure 2, growth in prices is a major factor driving increases in total

national health spending. The influence of price growth is remarkable, since this includes Medicare and Medicaid, which have government-set prices that are not subject to substantial growth.

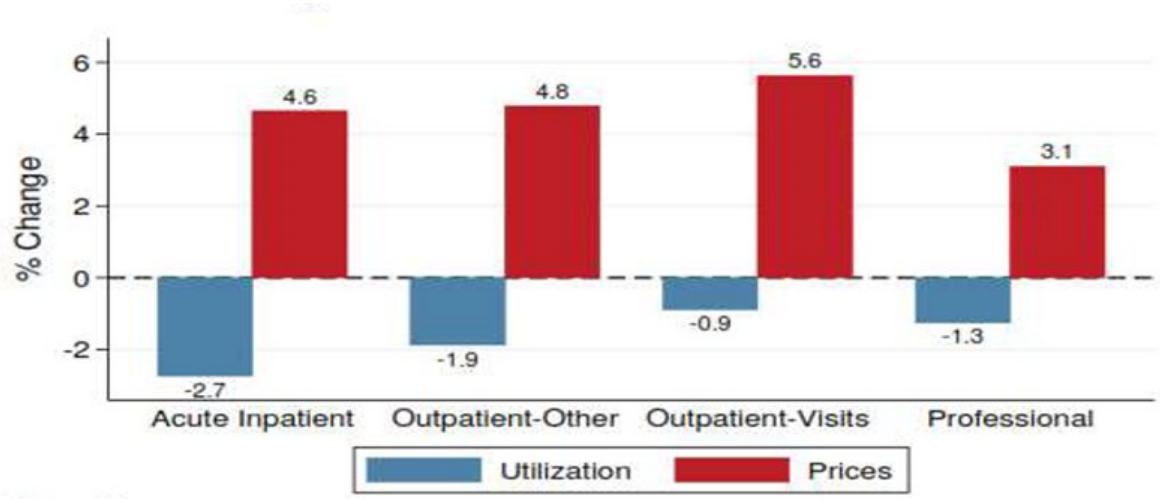
Figure 2: Factors Accounting for Growth in Per Capita National Health Expenditures, 2004-2014



Source: Anne B. Martin et al. (2016) "National Health Spending In 2014: Faster Growth Driven By Coverage Expansion And Prescription Drug Spending," Health Affairs, 35(1):150-160.

The impact of prices on spending growth is even more pronounced when focusing only on private health spending. Figure 3 illustrates the sources of growth in health spending for those with employer-sponsored health insurance in 2014. The red bars are the growth due to prices and the blue bars capture growth in spending due to utilization. Clearly prices are the drivers of spending growth, as utilization decreased across all the categories of services documented there.

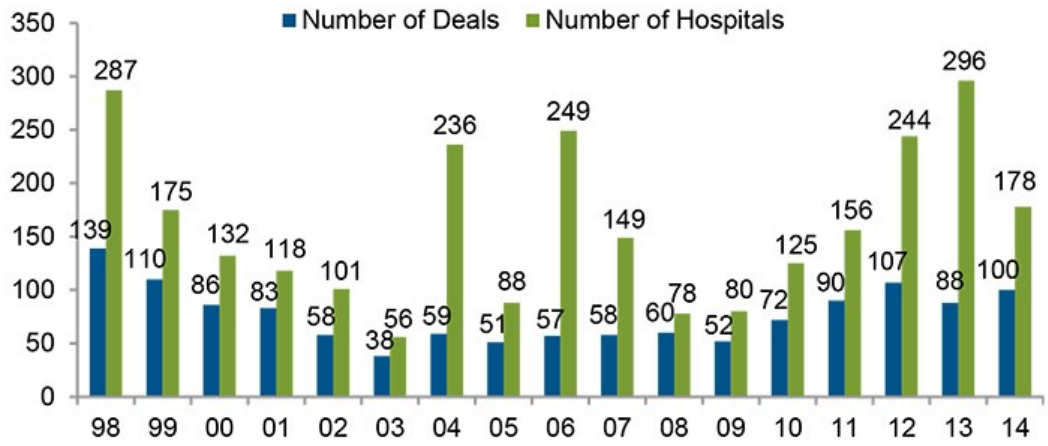
Figure 3: Changes in Utilization and Prices of Medical Service Categories, 2014



Source: *2014 Health Care Cost and Utilization Report, Figure 8, Health Care Cost*

There has been a tremendous amount of consolidation in health care over the past 20-plus years, in particular among hospitals. Figure 4 illustrates this. There have been over 1,200 hospital mergers since 1994, involving a substantial portion of US hospitals. There was a large hospital merger wave in the mid- to late-90s, followed by some slowing. Hospitals have recently started merging again at a dizzying rate; there were 457 mergers from 2010-2014.

Figure 4: Hospital Mergers and Acquisitions, 1998-2014



Source: *American Hospital Association, Trendwatch Chartbook 2015, Chart 2.9*

There has been so much consolidation that most urban areas in the US are now dominated by one to three large hospital systems — examples include Boston (Partners), the Bay Area (Sutter), Pittsburgh (UPMC), and Cleveland (Cleveland Clinic, University Hospital) (Note 1). It is also now more likely that further consolidation will combine close competitors, given how many mergers have already occurred.

