

May 16, 2014

VIA ELECTRONIC DELIVERY

Federal Trade Commission
Office of the Secretary
Room H–113 (Annex X)
600 Pennsylvania Avenue, NW
Washington, DC 20580

Re: *Examining Health Care Competition*; Health Care Workshop, Project No. P131207

Dear Commissioners:

The Federation of American Hospitals ("FAH") is the national representative of more than 1,100 investor-owned or managed community hospitals and health systems throughout the United States. Our members include teaching and non-teaching hospitals in urban and rural parts of the United States, as well as inpatient rehabilitation, psychiatric, long-term acute care, and cancer hospitals.

We recently had the opportunity to attend the Federal Trade Commission's ("FTC") public workshop, *Examining Health Care Competition* ("the Workshop"), and commend the FTC for its leadership in undertaking this comprehensive initiative. This is especially important as the health care industry adapts to crucial changes in the health care delivery and payment landscape across this country, fueled in part by the *Patient Protection and Affordable Care Act* ("ACA"). New delivery structures, while providing greater access and enhanced quality, at lower costs, call for changing incentives, and refined operational, legal and policy structures as well. Therefore, the FTC's examination of health care competition is timely and important for addressing policy approaches that may be more effective as we move into the new health care landscape. The FAH looks forward to working with the FTC as we all continue on this path.

As the FTC continues its examination of competition in health care, the FAH brings to the Commission's attention a new study commissioned by the FAH and completed earlier this

year. In the study, the *Center for Healthcare Economics and Policy*[1] undertook a comprehensive review of 75 studies spanning the years 1996-2013, as well as 36 primary sources.

The study challenges the conventional wisdom about the impact of consolidation, and reveals the narrow focus of outdated studies dating back to the early 1990s that have created misperceptions about the impact of realignments. It further recognizes the broader context of why hospital realignment is necessary.

As the nation's health care landscape shifts toward integrated systems and coordinated care, this transition in conjunction with other factors, including substantial public sector reductions in hospital funding, necessitates many of these realignments. Hospitals must adapt to survive while continuing to serve their patients.

Further, the study shows that hospital realignments create significant benefits for patients and communities. By pursuing mergers and other realignment efforts, hospitals are able to maintain their presence in the community and preserve patient access to care, improve service offerings and quality of care, sustain necessary investment in technology, facilities and health IT, achieve sensible reduction in excess capacity, and, create more competitive health care markets. Equally important, the study underscores that without realignment patients and communities may face disruptions in emergency services, other service lapses and even potential hospital closures.

We provide the study, as well as related background materials, for the FTC's reference as it continues its review of health care competition. (*See* Attachment.) We would welcome the opportunity to discuss the study with the FTC, to further elucidate the study's findings.

Also, the FAH appreciates that the FTC has given stakeholders the opportunity to provide comments on the topic of competition in healthcare. In this letter, the FAH addresses three main issues, two of which were focal points of the workshop: price transparency and quality transparency. Third, we address corporate practice of medicine laws, which we believe the FTC should study more closely due to our concern that they are a significant restraint on trade.

[1] The Center for Healthcare Economics and Policy is a separate business unit in the Economics Practice of FTI Consulting, Inc. FTI Consulting, Inc. is a global business advisory firm dedicated to helping organizations protect and enhance enterprise value in an increasingly complex legal, regulatory and economic environment. FTI Consulting professionals, who are located in all major business centers throughout the world, work closely with clients to anticipate, illuminate and overcome complex business challenges in areas such as investigations, litigation, mergers and acquisitions, regulatory issues, reputation management and restructuring.

PRICE TRANSPARENCY:
WHAT PATIENTS NEED TO KNOW: OUT-OF-POCKET COSTS

An important health care topic which continues to be subject to broad discussion and critique is price transparency. Most stakeholders will agree that efficiently operated markets require useful pricing information for consumers to make informed choices, and the health care industry is certainly no different. However, understanding pricing in healthcare remains challenging and somewhat unique, given that some available information may be more confusing than helpful to consumers.

In our view, effective price transparency should provide clear, accessible and actionable information so that patient-consumers easily can determine the cost of their premiums, deductibles, copayments and non-covered services ("Out-of-Pocket Costs"), prior to purchasing health insurance coverage as well as receiving medical services. This will allow them to make meaningful comparisons to help inform patient-centered care choices. Often, an episode of care includes multiple components furnished by distinct providers, so understanding the total price of services can be a challenging endeavor for consumers. Or, consumers may face multiple choices in health plans, all with different Out-of-Pocket Costs. How these transparency goals are achieved for consumers requires effective and efficient cooperation between multiple stakeholders, with clear guidance to consumers about where they can find relevant information and what information they should seek. With appropriate information in their hands, consumers can make informed choices in fair and competitive marketplaces.

The Healthcare Financial Management Association ("HFMA") recently convened a Price Transparency Task Force, which in May 2014 issued a report titled *Price Transparency in Health Care*. The FAH believes the Task Force's report contains five guiding principles which set an appropriate context for achieving meaningful price transparency for consumers:

Principle 1: Price transparency should empower patients to make meaningful price comparisons prior to receiving care. It should also enable other care purchasers and referring clinicians to identify providers that offer the level of value sought by the care purchaser or the clinician and his or her patient.

Principle 2: Any form of price transparency should be easy to use and easy to communicate to stakeholders.

Principle 3: Price transparency information should be paired with other information that defines the value of services for the care purchaser.

Principle 4: Price transparency should ultimately provide patients with the information they need to understand the total price of their care and what is included in that price.

Principle 5: Price transparency will require the commitment and active participation of all stakeholders.

These principles provide the underpinnings for our price transparency comments that follow.

A. Background

When discussing health care price transparency, it is important to be precise with the terminology that is used, as words really matter – which was precisely the subject of a April 2014 FAH blog. (*See* Attachment.) While hospital charges have been subject to particular scrutiny in recent years, they often have little impact on the cost of care – which is the same as price in this context - for most patients. For hospital price transparency to be meaningful and actionable, the information that should be given to consumers should be what they will be expected to pay out of their pockets, whether it is a deductible, copayment, and/or the applicable payment for an episode of care that is not covered by health insurance.

The focus that has been placed on hospitals charges has been a significant source of confusion, as there is usually a difference between a hospital's charges and the ultimate price paid by or on behalf of patients. This confusion is unfortunate, but it has its roots in government health insurance program reimbursement policies that remain in force. In particular, original Medicare reimbursement policies for hospitals created the framework that leads to today's problems.

While Medicare now generally pays hospitals under prospective payment systems, the Program previously paid hospitals under cost reimbursement policies. Cost reimbursement policies determined Medicare payments to hospitals based on year-end cost reports, which required cost and charge information be reported in correlation to various cost centers. These cost report policies have fostered the ongoing need for so-called hospital "charge masters," which remain in place and directly affect – and often confuse - the pricing information that should be the focus of consumers.