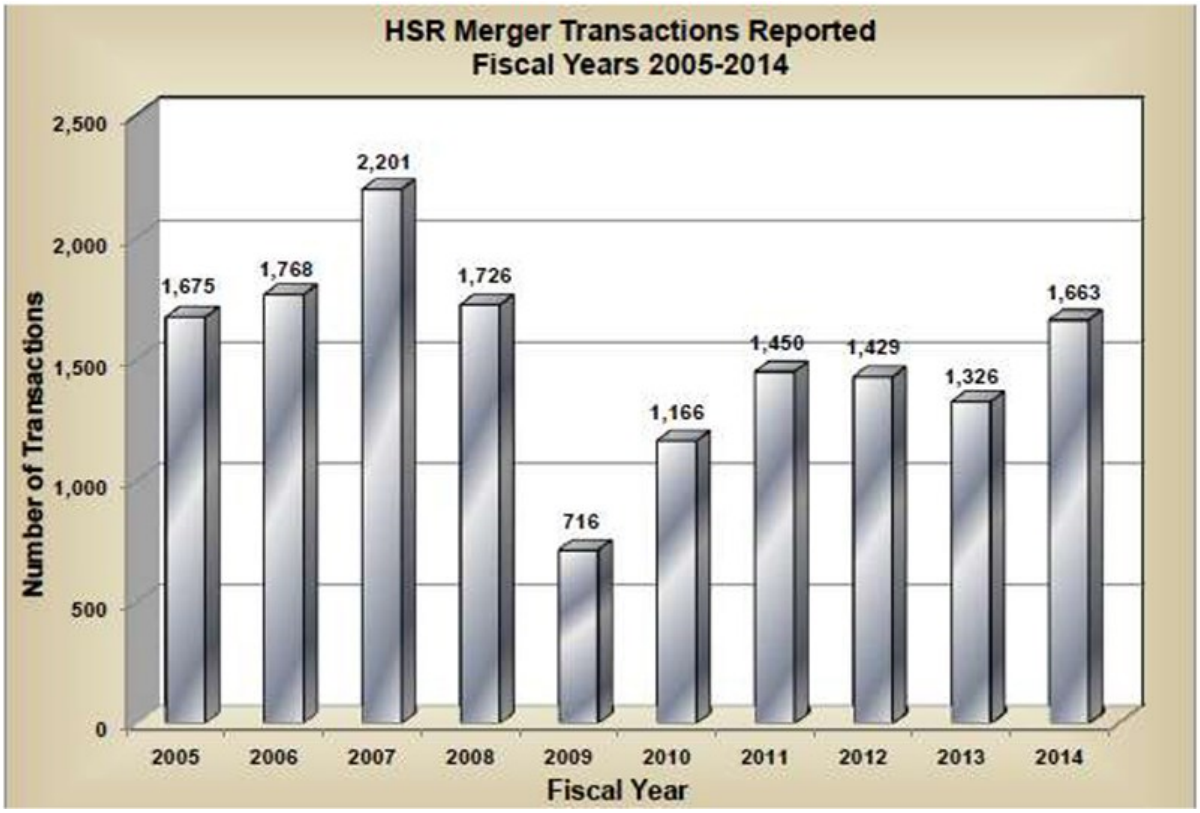
There has been a more recent trend towards acquisitions of physician practices by hospitals. While there are no comprehensive numbers on this phenomenon, it's reported that there has been a 32 percent increase in the number of doctors employed by hospitals over the last decade (Health Forum LLC. AHA hospital statistics 2012 edition. Chicago (IL): Health Forum LLB; 2011.), and that 32.8 percent of physicians are now employed by hospitals. (Account creation required.) The overall picture is of a highly concentrated provider sector that is rapidly becoming even more consolidated.

There are a number of explanations given for this rapid and extensive consolidation by health care providers. One has to do with the desire for enhanced bargaining power in negotiations with insurers. This seems to have been one of the drivers of the 1990s hospital merger wave: hospital consolidation followed the rise of managed care. It is also commonly thought to be a motive for hospital mergers between competitors today.

Another explanation has to do with the movement away from fee-for-service payments and towards new payment methods that shift risk to providers. Providers commonly state a perceived need to spread the risk associated with these new payment methods by getting bigger. (I note that bigger isn't always better. Small and nimble is sometimes a better way to ride out, and even prosper in, turbulent times.)

Another commonly stated reason for consolidation has to do with the changes wrought by the ACA and change in the health care sector generally. Providers may be attempting to shelter themselves from uncertain times by getting larger. It should also be noted that there has been a surge in mergers across all sectors of the economy, due in part to some post-recession "catching up" and the availability of ready cash. Figure 5 illustrates this. This suggests that some of what we observe with health care consolidation may be due to economy-wide, as opposed to health care-specific, factors.