While not necessarily a direct focus for the FTC, Medicare cost report reform is one policy initiative that the Department of Health & Human Services ("HHS") should consider undertaking to help eliminate some of the pricing confusion that exists today in the healthcare marketplace. To the extent that price confusion in the marketplace hinders competitive markets, the FTC may desire urging HHS to take this action.

B. Insured Patients vs. Uninsured Patients

The appropriate source of information for consumers depends on whether or not they have health insurance. **For consumers with health insurance, the health plan should be the consumer's point of contact for "one-stop" shopping for all information related to insurance coverage and payment, including Out-of-Pocket Costs.** Often, several providers are involved in an episode of care, resulting in multiple transactions between the health plan and the providers who furnish services. Because care providers are only involved in their own part of the total bundle of services, health plans are best suited to provide consumers with the information they most desire, which is their complete Out-of-Pocket Costs across an entire episode of care.

Moreover, insurer transparency should go well beyond a consumer's Out-of-Pocket Costs and include a summary of benefits and coverage, a listing of (and notice of any changes to) in-network providers, insurer ratings, and reliability of claims payments. Notably, the ACA requires qualified health plans operating on the new health insurance exchanges to make this information available to enrollees. We believe it is sound public policy to require this of all private health insurance plans. A competitive marketplace should provide clear and accessible information for consumers on their health plan's policies and operations that affect consumers' needs and decision making.

For information to be meaningful, accessible and actionable to consumers, it must be readily available for all types of consumers. Health plans should use effective and innovative communication methods and convey the information as simply and directly as possible. Insurers should continually communicate price and other information in multiple ways using a variety of methods to be most effective and have the broadest reach.

For consumers who do not have health insurance, the appropriate source of pricing information should be the health care providers from which they are seeking services. The same is true for consumers who have insurance, but are seeking services which are not covered under their health plan. For hospital services, hospital websites often are valuable sources of information to help guide consumers about how to obtain information they desire. Also, hospital patient financial service departments are a key source for obtaining pricing information regarding particular types of services, and they can also inform patients about any charity care or other pricing discount programs that may be available and their qualifying criteria. These departments can also inform prospective patients about other providers that they should contact for similar information depending on the particular types of services the patient needs or desires.

C. Negotiated Rates between Insurers and Providers

During the Workshop, there was some discussion about "full" transparency in health care, including disclosure of rates that private health plans pay to the health care providers in their networks. With the main focus of transparency being to provide useful and actionable information to patients, the FAH believes that negotiated provider network payment rates should not be disclosed. These rates are essentially prices negotiated between two health care businesses and do not affect what an individual patient's Out-of-Pocket Costs are for a particular service. Therefore, disclosure of these contracted rates serves little purpose in light of transparency's main focus on useful, consumer-friendly information about their Out-of-Pocket Costs.

While transparency of negotiated provider network rates may sound desirable, there is a clear downside that may have anticompetitive effects. Economists and antitrust enforcers have recognized that transparency on provider network rates could lead to inflation of prices by discouraging private negotiations that can result in lower prices for some buyers.

Specifically, federal antitrust authorities have spoken to this issue. In August 1996, the Department of Justice and the FTC issued a Statement on Provider Participation in Exchanges of Price and Cost Information. This Statement created a safety zone from antitrust enforcement for,

among other things, pricing surveys provided a set of criteria were met. One criterion was that the data be more than three months old, and the Statement also states that an "exchange of future prices for provider services . . . are very likely to be considered anti-competitive." We believe this Statement reflects a general concern that making current provider network payment rates available could have anticompetitive effects on the current marketplace and future provider network contracts.

D. Price Transparency: Federal and State Initiatives

Policymakers at both the federal and state levels are addressing price transparency, with the largest percentage of initiatives occurring at the state level. We urge the FTC to monitor the development of various state initiatives and assess them for anti-competitive impact. The Catalyst for Payment Reform, which was represented on a panel at the Workshop, recently issued its *Report Card on State Price Transparency Laws*. This resource provides a comprehensive overview of state transparency initiatives, but what it lacks is an assessment of the various initiatives through an antitrust prism. While consumer benefits of price transparency are important, those must be balanced with the potential negative effects of anti-competitive conduct.

As noted above, there is concern that current or future pricing information about network provider rates could have an anti-competitive effect and harm markets and consumers. One particular emerging state transparency initiative that the FTC should study for potential anti-competitive effects are All Payer Claims Databases ("APCD"), which are currently found in several states. APCDs are designed to create a statewide repository of cost and quality information from private and government payers. Often, the databases contain eligibility and claims data providing "service-level" information based upon claims paid by all payers in a state.

While consumers may benefit by understanding the price component for all services in an episode of care, the availability of specific price information about current business-to-business negotiated rates between a particular provider and a health plan may give too much insight into prices for future services and raise anticompetitive concerns similar to those identified in the 1996 Statement on Provider Participation in Exchanges of Price and Cost Information. Because these state-based initiatives are geared toward providing as much information to consumers as possible, it is critically important for antitrust authorities to assess their impact on competition and whether such initiatives may have the effect of stifling competition and driving up health care prices.

At the federal level, the ACA required hospitals to implement price transparency policies. In May 2014, the Centers for Medicare & Medicaid Services ("CMS") proposed implementing guidelines for hospital transparency policies that instructs hospitals either to "make public a list of their standard charges (whether that be the charge master itself or in another form of their choice), or their policies for allowing the public to view a list of those charges in response to an inquiry." CMS encourages hospitals to undertake efforts to engage in consumer friendly communications to help patients understand what their potential financial liability might be for services sought, and to enable patients to compare charges across hospitals. The FAH believes this is a reasonable approach to making beneficial price information available to consumers.

QUALITY TRANSPARENCY: SIGNIFICANT STRIDES IN AN EVOLVING ENVIRONMENT

As discussed above, price transparency is a key component of transforming the health care delivery system in this country to one that is more integrated and efficient, and based on the value rather than volume of care. To achieve a system based on value, consumers must receive relevant, up-to-date and useful information about what they will pay for medical coverage, including Out-of-Pocket costs. Effective transparency is critical so that consumers can meaningfully compare health insurance options and make smart coverage, provider, and medical treatment choices.

Inherent in effective price transparency is the ability to pair with price data meaningful quality data through performance measurement and public reporting. This enhances provider quality improvement and facilitates consumer education with the goal of helping consumers better determine the value of medical services.

The FAH long has been an active supporter and strong advocate for developing quality transparency. We, therefore, understand the promising aspirations that can be achieved through quality reporting, along with the significant limitations, especially at these still relatively early stages of health care quality reporting. To be clear, there have been significant strides in developing and implementing quality reporting programs over the last decade, but the challenges that remain are equally significant and must be recognized as we begin to use quality data to compare providers and medical treatments. Certainly, these limitations must be weighed and factored by the FTC as it examines how quality measures might be used effectively in evaluating mergers, acquisitions, or other clinical integration arrangements.

A. Significant Forward Movement and Achievements in Quality Reporting and Transparency

More than a decade has passed since the Institute of Medicine released its seminal report, *Crossing the Quality Chasm*, and throughout these years, the FAH has been working side-by-side with other stakeholders toward three quality goals: improving quality of care; making provider performance more transparent; and improving the value of health care services as measured by both cost and quality. More specifically, the FAH has been engaged in multi-stakeholder collaborative processes to develop, evaluate, endorse, and recommend performance measures for use in federal and private quality reporting and payment programs. These processes include purchasers, payers, providers, consumers, employers, and other stakeholders to support improvement in health care quality and outcomes while achieving better value for the services provided. These groundbreaking efforts have produced, over many years, a reliable multi-stakeholder, consensus-based quality framework designed to address national goals and priorities outlined in a National Quality Strategy ("NQS"). Much progress has been made, yet much work remains in continuing to advance these goals.

The NQS reflects the multi-stakeholder consensus that a patient-centered health care system will lead to improved population health with more efficient care delivery, and at lower cost. To help achieve the NQS, the National Quality Forum ("NQF") convenes multi-

stakeholder consensus development committees for evaluating, endorsing, and recommending quality measures for use in public reporting and payment programs. The NQF quality measure endorsement process ensures that measures are vetted through a multi-stakeholder process that assesses the importance of topics to measure, and the scientific soundness, reliability, and feasibility to collect and report the data. In order to drive transparent quality improvement, metrics must be understandable to patients and their families and providers and not just a matter of academic interest.

The NQF also convenes the Measure Applications Partnership ("MAP"), a separate multi-stakeholder process. The purpose of the MAP is to assess quality measures for their readiness for specific federal public reporting and payment programs prior to the measures being included in a proposed rulemaking issued by HHS.

To be effective, quality measures must produce results that are meaningful for patients, payers, providers and other quality enterprise stakeholders. The measure endorsement and pre-rulemaking review for appropriate use in specific quality programs are critical for ensuring alignment of public quality reporting and payment programs across various providers, as well as the reliability, validity and usefulness of quality measures. The consensus-based review process also influences the private sector use of quality measures.

Both the NQF measure endorsement process and the MAP provide proven processes for engaging strong multi-stakeholder efforts and consensus building. Collectively, they permit wide vetting of the measures by multiple stakeholders based on criteria for importance, validity, a solid evidentiary base, usability, and appropriateness for the intended purpose. Involving these multiple stakeholders in the approval process creates a level playing field, reduces reporting burden, helps assure broad acceptance of the measures for use by both public and private payers and by consumers, and creates efficiencies with less duplication of effort. Without these processes, the system risks returning to fragmented past practices with less consensus and alignment among quality programs in both the public and private sectors.

B. Key Principles for Measuring Quality Performance and Public Reporting

All of the critical efforts discussed above have advanced and continue to advance quality reporting and transparency efforts in a positive direction. **Many lessons learned have surfaced through these diligent efforts. These lessons are the basis for key principles that should be the foundation for facilitating further forward movement, in the coming decade and beyond, toward meaningful, reliable and actionable quality reporting and transparency structures.**

As the FTC continues its examination of health care competition and evaluates how to use quality data in its analysis of mergers, acquisitions and other clinical integration arrangements, the FAH urges the FTC to ensure that any quality data it examines adheres to the key principles discussed below.

- Quality measurement and reporting should be meaningful and actionable

Quality measurement and reporting of quality performance should be meaningful and actionable to patients, providers, and all interested stakeholders. This means that the measures must be valid, reliable, and consensus-based. It also means that patients, providers, and other stakeholders must be able to use quality data and performance reports in a manner that actually advances quality, including at the point of care, and allows for effective comparability of medical treatment. It should not simply be a "check-the-box" activity that merely serves essentially to create administrative burden, without any corresponding benefit or ability to evaluate the quality of care provided.

- Quality measure development, reporting and endorsement should be consensus-based

The development and endorsement of quality measures should be consensus-based to include a broad range of important stakeholders in these processes, as well as in the development of the performance reports. For example, it is critical that hospitals and physicians be involved with the development of the measures on which they will be evaluated.

The NQF consensus development process for evaluating, endorsing and recommending quality measures for use in public and private programs, and the MAP pre-rulemaking advisory process, provide a proven process for engaging strong multi-stakeholder consensus-driven efforts. Notably, these processes are continually reinforced for purposes of improvement, efficiency and effectiveness opportunities, and provide strong public-private cooperation because several federal agencies participate as well.

Further, these processes permit wide vetting of the measures by multiple stakeholders based on criteria for importance, validity, solid evidentiary base, and usability. Involving these multiple stakeholders in the approval process creates a level playing field, reduces reporting burden and helps assure broad acceptance of the measures for use by both public and private payers and by consumers.

Measures that are individually endorsed – whether they are physician-endorsed or endorsed through a limited stakeholder process that does not involve the review of measures by an impartial multi-stakeholder entity – would lead to questions about the usefulness and comparability of the data produced. It could also create a proliferation of inconsistent, conflicting, and duplicative measures that would be burdensome, confusing and even harmful to patients and health care providers who need to rely on consistent and accurate data at the point of care. It certainly would add to the overall costs in the health care system due to the investment needed to report through multiple mechanisms, and would undermine the goals of improved health, improved care delivery and lower costs.

- Quality measurement and performance reporting should be based on consistency of measurement across providers and settings

Consistency of measurement across providers and settings is required for valid and reliable quality measurement and performance reporting. It can be achieved by ensuring that measures are endorsed through the NQF, a consensus-based, multi-stakeholder process, and recommended for use in a quality program by the NQF-convened MAP. All stakeholders should have the opportunity to review any quality measure for its scientific validity, feasibility, reliability and importance. The NQF and MAP processes ensure that quality measures used for public reporting and payment will be valid for purposes of accountability and comparison.

- Public reports of provider performance should have purpose, transparency and validity

Public reports of provider performance should: (i) explicitly state the report's purpose; (ii) be transparent about the report's methodological details; and, (iii) provide information to affirm the validity of the measures and methodologies used in the report.

The purpose of a public report should be stated so that end-users can determine whether the measures and methodology meets the intended purpose. Further, for proper evaluation, there should be transparency of the report's methodological details, including measure specifications, data collection methods, data resources, risk adjustment and provider attribution methodologies, composite score methodologies, along with limitations in these methodologies and the data collection. Finally, validity is required to create an accurate picture of what is being measured and the results of that measurement. As discussed above, this would include measures endorsed by the NQF, as well as ensuring that composite and scoring methodologies are supported by clinical evidence and field-tested, where appropriate. For further discussion of specific components of purpose, transparency and validity, the FTC should review the *Guiding Principles for Public Reporting of Provider Performance*, which has been endorsed by the hospital community, including the FAH. (*See* Attachment.)