Figure 5: Economy Wide Mergers, 2005-2014 (Hart-Scott-Rodino Reportable Mergers)



Source: Hart-Scott-Rodino Annual Report, Fiscal Year 2014, Federal Trade Commission and Department of Justice.

There are also a set of explanations for consolidation related to "The Triple Aim" of improving quality, reducing costs, and supporting population health. The claim is that consolidation will allow providers to improve quality for patients by better coordinating care or by having the scale to invest in information technology systems or other processes. Consolidation is also said to decrease costs by reducing or eliminating duplication and allowing firms to achieve economies of scale. Last, providers claim that they need to consolidate in order to have the scale and scope to address population health.

Potential Benefits Of Consolidation — And Evidence

While there is a logic to these claims regarding the potential benefits of consolidation, the evidence does not support them. Hospital mergers do not generally lead to reduced costs or improved quality. Merely changing ownership via consolidation does not imply

integration. Not surprisingly, real integration is what's required to realize any potential benefits from consolidation, and integration is hard.

Further, the vaunted reputation of integrated delivery systems does not hold up to inspection. While integrated delivery systems may seem in principle to be a superior form of organization, it turns out that most integrated delivery systems are neither cheaper nor better than independent providers.

Potential Harms Of Consolidation — And Evidence

The concern about consolidation is that mergers between close competitors will substantially damage or eliminate competition in markets where this occurs. Providers compete to be included in payers' networks based on price and quality. If two (or more) providers are close competitors, a merger between them will eliminate that competition. Competition in the market will be harmed unless there are sufficient remaining alternative providers that are close substitutes for the merged entity.

This concern is particularly pronounced now that US health care markets are so concentrated. If mergers have already reduced the number of close competitors in a market, the next merger is quite likely to seriously harm competition.

There is very strong evidence that mergers between hospitals that are close competitors lead to substantial increases in price. There is an extensive scientific literature examining hospital competition, and it consistently shows that competition leads to significantly lower prices (and vice versa). Studies of hospital mergers show that mergers between close competitors can lead to price increases anywhere from 20 to up to 60 percent. It's important to recognize that while these price increases are paid directly by insurers, they are ultimately passed on to consumers in the form of higher premiums or reduced total compensation for workers with employer sponsored health insurance.

There is now also substantial research evidence on the impact of consolidation on the quality of care. There is strong evidence that reduced competition harms quality when prices are administered (as for the Medicare program or in the English National Health Service). The effects of competition on quality when prices are market determined (as they are for the privately insured) is less clear, although in my opinion the best studies

to date find that competition is associated with better quality. Clearly more work is needed here.

Why Should We Care?

We've reviewed what's happening with regard to health care spending, prices, and consolidation. Why should we care about all this? We should care because health care spending growth is high and unsustainable. Unless it changes we are mortgaging our future and our children's futures.

Much of higher private health care spending is paid for by workers. Higher health care costs are passed on by employers to their workers. The average American family hasn't had an increase in their real income net of health care costs in a long time. In addition, these costs are a disproportionate burden on the least fortunate among us — higher prices are a greater burden for low-income individuals. Higher private prices make less remunerative public programs (such as Medicaid) less attractive to providers, likely harming access.

Rigidities in health care markets lead to higher prices, lower quality, and likely impede innovation. Lower quality of care can have profound consequences for patients. Firms with dominant market positions don't necessarily have strong incentives to innovate. This may be one reason that the health care sector has been so slow to develop and adopt new and better ways of organizing and delivering care, including taking full advantage of advances in information and medical technology.

Another potentially serious consequence of provider market power is that dominant providers may have the ability to resist attempts by insurers to introduce payment reforms, or simply to subvert the incentives in those new payment methods. A dominant provider can bargain with an insurer not only over payment levels, but over payment methods. Dominant providers can simply refuse to accept new payment methods if status quo methods (such as fee for service) are more beneficial for them. There are anecdotal reports of this happening. More broadly, how providers are paid can't create competition, and some methods (e.g., reference pricing) will work poorly or not at all if there's insufficient competition.

Even if a provider accepts a new payment method, it can undo the incentives in that payment method if it negotiates a high enough rate. The methods in payment reform

rely on rates being close enough to providers' costs to offer an incentive to reduce costs or improve quality. If a dominant provider negotiates a high enough rate they will face little pressure and therefore have little or no incentive to respond.

What Should We Do? Time To Focus On Supply Side Policies

Policies toward health care markets can be roughly divided into "demand side" and "supply side" policies. Demand side policies are those that act on consumers with regard to their use of health care. These include coverage expansions, cost sharing, and information. At this point, I don't see further major new policies with regard to coverage expansion following the ACA. There is a lot of discussion about consumer cost sharing (e.g. high deductible health plans) and information (e.g., transparency).

Health insurance policies should have some consumer cost sharing (tailored to what the individual can afford). This lowers premiums and provides incentives to reduce utilization. Transparency aims to provide consumers with information about prices and quality, and in particular what their out-of-pocket expenses will be for a service at particular providers.