C. Limitations of Quality Measurement and Performance Reporting

As we move forward in developing quality measurement and performance reporting programs, the foregoing principles should be rooted firmly in the quality infrastructure. Otherwise, existing limitations with using quality data to compare performance will be exacerbated. **We urge the FTC – as it examines how quality data might be used effectively in evaluating mergers, acquisitions, or other clinical integration arrangements – to ensure that the data it evaluates is rooted in the principles espoused above. In addition, we urge the Commission to recognize the ongoing limitations in measuring and reporting quality performance that exist at this point in the quality enterprise continuum.** We do not believe it is necessary or appropriate for the FTC to develop its own quality metrics for purposes of its oversight authority. Instead, the FTC's oversight should be tailored to achieving the mission of the Commission using industry-accepted norms and measures.

As panelists discussed at the FTC Workshop, key limitations include, significant obstacles with data collection and connecting quality process measures to patient outcomes and physician quality. Although, we are in the relatively early stages of transitioning from emphasis on process measurement to outcome-based measurement to identify quality health care providers, there are not yet a sufficient number of outcome-based measures to make broad determinations. In addition, the measurement community is working to perfect the outcomes measures currently in use and determine how best to risk-adjust the measures to capture true differences in care. Most outcomes measures are not adequately adjusted for differences in socio-economic status of the patient population base.

For example, external forces may have a significant impact on the care and long-term outcome of the patient. This likely would be reflected in a congestive heart failure patient who is discharged to a community that does not have a grocery store or pharmacy, and may have limited public transportation. The patient may be unable to pick up prescriptions at a pharmacy or get to a follow-up doctor's appointment. Further, the patient may not have the ability to purchase low-sodium food or fresh fruits and vegetables. The lack of community services will have a strong impact on the patient's ability to maintain good health and avoid hospital readmission. Hospitals are working in communities to help support necessary services and provide patients with greater instructions at discharge, but these efforts and patient and community characteristics are not captured currently in outcomes measures. While the development of the next generation of valid outcomes-based measures is on the horizon, it is prudent to recognize that existing measures may not provide a full or accurate broad picture of the quality of care provided.

Moreover, questions remain about the most effective way to utilize interoperable electronic health records ("EHRs") to collect and produce usable, valid, and meaningful quality data that can advance further quality improvement goals. The FAH is a strong supporter of EHR technology that has the potential to be a conduit for having the right information in the right place at the right time, resulting in better care for patients. Quality reporting through EHRs also has the potential to reduce burden on providers, improve the quality of the data, and improve access to quality information within institutions. Further, deriving data elements from EHRs can facilitate the collection of more sophisticated quality measures, including outcomes measures.

There are a number of technical challenges, however, that must be addressed for this potential to be realized fully. For example, electronic clinical quality measures ("eMeasures") must work, as intended, before they are implemented. For the last several years, electronic reporting has been referred to as the future of quality measurement. With approximately 75 percent of eligible hospitals currently "Meaningful Users" of certified EHR technology for purposes of Medicare, the future is here. Yet, to realize the full benefit of these EHR systems, HHS needs to facilitate the collection of fully tested, valid and complete eMeasures.

Developing measure specifications is very complex and it is easy for gaps to go unnoticed until nationwide data collection begins. Working with brand new EHR technology, and untested, unproven eMeasures complicates this even further. EHR reporting of data requires a much more robust infrastructure and much higher levels of scrutiny regarding data validity, quality and completeness than is required for manual chart abstracted data. A great deal of work remains in this area. For example, there currently is no defined process for clarifying electronic

measure specifications. This is a critical infrastructure component (which exists for chart abstracted measures) that should be established prior to EHRs becoming the primary mechanism for reporting hospital quality data. These problems limit the applicability and effectiveness of eMeasures, and more work needs to occur in this area.

Additionally, as panelists discussed at the Workshop, there is a time lag between organizational change (such as a merger or acquisition) and the ability to operationalize a change in quality. This time lag could potentially range from 18 to 24 months, with the variance depending on the data being used, how the data is being analyzed, educating or re-educating staff and the scope of operations for implementing a particular quality program. For example, a program focusing on reducing birth by cesarean section, that targets a minimum number of hospital departments, can be operationalized sooner than a program that involves multiple hospital departments or systems. The FTC should recognize that a sufficient timeframe is needed before a change in quality can be realized after a merger and should not prematurely reject efficiency-enhancing mergers or acquisitions.

On a related note, the FTC must also recognize that even high performing quality programs can always be improved. Earlier this year, the Massachusetts Health Policy Commission ("HPC") analyzed the proposed merger of Partners HealthCare and South Shore Hospital. In terms of quality, the HPC determined that as a baseline, the quality at both Partners and South Shore Hospital was relatively high, and questioned whether quality was likely to be improved. On this basis, the HPC determined that it was "unclear" that the acquisition was necessary to achieve quality improvement.

The FAH believes that analysis of the competitive impact of a merger should be based on a number of factors, such as price and access. We also recognize that quality is also an important part of the analysis, but we reject the notion that quality cannot be improved. There is always the next generation of quality tools and programs that can lead to improved quality, which are better achieved through scale and improved clinical coordination. As discussed above, we have made important strides in quality, but much remains yet to be achieved. It would be a mistake to hamper merger opportunities that can provide infusion of financial assets, systemic efficiencies, and the expertise needed to raise the quality bar for hospitals across communities.

Finally, caution must also be heeded in terms of quality reporting. For example, there is wide variation in the quality metrics used in reporting quality performance. While there remain some flaws in the quality reporting tools used by the federal government, the FAH believes these tools are superior to proprietary quality reporting products. Further, quality reporting can provide trend lines, but no single data point is an absolute. For instance, readmissions data is valid when using the most recent three years of data to calculate a performance score. In contrast, one year of data would not yield meaningful information.

The FAH emphasizes that the field of quality improvement has seen many important advances, but the foregoing limitations provide a strong reminder to exercise particular caution when using quality data, at this point in time, to examine health care competition.

CORPORATE PRACTICE OF MEDICINE: AN OUTDATED AND ANTICOMPETITIVE DOCTRINE

The Workshop's focus on the competitive impact of recent developments in health care, including professional regulation, is consistent with what the FAH believes should be an active reassessment of whether old models serve the goals of modern reform. More specifically, the Workshop touched upon an area that we believe deserves more attention by the FTC, that is, the outdated and archaic corporate practice of medicine doctrine. The FAH believes the FTC should evaluate and opine on the current anti-competitive effects of the Corporate Practice of Medicine doctrine.

This doctrine is an area the FTC has previously addressed through enforcement and advocacy initiatives, although it has not done so for quite some time. Given the Triple Aim imperatives for providers responding to reform—to increase quality, lower costs, and improve access—and the fact that the corporate practice restrictions that originally drew the FTC's attention largely remain in place and continue to have significant and unwarranted anticompetitive effects, the FAH believes that this doctrine deserves the renewed attention of the Bureau of Economics, Bureau of Competition, and Office of Policy Planning.

For the reasons discussed below, the FAH recommends that the FTC re-examine the anticompetitive effects of state corporate practice of medicine policies. Specifically, the FAH recommends:

- **that the FTC analyze whether the claimed benefits to patients that were initially thought to flow from the doctrine continue to be cognizable in today's health care landscape such that they would justify the restrictions;**

- **that the FTC issue a statement that the doctrine has anticompetitive effects and is an unfair method of competition; and,**

- **that the FTC promote the recommended statement to influence state legislators, attorneys general, and other policy makers to reconsider the justifications for and effectiveness of the doctrine in light of health care reform and the modern health care landscape.**

A. Background and Current State of the Law

The ban on the corporate practice of medicine—historically broadly defined as corporations hiring physicians for purposes of generating profits—has been in effect since the turn of the last century. While the ban was based on the need to protect the public from corporate interference with medical care and restrictions on physicians' autonomy and discretion, it also prevented the development of new competitive models of care delivery.

In 1975, the FTC successfully challenged corporate practice of medicine policies, developed by the physician community, as an unlawful restraint on competition under Section 5

of the FTC Act.[2] Specifically, the FTC challenged the prohibition as anticompetitive, because it restrained physician competition, proscribed the use of compensation methods that were potentially more efficient than fee-for-service models, and prevented physicians from pursuing efficiency-enhancing business structures. Although the Cease and Desist Order in the FTC action was upheld on appeal through the Supreme Court,[3] the corporate practice of medicine doctrine remains in force in many states.

Given the changes in the health care landscape, however, the need for and effectiveness of corporate practice of medicine protection is increasingly being called into question. Given the rise in managed care and the advent of increasingly integrated care delivery, the public benefit of physician autonomy versus the public benefit of provider flexibility with respect to forming more efficient and effective models of care delivery should be reevaluated.

Moreover, in many instances, state laws contain exceptions or unintended loopholes that cannot be justified as creating a public benefit when weighed against the costs. This can create an uneven playing field among competitor providers, with none of the claimed benefit for the public. For example, some state laws allow only non-profit corporations to employ physicians, despite that in the modern health care market, for- and non-profit providers are more similar than not, as has been recognized by courts and the FTC. Further, in California, there is a patchwork of exceptions to that state's broad statutory ban on employment of physicians by hospitals, including teaching hospitals, drug treatment centers, foundations and clinics, and HMOs. And in Texas, certain non-profit hospitals, along with rural and public hospitals, may employ physicians, while other hospitals may not, for no discernible public health or health care quality related basis. These exceptions, like others, illustrate that the desire for protection indeed creates a very uneven playing field, looking more like swiss cheese than sound public policy.

Finally, as the FTC recognized decades ago, from a policy perspective, the harm that these laws do to fair competition and innovation far outweighs the alleged public good. When narrower laws that do not implicate competition can achieve the same goals, perhaps more effectively, those provisions should replace bans on the corporate practice of medicine.

B. Why the FTC Should Re-Evaluate the Corporate Practice of Medicine Doctrine Now

Whether through the advocacy of the FTC's Office of Policy and Planning, research by the Bureau of Economics, or enforcement initiatives of the Bureau of Competition, the FAH urges the FTC to refocus its attention on the anticompetitive effects of the corporate practice of medicine doctrine. These efforts would be consonant with the FTC's overall objectives in promoting competition and innovation in rapidly changing health care markets in several ways:

- Promotion of Flexibility in Creating Better Models of Care Delivery

  The FTC, along with the Department of Justice's Antitrust Division, has recognized the procompetitive potential of emerging corporate structures in health care to

[2] *See In re Am. Med. Ass'n*, 94 FTC at 1011-12.
[3] *Am. Med. Ass'n v. FTC*, 638 F.2d 443, 447 (2d Cir. 1980), *aff'd*, 455 U.S. 676 (1982).

improve patient care and experience, including Accountable Care Organizations.[4] Because relationships and accountability are what enable effective integration and delivery of quality care across a full continuum, providers must have the ability and latitude to choose with whom and how they contract and collaborate. Although the corporate practice of medicine doctrine is traditionally thought of as restricting the employment of physicians, in reality many state laws foreclose a much broader array of economic relationships.[5] Yet, as providers work to change how we deliver care in this country, especially with implementation of the ACA, corporate practice of medicine laws significantly limit how physicians may respond to the demands of health care reform through innovative partnerships and capital arrangements.

- Promoting Innovation in Creating New Payment Models

Another paradigm shift encouraged by the ACA and other state and federal reforms is from the traditional fee-for-service model to one trained on paying providers for value and efficiency. Without the ability to respond to this change with all possible options, including risk sharing and corporate alignment, providers in states that restrict the corporate practice of medicine are at a significant disadvantage. State laws, such as New York's broad prohibition on fee splitting between licensed professionals and non-professionals, for example,[6] may hamper the development of payment models that allow for innovative bundling of services that benefit both patients and payors.

- Promoting a Level Playing Field for Providers

The FTC has devoted significant resources to leveling the competitive playing field for providers as a means of improving care for consumers. The principle that animated the FTC's 1975 challenge to the corporate practice of medicine doctrine—that protectionist regulation of professionals that restrains competition among providers with no prevailing public benefit may give rise to a violation of the antitrust laws—underlies the FTC's recent enforcement initiatives,[7] and advocacy efforts. For instance, the FTC's

[4] *See, e.g.,* Statement of Antitrust Enforcement Policy Regarding Accountable Care Organizations Participating in the Medicare Shared Savings Program, *available at* http://www.justice.gov/atr/public/health_care/276458.pdf; "Promoting Healthy Competition in Health Care Markets: Antitrust, the ACA, and ACOs," June 11, 2013 speech by FTC Commissioner Julie Brill, *available at* http://www.ftc.gov/sites/default/files/documents/public_statements/promoting-healthy-competition-health-care-markets-antitrust-aca-and-acos/130611cprspeech.pdf ("Antitrust law permits providers to engage in a wide array of legitimate collaborative activities, including ACO arrangements, as well as many mergers and consolidations, so long as the conduct is likely to promote consumer welfare through lower cost or improved quality."); "Antitrust and Health Care," May 24, 2010, speech by Assistant Attorney General Christine Varney, *available at* http://www.justice.gov/atr/public/speeches/258898.pdf ("[The DOJ and FTC's] ultimate goal is to ensure that health care providers have the necessary guidance to form innovative, integrated health care delivery systems without unduly confining providers to any particular delivery model.").