These are all fine things to do (within reason). However, it's not realistic to expect these policies to drive change in health care markets by themselves. One key reason has to do with the nature of health care expenses. It's well known that a small proportion of individuals account for the vast majority of spending. Those individuals have expenses that are (and should be) well beyond the cost-sharing features of any reasonable health insurance plan. What that means is that they have no incentive to choose care or providers based on costs, no matter how good the information is that they have.

As a consequence, the majority of health care costs are not going to be responsive to cost sharing or transparency initiatives. This doesn't mean we shouldn't bother with such initiatives—they can still be beneficial—but we shouldn't expect these kinds of policies to drive health care markets. In addition, some recent evidence suggests that consumers don't respond rationally to cost-sharing incentives, casting doubt on the ability of such methods to reduce costs or curtail inappropriate utilization.

Last, as stated previously, many markets are dominated by large powerful providers. In situations like this consumers have little choice, so providing them with incentives or information will accomplish little (if anything at all).

As a consequence, in my opinion it is time to focus on supply side policies. There are two broad supply side categories: payment reform/incentives and competition policy. By payment reform I mean changing the methods by which providers are paid to encourage higher-quality care at lower cost. By competition policy I mean the constellation of things that affect the functioning of health care markets.

Competition policy includes federal and state antitrust enforcement. It also includes federal and state policies that set the "rules of the road" for markets and profoundly affect who is in those markets and how (and if) they compete: examples include any willing provider regulations; certificates of need; network adequacy regulations and oversight; transparency requirements; market monitoring, and scope of practice regulations. These are affected by both state and federal actors. We need policies that will encourage and support beneficial forms of integration while preserving and promoting competition.

As I alluded to earlier, payment and competition policies are complements. Providers who face little or no competition can subvert payment policy, rendering it ineffective. Conversely, payment policy can augment competition, contracting on things markets may not deliver on their own.

The US is facing a great challenge to our health care system. If left unchecked, consolidation could undermine attempts to control costs, improve care and increase the responsiveness and innovativeness of our health care system. We need new and vigorous supply side policies to encourage beneficial organizational change and competition. If we fail, we may have an even more expensive, less responsive health care system that will be exceedingly hard to change.

Author's note: *This paper is based on a presentation I gave at the Solomon Center Inaugural Conference "The New Health Care Industry: Integration, Consolidation, Competition in the Wake of the Affordable Care Act," at Yale University, November 12, 2015. I am grateful to the organizers Abbe Gluck and Fiona Scott Morton, to Michael Ulrich and Chris Fleming for help with this paper, and to the other conference participants for valuable interactions and comments. All opinions and errors, however, are mine alone.*

Note 1

There has also been substantial consolidation in health insurance. Leemore Dafny documents this in her post in this symposium.

Attachment 4

Overcoming the Pricing Power of Hospitals

Bob Kocher, MD
Ezekiel J. Emanuel, MD, PhD

AMID A PERIOD OF UNPRECEDENTED CHANGE AND IMprovement in the US health system, the changes leading to larger local hospitals and health systems, including academic medical centers, are cause for concern. For decades, the dominant business strategy of local hospitals and health systems has been to gain local and regional market share and use that local market power to increase prices charged to private payers.

This model has been successful because large businesses must select health plans that satisfy the physician and hospital preferences for hundreds if not thousands of employees. Consequently, employers opt for broad and inclusive networks. This reduces their bargaining power, forcing employers to become price takers and tolerate 8% to 10% year-on-year increases in hospital prices.[1]

Moreover, health plans seem to have become immune to these price increases for 2 reasons: first, any single hospital, no matter how egregious its price increases, has only a small effect on total premiums. Second, price increases are common to all insurers, and do not constitute a competitive disadvantage. However, in a market where all hospitals aggressively increase prices, the net effect is large.

Hospital Spending and Consolidation

Hospital spending remains the largest category of health care costs, consuming nearly one-third of national health expenditures.[2] More than $880 billion will be spent on hospitals in 2012,[2] which is more than Social Security spending ($769 billion) or defense spending ($671 billion). Even more importantly, hospital price increases are now the largest contributor to increases in insurance premiums. According to an estimate for 2013, hospital prices will increase 8.2%—more than any other sector of health care spending.[1]

If the hospital market were functioning well, price increases would not continuously outpace inflation and would not be immune to a recession in which prices in the rest of the economy remained flat or decreased. Moreover, hospitals are increasing prices as demand declines—exactly the opposite of pricing behavior in competitive businesses.

Hospital consolidation is a long-term trend that predates enactment of the Affordable Care Act. It has multiple contributing factors, including the decline in hospital stays because an increasing number of procedures are performed at outpatient facilities. For instance, today, except for bone marrow transplantation, routine chemotherapy is almost never administered in the hospital—a substantial change from the mid-1990s. This decline in inpatient hospital use means there are too many hospital beds and low occupancy rates in many communities.

Health care reform has stimulated additional consolidation as well as having hospitals purchasing physician practices. Hospitals now employ a majority of physicians.[3] Hospitals justify this consolidation as necessary to support integrated care, investments in health information technology, and new payment models like accountable care organizations. In 2011, there were 86 hospital mergers and acquisitions, which was the most in the last decade.[4]

Hospital consolidations have not created high-quality and low-cost integrated delivery systems. Prices for hospital services are 13% to 25% higher in consolidated hospital markets.[5]

Challenges in Countering Hospital Pricing Power

State and federal policy makers, regulators, and health plans have struggled to design policies to counteract hospital market power. Hospitals, particularly academic medical centers, have substantial political clout. In many communities, hospitals are the largest employers and create high-paying jobs. For instance, hospitals in San Francisco, California, and Boston, Massachusetts, are among the largest local employers and sources of new jobs. Because price increases in part lead to higher wages for hospital workers, which translate into local economic growth, efforts to reduce hospital market power are politically complicated.

Patients and physicians frequently exacerbate the problems posed by hospital consolidation. Patients typically seek care at a hospital near their home. Neither the referring physicians nor patients typically know the prices charged by various hospitals or differences in the outcomes and patient experience that may justify price differences. With the exception of a small number of procedures (eg, organ transplantation), health plans have been ineffective at guiding patients to centers of excellence or hospitals offering better value. Despite high cost-sharing benefit designs and the increasing acceptance of consumer-directed health plans, individual members have rarely demanded price data and are subjected to out-of-pocket bills that amount to hundreds of dollars. In some cases, these bills are higher based solely on which local hospital patients choose.

3 Steps to Reduce Hospital Market Power

Incentivize Physicians to Be Sensitive to Hospital Prices. Changing reimbursement from fee-for-service to payment mechanisms that make physicians sensitive to the value of the hospital services can serve as an impediment to high prices. Shared-savings programs, bundled payments, reference-based

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pricing payment models, and global payments reward physicians for delivering high-value care. In designing these programs, it is important to ensure that physicians are responsible in some way for the total costs of care and therefore sensitive to the prices charged by hospitals. Well-designed programs produce lower hospital resource use, fewer bed days, and fewer emergency department visits.[6] Moreover, independent physician groups are more likely to direct their patients to lower cost hospitals. As the most profitable commercially insured patient volume flows away from high-cost hospitals that are not able to deliver better outcomes, the hospitals will have strong incentives to lower prices or substantially increase their value.

Support Pricing Transparency. Patients and physicians currently do not understand the out-of-pocket ramifications of hospital choices and the existence of lower cost nearby options. Some health plans are designed so that patients bear up to 40% of most medical costs up to out-of-pocket maximums and deductibles of several thousand dollars. Consequently patients have a strong incentive to know they will receive similar or better quality care at lower costs. Because hospital price and quality have little correlation, every major market in the United States is ripe for patients empowered by knowing out-of-pocket cost differences to leverage this arbitrage opportunity.

There are significant barriers to pricing transparency. Some of them are so-called gag clauses in contracts. Others are myriad prices offered for the same service. Lawmakers should simply prohibit pricing gag clauses in contracts. In addition, lawmakers should require clinicians to provide patients with a good faith estimate of total cost and their share of the costs at the time of scheduling the test or treatment.

Redefine Local Markets. For many purposes, such as antitrust enforcement and insurance offerings, local markets are defined as hospital referral regions. However, except for a few specialized services performed at major academic referral centers, most hospital care is local. Patients seldom access clinicians spread far across hospital referral regions. In major metropolitan markets, patients receive virtually all of their care within a small radius of their residence. Hence, patients effectively choose between only 1 or 2 hospitals. As a result, hospitals have pricing power far in excess of their market share in the hospital referral region.

To recognize the local nature of current health care delivery, regulators should consider local market effects of mergers and acquisitions when evaluating consolidation for antitrust violations. Traditional measures like market share within a medical service area or changes in the Herfindahl index do not capture these local effects. Health plans should create insurance products that more generously reward patients with lower deductibles and co-payments for seeking out and traveling to hospitals with lower prices and higher quality for specific services. This will require more transparency on hospital quality and pricing to patients.

These 3 recommendations operate synergistically and could create more competitive markets in which relative value for price drives competition and ultimately, differences in price. With the exception of antitrust enforcement and prohibition on gag clauses, these can be pursued today by private payers. Technology is also making each of these easier.

If these actions do not succeed in reducing hospital price growth, 2 potent additional policies could work in combination with these: prohibit hospitals from negotiating physician rates for their employed groups to reduce their market power; and adopt an all-payer rate system like that used in Maryland. Over the last few decades, Maryland has succeeded in reducing the rate of hospital price increases.[7]

Create Competitive Hospital Markets

Creating competitive hospital markets benefits patients and is essential to reduce the rate of health care cost growth. Moving from an era of market power enabling hospitals to be price setters to a market in which patient demand drives hospital prices and quality improvement has the potential to transform the US health delivery system. When this occurs, hospitals may offer differentiated services at a variety of price points, such as more personalized services for patients with chronic illness; offer guarantees and warranties for care; and build systems that deliver outcomes as opposed to activity, are focused on service and quality, and reduce if not eliminate waiting times.