[5] *See, e.g.,* 8 Del. C. Ch. 6 (allowing corporate practice of medicine by professional service corporations if all shareholders are licensed in the same profession).

[6] NY Educ. Law § 6511.

[7] in *The North Carolina State Board of Dental Examiners v. FTC,* No. 12-1172, 2013 U.S. App. LEXIS 11006 (4th Cir. May 31, 2013).

advocacy efforts in the areas of mobile dentistry[8]—arguing that protectionist policies prohibiting the provision of services by mobile dentists in venues such as schools—and limited service clinics—arguing for regulations that enhance rather than restrict services delivered in a retail context—recognize that protectionist laws often harm competition and patients.

- Promoting Better Care for Patients

The key to improving the quality of, and access to, health care is the willingness and ability of providers to both integrate their efforts across the care continuum, and to innovate. Economic flexibility to place resources that drive innovation to improve care is also essential, often involving corporate alignment of providers through employment or other integrated network relationships. For instance, as discussed above regarding quality transparency, we are moving forward into an era of powerful health information tools, such as EHR platforms that have the potential ability to streamline care delivery and provider communication, reduce error, enable evidence-based improvements and efficiency gains and generally make the overall care experience better for patients. To harness the full capacity of EHRs, health systems must have the right incentives to make investments in technology, and the ability to truly align caregivers at every level. Although technically it may be possible to implement a platform costing tens, if not hundreds of millions of dollars across providers that are not economically affiliated, the reality is that unless that platform can be underwritten and maintained by an entity with an economic interest in the providers using the platform, that investment—and the care-improving connections through the platform—are not likely to strongly materialize. Similarly, a system may be willing to invest in or even subsidize community-based care, but only if the providers are economically aligned members of the organization. Where corporate practice of medicine laws thwart or diminish these incentives, patient care and the care delivery system as a whole suffers.

For these reasons, the FAH believes the time is ripe for the FTC to re-evaluate whether state corporate practice of medicine policies are creating unreasonable competitive restrictions that interfere with the transitioning to a new health care system which can deliver better, more efficient, value-driven care for patients. As these laws remain state-based, a broad pronouncement from federal antitrust enforcement agencies is warranted and will help shape future policies in states.

****

[8] FTC Staff Comment To the Louisiana State Board of Dentistry Concerning Proposed Modifications to Louisiana's Administrative Rules on the Practice of Portable and Mobile Dentistry, December 18, 2009, *available at* http://www.ftc.gov/sites/default/files/documents/advocacy_documents/ftc-staff-comment-louisiana-state-board-dentistry-concerning-proposed-modifications-louisianas/091224commentladentistry.pdf.

The FAH appreciates the opportunity to provide our views to the FTC as it continues its examination of health care competition, and we look forward to continuing to work with the FTC to promote competitive health care markets that change how we deliver care to our patients, while optimizing access to and quality of care, at lower costs. We look forward to an opportunity to discuss further our views with the Commission. Please feel free to contact me or Jeff Micklos or Katie Tenoever of my staff at (202) 624-1500.

Sincerely,



CENTER FOR HEALTHCARE
ECONOMICS AND POLICY

FTI CONSULTING™

JANUARY 23, 2014

HOSPITAL REALIGNMENT: MERGERS OFFER SIGNIFICANT PATIENT AND COMMUNITY BENEFITS

MARGARET E. GUERIN-CALVERT

JEN A. MAKI, PHD

CRITICAL THINKING
AT THE CRITICAL TIME™

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HOSPITAL REALIGNMENT: MERGERS OFFER SIGNIFICANT PATIENT AND COMMUNITY BENEFITS

By Margaret E. Guerin-Calvert and Jen A. Maki, PhD*

Overview

Hospital mergers offer substantial benefits for patients and communities. This study provides a comprehensive review and analysis of hospital merger studies and trends that uncovers a reality rooted in research and quite different than what many people think.

Hospital consolidation has been much studied, but often on narrow issues without the comprehensive examination that provides understanding of its overall effects. The extensive review of trends and literature provided in this study illustrates this point and finds that there is not a sufficient appreciation of the positive contribution realignment makes to patients and communities.

All too frequently, conventional wisdom suggested by media coverage is that hospital realignment, mergers and consolidations systematically result in pricing power, with anticompetitively higher prices for those needing care. Yet, in terms of prices for consumers, this study's extensive review of the literature finds no consistent statistical relationship between consolidation patterns and hospital prices across the studies. What also can get lost is that these claims about hospital merger effects often rely on outdated data that do not reflect today's dynamic market conditions.

This comprehensive analysis of consolidation studies reveals hospital realignment offers benefits including improved service offerings, cost reduction, and enhanced competitiveness. Importantly, the analysis underscores that without realignment, patients and communities could face disruption and instability, hospital closures, and reduced access to care.

Under current conditions, hospitals are moving toward a new system of coordinated care as a means to maintain, improve, and expand access for patients. This trend comes as another broader trend is taking place with important implications across the economy: a spending slowdown in health care that many experts believe is structural and likely to continue. Currently, health care inflation is at record lows, as is spending growth at hospitals and other providers throughout the country.

Overall, the impact of hospital realignment – particularly in the challenging environment today – is much broader than what currently is being discussed. This study outlines and examines major systemic changes occurring across the health care system that are driven by a number of factors, such as policy, economic conditions and demographics. This analysis also highlights that many of the studies cited in recent media reports and by academia focus on hospital business transactions of the 1990s, a data set that is old and not representative of the operating environment in which hospitals compete.

KEY FINDINGS

- **Studies point to real benefits from hospital realignment – enhanced access, higher value and greater efficiency.**
- **Hospital realignment is driven by a mix of policy reforms and a changing economic landscape.**
- **Claims of negative realignment effects often cite outdated data not reflective of today's market or narrow studies not representative of most transactions.**
- **Government antitrust reviews underscore that the vast majority of mergers do not raise risks of a substantial lessening of competition.**
- **Fundamental realignment changes are underway within the context of a historic slowdown in the rate of healthcare spending.**

*Margaret E. Guerin-Calvert is President and Senior Managing Director, The Center for Healthcare Economics and Policy ("Center"), a separate business unit in the Economics Practice of FTI Consulting, Inc. She is also Senior Consultant, Compass Lexecon, a wholly owned subsidiary of FTI Consulting, Inc. Jen Maki is Director, The Center for Healthcare Economics and Policy. The report benefited from substantial assistance of our colleagues at the Center. *The views and opinions presented are solely those of the authors and the Center and do not necessarily reflect the views of FTI Consulting, Inc. or other organizations with which the authors are or have been affiliated*. The co-authors have worked on healthcare matters for a variety of healthcare entities, including providers, health plans, government, and associations.