The first step on the transformation pathway is to adopt policies that create the right incentives. The 3 proposed changes of incentivizing physicians, supporting pricing transparency, and reforming local markets (with the exception of prohibiting gag rules) can largely be done without new legislation.

Large employers can take the lead through their purchasing of care, engagement of their workers and health plans through changes in their reimbursement approaches, benefits designs, and supporting transparency. Doing so will save patients and payers money and help them receive better care in a market competing on value.

Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Kocher reported serving on an advisory board for the National Institute for Health Care Management; serving on the board of Castlight Health; serving as a consultant to BGC3 and New York Presbyterian Hospital; employment with McKinsey & Co and Venrock; receiving payment for lectures from the Federation of American Hospitals, the Society for Hospital Medicine, and GE; owning stock in Castlight Health; and receiving travel reimbursement from APAX Global Partners. Dr Emanuel reported receiving payment for speaking engagements unrelated to this work.

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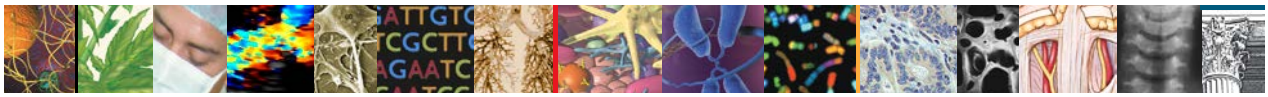

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

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The Good Merger

Leemore S. Dafny, Ph.D., and Thomas H. Lee, M.D.

The U.S. health care sector relies on private markets to satisfy patient needs as fully and efficiently as possible. To realize this objective, it seems clear that providers must jettison the strategies of old — such as maximizing output within each narrow service line — and embrace new approaches — such as building teams around patient needs rather than around clinicians and facilities.[1] Forward-looking providers are beginning to measure and report condition-specific outcomes and to negotiate bundled-payment contracts that reward care redesign.

As providers work to bring value-driven marketplaces to life, many are searching for allies. Their boards and the communities they represent must ask themselves whether these new affiliations are a means to improve the value delivered to patients or a tactic to fend off market forces and preserve the status quo a little longer. A "good" merger or affiliation is one that increases the value of health care by reducing costs, improving outcomes, or both, thereby enabling providers to generate and respond to competition. The all-too-common alternative is a merger intended to reduce competition — to ensure referral streams (which would otherwise be earned through superior offerings) or to help providers negotiate higher prices and thereby avoid the difficult work of improving outcomes and efficiency.

Although regulators can sometimes stop a "bad" merger,[2] they cannot create a good one. Which type of merger predominates as consolidation proceeds[3] will depend on the actions of the leaders of our health care institutions. The decisions they make will have enormous influence on the ability of our health care system to deliver on its promises.

The harsh reality is that it's difficult to find well-documented examples of mergers that have generated measurably better outcomes or lower overall costs — the greater value that is publicly touted as the motivation underlying these combinations.[4] The most consistently documented result of provider mergers is higher prices, particularly when the merging hospitals are in close proximity. Providers' hopes for improving value by consolidating and then integrating care within

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Potential Cognizable Efficiencies in Provider Mergers.

Potential Efficiency	Examples	Comments
Avoidance of capital expenditures	Provider A has excess capacity (unused patient rooms or operating rooms). Provider B, at capacity in an outdated facility, plans to build a $300 million patient tower. By merging, they can shift patients to Provider A while Provider B reconfigures its facility at a cost of $125 million, avoiding $175 million in capital expenditures.	Reduction or elimination of planned capital expenditures should be estimated in advance of mergers and should be great enough to offset other associated expenses.
	Provider A and Provider B use different electronic medical records systems. A merger will enable Provider B to obtain Provider A's system and ongoing support at a lower cost than it could on a standalone basis.	Provider B may be replacing a functional system, and there may be a way to achieve compatibility without purchasing a new system. Net savings must incorporate the expense of transition, and all savings should be verified by vendors.
Reduction in operating expenditures	Merger plans specify consolidation of service lines at a single site where care can be delivered with greatest efficiency (e.g., moving all routine obstetrics or orthopedics care to a community hospital or consolidating cardiac surgery programs).	Service-line shifts affect other services. Plans should be scrutinized to see whether total savings are real and not offset by costs of consolidation and reductions in efficiency of other services.
	Merger will enable purchasing efficiencies (e.g., obtaining better prices from vendors by reducing variation in major joint prostheses).	Purchasing efficiencies are rarely merger-specific, since a provider could combine with a distant provider to attain joint purchasing volume. Actual savings are often lower than expected because variation among clinicians is not reduced. Group purchasing organizations have diminished the magnitude of such savings. Finally, to the extent that these "savings" are merely a transfer of profits from suppliers to buyers, they might not be deemed cognizable by enforcement agencies because they do not represent value creation.
Improvement in patient outcomes	Merger will lead to consolidation of care for specific subgroups of patients or conditions (e.g., acute stroke or renal transplantation), thereby creating a patient population of sufficient size to justify the existence of a full-time multidisciplinary team. Published research can be used to predict expected improvements in outcomes. Alternatively, consolidation of care at sites with better outcomes would be expected to improve quality by eliminating care at sites with worse outcomes.	Projected improvements should be quantified to the extent possible and should be compared with improvements that could be achieved absent the merger. Outcomes should be measured after the merger and ideally made public.

merged entities remain objectives rather than accomplishments in most organizations.

Higher-value health care will not result from good intentions alone; translating this ideal into reality takes vision, planning, and resolve. At any given moment, it will be tempting to avoid or defer the disruption that is inevitable when care is reorganized. And that is a major reason why the goals and the measures for evaluating the success of proposed mergers should be defined before mergers are consummated. Making these goals explicit not only helps stakeholders and regulators to assess the merits of a proposed deal, but it also creates public commitments that can facilitate the execution of those plans after the merger occurs.

Though there is no "how to" guide for mergers, providers would be well served by considering the extent to which their proposed transactions generate "cognizable efficiencies." This term, known to few health care providers, is familiar to every antitrust expert: if a merger has the potential to reduce competition and thereby enable the merging parties to raise prices (or reduce quality), only cognizable efficiencies can offset this potential harm. According to the Horizontal Merger Guidelines issued by the Department of Justice and the Federal Trade Commission, cognizable efficiencies are verifiable and merger-specific. Verifiable efficiencies cannot be "vague" or "speculative": they should be quantified using fact-based analysis. Merger-specific efficiencies refer to benefits or cost savings that could not reasonably be achieved without the merger (e.g., with the assistance of a consultant, a

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change in management, or through other types of relationships, such as affiliations or joint ventures). They are assessed net of the costs produced by the merger or incurred in achieving those efficiencies.

In short, cognizable efficiencies are real and measurable improvements in costs or quality. These include both cost savings and improvements in patient outcomes that can be attributed to merger-dependent steps such as consolidation of clinical programs. To date, relatively few parties to provider mergers have defined their cognizable efficiencies in advance, perhaps because they do not want to agitate internal constituents or because they assume that opportunities to improve quality and to cut costs will arise naturally and be pursued in due time. But the best practice in other business sectors with similar revenue streams is to propose mergers only after hard-nosed considerations and analyses of efficiencies. We believe that applying such rigor to health care mergers would help prospective partners to identify which unions might actually create value and provide a roadmap for doing so after the papers are signed.

An audio interview with Dr. Dafny is available at NEJM.org

In the table, we lay out categories of potentially cognizable efficiencies and offer examples that should be useful to organizations that are critically assessing the value that might be created by mergers. For example, if a merger enables a provider organization to avoid an otherwise necessary capital expenditure, the forgone spending is potentially cognizable.

The table is not a checklist that guarantees that mergers will pass muster with regulators, nor do we conjecture how large cognizable efficiencies must be for a proposed merger to warrant support from internal and external stakeholders. (Stakeholders and regulators must also evaluate the competitive milieu to assess the extent to which efficiencies will be passed through to consumers, offsetting potential anticompetitive effects of a transaction.) However, the absence of detail on these items should arouse concern about whether the goal of a given merger is truly to better serve the community. If the merger is likely to lessen competition in a marketplace, regulators will demand evidence that financial and outcomes-related efficiencies will benefit consumers and will more than offset potential price increases or quality reductions arising from reduced competition. Regardless of the interest of regulators, the boards and other leaders of merging parties should insist on a net positive efficiency standard.

The harsh reality is that it's difficult to find well-documented examples of health care mergers that have generated measurably better outcomes or lower overall costs.

We appreciate the difficulty of calculating cognizable efficiencies and are aware that many ideas for savings are unproven or have been shown to have a modest effect when they're rigorously studied. We also understand the internal challenges of specifying areas of consolidation before a merger has occurred, when changes in organizational structure still seem optional. But if plans for cognizable efficiencies are not specified in advance, they may take years to realize — or never be realized at all.

Proposed mergers may threaten robust competition — but they could also be moments of opportunity, which, if seized, could help providers make major advances in their ability to compete on outcomes and costs. We believe that clear specification of cognizable efficiencies with explicit accountability for their achievement is a key input to a "good" merger. Such plans are a reflection of good management and create the context for execution of sound strategy.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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Attachment 6

VIEWPOINT

Hospital Consolidation, Competition, and Quality
Is Bigger Necessarily Better?

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A wave of hospital mergers during the last several years has raised concerns among US policy makers, regulators, and employers that increasing market consolidation may lead to higher health care spending as larger systems with greater market power extract higher prices from private payers. The number of hospital mergers or acquisitions has doubled since 2009, and many observers have pointed to the Affordable Care Act for transforming the economics of health care in ways that incentivize the creation of larger hospital systems.[1] Although regulators are concerned about the effects of consolidation on health care prices, hospitals seeking to merge argue that larger, integrated systems will be able to provide substantially better care and achieve greater efficiencies.[2] Whether these benefits result from consolidation is unclear. As federal regulators and policy makers weigh these issues, an assessment of the arguments that underlie the consolidation of the medical marketplace, and the potential influence of these arguments on clinical care, is warranted.