Studies Point to Real Benefits of Hospital Realignment – Enhanced Access, Higher Value, Greater Efficiency

- A key driver of realignment has been the ability of hospitals to maintain services for their communities that otherwise might be reduced or eliminated through hospital downsizing or closure. Studies show that factors driving realignment include hospitals' financial circumstances, and the need to reduce redundant services, achieve efficient realignment and improve access to capital.
- The alternative to mergers or acquisitions is shown by some studies to be hospital closures, downsizing, or reduction in service mix. Hospital closures can reduce access to care and can result in negative welfare effects for the local community; literature found some negative impact on mortality rates.
- A review of literature on the benefits from mergers – including value, cost and efficiency – found that merger efficiencies can stem from:
  - Realignment of services to achieve greater scale of operations or to improve quality of care and enhance access to care. Economies of scale resulting from hospital mergers can result in sustained, measurable savings.
  - Access to capital and improved ability to make necessary investments such as upgrading technology and updating facilities or services.
  - Reduced costs or reduced rate of cost growth through improved operating efficiency, reduced administrative and overhead costs, and reduction or elimination of redundant services.
  - Reduction in excess capacity.
  - Reduction of costs through realignment, to benefit poorly performing or inefficient hospitals (hospitals with high prices and high costs).

A key driver of realignment has been the ability of hospitals to maintain services for their communities that otherwise might be reduced or eliminated through hospital downsizing or closure.

Hospital Realignment is Driven By a Mix of Policy Reforms and a Changing Economic Landscape

- Major systemic changes underway in the healthcare sector are driven by government policy changes as well as economic conditions and demographics. The challenges facing the healthcare industry include the slow economic recovery, reduced reimbursements, difficulty in obtaining capital, a changing infrastructure promoting coordination of care, and essential investments in and implementation of costly healthcare information technology ("IT") systems. Poor occupancy rates and excess capacity are a pressing concern in many areas. A review of the economic literature reveals that these types of factors have been drivers of past mergers.
- Key factors shaping healthcare delivery and realignment are:
  - Efforts to achieve "Triple Aim" goals of enhanced patient care, improved population health, and reduction in rate of increase in per-capita costs. Achieving these goals requires a broader focus on coordinated care delivery for populations rather than episodes of care; more efficient delivery systems of integrated and coordinated care are essential.
  - Shifts from inpatient to outpatient care and excess inpatient capacity, along with improvements in technologies enabling less invasive procedures and shorter stays, have resulted in a significant increase in outpatient care and a reduction in inpatient care, both of which generally improve the quality of care and lower the cost of delivering care.
  - Integrated delivery systems (or integrated delivery networks) provide the means for systems of hospitals (community and tertiary) and physicians to deliver a full spectrum of care to a community. The development and adoption of integrated delivery systems has been accomplished by adding hospitals and/or providers to a system and by expansion of outreach efforts of health systems to serve a wider community and population.

Claims of Negative Realignment Effects Often Cite Outdated Data Not Reflective of Today's Market or Narrow Studies Not Representative of Most Transactions

Recent press and academic articles convey divergent views about hospital merger and acquisition activity, including the key drivers and the likely impact of transactions upon price, value and access. Most agree that a variety of government policy, market, and hospital-specific factors create pressures and incentives for significant realignment of healthcare delivery accomplished by the creation of integrated systems or by mergers, affiliations, or acquisitions of hospitals. These pressures are particularly pressing for smaller stand-alone

hospitals. These articles acknowledge, as drivers for restructuring, the increasing financial pressures currently facing hospitals, and the need to transform healthcare delivery from its current fragmented state to improve care and reduce costs. At the same time, other articles suggest trends toward consolidation lead to potential anticompetitive effects across a broad array of mergers and often reference selected academic studies of price effects of mergers in the 1990s to draw inferences about what is happening today.

- This reliance on past (and in some cases quite distant past) merger activity reveals the imperative for a more comprehensive understanding of current market conditions, current merger motivations and more rigorous examination of merger effects to evaluate the likely benefits or competitive risks of *current* and future hospital transactions. Fundamentally different market conditions mean that past research can be ill-suited to infer the impact of *current* merger transactions. Past research may not capture dramatic changes ongoing in the healthcare industry, including transformative changes on the provider and insurer side, and the pressures and results of healthcare reform – particularly requirements for new technologies, new business models, innovative payment reform, and reduced reimbursements. Most of these oft-cited studies are based on mergers or data from the 1990s which occurred under substantially different market conditions than those present today. This may lead to incorrect and even misleading inferences on the impact of mergers in today's health care environment.

  Fundamentally different market conditions mean that past research can be ill-suited to infer the impact of current merger transactions.... Most of these oft-cited studies are based on mergers or data from the 1990s which occurred under substantially different market conditions than those present today.

  Our comprehensive review of available studies shows:

  - Many studies examine changes in concentration, not actual mergers. However, across studies, there is no consistently quantified relationship between changes in market concentration and observed hospital price increases.
  - Actual merger retrospectives show common market characteristics – such as fewer competitors and higher concentration – but inconsistent results on price effects, suggesting that market share and concentration alone may be poor predictors of competitive effects. This suggests that offsetting benefits or other dynamics likely are important factors.
  - It is difficult to generalize about merger effects from some studies due to methodology and approach. Several are based on simulations or models that either have not been validated against actual mergers or on assumptions that areas studied are actual markets or that no longer may be consistent with market conditions. Price predictions thus may be overstated.
- Price variation studies tend to be based on limited data and narrow samples. Empirical research demonstrates that many factors account for price variation, including cost of patient care, the severity of care, and the health of populations served. Price variation neither is necessary nor sufficient to demonstrate market power exercise in differentiated products, and differences in price levels are not indicative of market power.
- Studies reporting significant – 20% or more – price increases from mergers are specific cases involving selected transactions or data from mergers in highly concentrated markets and thus are not generalizable to all mergers and acquisitions or even to those in highly concentrated markets.

  However, across studies, there is no consistently quantified relationship between changes in market concentration and observed hospital price increases.

  - The majority of hospital acquisitions occur between hospitals located in different markets and would not be subject to the same market conditions that study authors hypothesize drove price increases.
  - Many "in-market" mergers occur in the largest metropolitan areas with many competitors and do not involve material changes in concentration.
  - Even the selected case studies show mixed results – concentrated markets alone did not yield statistically significant price increases.

Government Antitrust Reviews Underscore That the Vast Majority of Mergers Do Not Raise Risks of Substantial Lessening of Competition

- Antitrust review is a fact-intensive inquiry into whether a merger is likely substantially to lessen competition. Only a small proportion of actual hospital transactions raised significant risks of substantial lessening of competition. Only a minority of mergers involved prolonged review, and several of these were not challenged. Most involved hospitals operating in different geographies or in ones with numerous competitors. According to former FTC Chairman Jon Leibowitz, less than two percent of all hospital mergers reviewed between 2007 and 2011 were challenged in court.
- These trends are more supportive of a conclusion that the majority of transactions enhance value or are competitively benign.
- These trends also reveal high concentration, high market shares and the number of competitors are not predictive of either hospital merger challenges or of predicted or actual anticompetitive effects: Both retrospective and prospective hospital merger analyses in highly concentrated markets show that many hospital mergers, even in concentrated markets, either did not result in or were not predicted to result in substantial increases in prices.