The notion that merging of hospital systems can provide better care hinges on 3 sets of arguments: mergers can create high-volume institutions with better outcomes, achieve more "integrated" care, and be better financially equipped to make substantial investments needed to improve quality of care through tools such as electronic health records.[2] Although each of these arguments has merits, none of them is necessarily a by-product of hospital mergers. Policy makers should instead create a market case for quality through strong, meaningful financial incentives that promote better care while containing health care costs to truly shift hospitals toward delivering efficient, high-value care. A more persuasive case could be made for consolidation if large systems could demonstrate price reduction, improved quality of care, and better patient outcomes.

> Higher health care costs from decreased competition should not be the price society has to pay to receive high-quality health care.

The primary argument used by many hospitals is that merging and specializing clinical services across institutions can improve outcomes through increased volume. Although high-volume institutions do have on average better outcomes, important caveats in the volume-outcome relationship have implications for how hospital mergers should be evaluated—when it comes to the delivery of health care, bigger is not always better. The volume-outcome relationship varies widely across conditions and outcomes, with the largest benefits occurring among a small number of technically difficult surgical interventions, such as esophagectomy and pancreatectomy. For most other conditions, the benefits of volume are less pronounced and the volume-outcome relationship is usually not linear.[3] Rather, the volume effects usually taper off after a critical threshold is achieved—and for many conditions, a majority of hospitals already have clinical volumes above that threshold. Therefore, these institutions are unlikely to see significant improvements by simply increasing their volumes. Most importantly, there is emerging evidence that volume may simply be a proxy for other processes, such as having systems in place to recognize and effectively manage complications. To improve the delivery of high-quality care, hospitals should instead focus on improving the processes that create better outcomes for patients. High-quality hospitals often have large market share because they are recognized as being good hospitals.[4] Relying on increased volume to create quality may be confusing cause and effect.

The second argument advanced by advocates of hospital mergers is that mergers can lead to greater "integration" of care, which can be especially helpful in managing the care of chronically ill patients. However, consolidation is not integration. Clinical integration requires meaningful data sharing, systems for effective handoffs, and streamlined care transitions. These processes can be achieved through other mechanisms, such as participating in health information exchanges. Although there is much room for further growth, there has been a rapid increase in the availability of health information exchanges across the nation and many hospitals are now participating in these arrangements. Care integration results from the sharing of clinical information with all who might care for the patient. Larger systems may be less motivated to join health information exchanges, assuming that they already capture a large proportion of patients' clinical information internally. In such instances, hospital mergers may create new islands of data in which information is seen as a tool to retain patients within their system, not as a tool to improve care.

Third, advocates of hospital consolidation maintain that larger hospital systems will be better equipped to make investments in quality measurement and improvement. While this notion is attractive, there is little evidence to suggest that smaller institutions cannot make the investments needed to make care better. Qual-

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ity improvement does not necessarily depend on expensive technologies but rather results from engaged leadership that prioritizes quality and works to achieve better care. Many quality improvement interventions, such as checklists, are relatively inexpensive, although they require a commitment to effective implementation, data collection, and focusing on monitoring and evaluation.[5] Even for electronic health records, which are potentially expensive, small institutions can do quite well. The federal government has created a financial incentive program to encourage the adoption and meaningful use of electronic health records, and the evidence to date suggests that small hospitals are keeping up with larger ones in new adoption of health information technology.[6]

If hospital mergers are not necessary for better care, can competition instead play a helpful role in improving quality? Possibly, especially if policy makers and private payers make meaningful commitments to payment reform. The evidence suggests that hospitals in competitive markets tend to have better management—presumably because poor management is associated with more substantial costs in such markets.[7] But to date, the presence of better management has not translated consistently into better care because these managers are, in a fee-for-service environment, being incentivized primarily to focus on volume. With more robust pay-for-performance, payers can in effect create a market case for quality. For example, hospitals can currently justify performing few cases of high-risk surgeries such as esophagectomy because there are few or no financial costs associated with high rates of complications or mortality. However, if Medicare and other payers paid substantially lower amounts for poor outcomes, many low-volume institutions would likely stop providing these technically difficult procedures, allowing institutions providing higher-quality care in those markets to naturally become regional hubs—and volume would follow quality. Similarly, if payers tied incentives to longer-term outcomes, such as 90 days after an event, centers that provide truly "integrated" care through smarter data sharing and better communication would be rewarded, irrespective of whether they were part of a small or a large delivery system. With large enough payments tied to long-term outcomes, the perverse incentives that encourage health care organizations to restrict the flow of clinical data and fragment care would be mitigated.

The hospital industry is undergoing remarkable changes, and as institutions try to merge, they often point to large, integrated hospital systems—organizations like Geisinger and Intermountain Health—as examples of "larger is better." However, these organizations are exemplars not because they are large but because they have had a longstanding commitment to quality. The delivery of high-quality care reflects priorities more than resources or size. Many small health care organizations are excellent, proving that size is no prerequisite for delivery of high-quality care. Higher health care costs from decreased competition should not be the price society has to pay to receive high-quality health care.

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