Fundamental Realignment Changes Are Underway within the Context of A Historic Slowdown in the Rate of Healthcare Spending.

- Overall healthcare spending growth is slowing, as reflected by the hospital Producer Price Index (PPI). Some of the key factors behind this trend involve changes in the healthcare delivery system including greater provider efficiency, increased cost sharing, as well as a reduction in imaging technology proliferation, and the advent of new pharmaceuticals. This slowing in the rate of growth of healthcare spending and in hospital PPI, on balance, suggests some benefit from changes in the healthcare delivery system.

This slowing in the rate of growth of healthcare spending and in hospital PPI, on balance, suggests some benefit from changes in the healthcare delivery system.

Methodology

The Center for Healthcare Economics and Policy was commissioned by the Federation of American Hospitals (FAH) to contribute to understanding the likely benefits or competitive risks of hospital consolidation by undertaking research on trends influencing transactions and healthcare delivery, and to assess the literature on the price, value (cost and quality) and access effects of hospital merger transactions. We were tasked to evaluate these research findings for today's dynamic environment of major systemic change in healthcare delivery in the US with its increasing demands for both integrated care and reduction in healthcare costs along with fundamental changes in payment methodologies (i.e., the transition to value and risk-based from fee-for-service models). We evaluate research on the expected and actual benefits and competitive risks of hospital transactions and the circumstances in which they occur. We examine studies of price effects of mergers, and study the specifics of antitrust review of hospital mergers. We limit our analysis to focus on only those studies and articles examining US data and trends. Sources included in the study were identified based on literature searches conducted as of September 2013.

I. Introduction and Overview

A. Objectives and Approach

Recent press and academic articles convey divergent views about the key drivers and likely impact of hospital merger and acquisition activity on value (costs, quality), access and price. Most agree that government policies including healthcare reform initiatives, market conditions, and hospital-specific factors create incentives for significant realignment of healthcare delivery whether by mergers and acquisitions of hospitals – particularly smaller stand-alone hospitals – or by development and expansion of integrated delivery systems. There is little agreement, however, about both the drivers and impacts of transactions.

Most agree that government policies including healthcare reform initiatives, market conditions, and hospital-specific factors create incentives for significant realignment of healthcare delivery whether by mergers and acquisitions of hospitals – particularly smaller stand-alone hospitals – or by development and expansion of integrated delivery systems. There is little agreement, however, about both the drivers and impacts of transactions.

- A recent news article suggests dramatic consolidation yields substantial cost increases: *"Hospitals across the nation are being swept up in the biggest wave of mergers since the 1990s, a development that is creating giant hospital systems that could one day dominate American health care and drive up costs."*[1]
- Yet, a recent academic article views the trends as efficiency-enhancing and necessary to improve cost, quality and access: *"Our healthcare system is fragmented, with a misalignment of incentives, or lack of coordination, that spawns inefficient allocation of resources. Fragmentation adversely impacts quality, cost, and outcomes. Eliminating waste from unnecessary, unsafe care is crucial for improving quality and reducing costs–and making the system financially sustainable. Many believe this can be achieved through greater integration of healthcare delivery, more specifically via integrated delivery systems (IDSs)."*[2]

Specifically, the sharpest disagreement is over what is likely realized from hospital transactions –whether current and anticipated hospital transactions will yield important consumer and community benefits in improved value, efficiency, and access or instead result in anticompetitive pricing without offsetting benefits.[3] The latter perspective often relies on selected academic studies or modeling of price effects of mergers in the 1990s or in highly concentrated markets to draw their more general inferences about market power impact and motivations for current and future transactions.[4] Importantly, this reliance on past (and in some cases quite distant past) data or studies reveals the imperative for a more comprehensive understanding of *current* market conditions, *current* merger motivations and more rigorous examination of merger effects to evaluate the likely benefits or competitive risks of current and future hospital transactions.

Reliance on findings from past studies including ones evaluated under possibly fundamentally different market conditions points to some potentially critical gaps in and issues with using past research to inform current understanding of merger effects. In turn, this has precipitated calls for more careful review and re-focused research to better understand current merger trends and their

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1 Julie Creswell and Reed Abelson, *New Laws and Rising Costs Create a Surge of Supersizing Hospitals*, THE NEW YORK TIMES (August 12, 2013), available online at http://www.nytimes.com/2013/08/13/business/bigger-hospitals-may-lead-to-bigger-bills-for-patients.html?pagewanted=all&_r=0. *See* also: Anemona Hartocollis, *2 Hospital Networks Agree to Merge, Raising Specter of Costlier Care*, THE NEW YORK TIMES (July 16, 2013), available online at http://www.nytimes.com/2013/07/17/nyregion/2-hospital-networks-agree-to-merge-raising-specter-of-costlier-care.html, and Eduardo Porter, *Health Care's Overlooked Cost Factor,* THE NEW YORK TIMES (June 11, 2013), available online at http://www.nytimes.com/2013/06/12/business/examinations-of-health-costs-overlook-mergers.html?_r=1&.

2 Alain C. Enthoven, *Integrated Delivery Systems: The Cure for Fragmentation*, 15 AMERICAN JOURNAL OF MANAGED CARE 10S (2009): S284-S290 at S284.

3 Recent Congressional testimony highlights these different perspectives. For example: "The health care field is undergoing a period of fundamental transformation in which the very model of health care delivery is being changed in order to improve quality and lower costs. The reasons for such change are varied; but chief among them are expectations [for]…greater value. Meeting these expectations requires building a continuum of care to replace the current fragmented system of health care. In addition, hospitals are facing enormous pressure to raise capital to invest in new technologies and facility upgrades. Mergers or acquisitions are often essential to make these goals a reality." Sharis Pozen, *The Patient Protection and Affordable Care Act, Consolidation, and the Consequent Impact on Competition in Healthcare*, Statement of the American Hospital Association, U.S. CONGRESS, HOUSE JUDICIARY COMMITTEE, SUBCOMMITTEE ON REGULATORY REFORM, COMMERCIAL AND ANTITRUST LAW (September 19, 2013). Testimony indicating concerns about mergers includes: Joe Miller, *Competition and Consolidation in the U.S. Health Care System*, U.S. CONGRESS, HOUSE JUDICIARY COMMITTEE, SUBCOMMITTEE ON REGULATORY REFORM, COMMERCIAL AND ANTITRUST LAW (September 19, 2013). Several news article reference economist statements on inferences drawn from prior studies on merger price effects or price variation such as Martin Gaynor: Hartocollis (2013); and Paul Ginsburg: Robert Weisman, *Hospital Mergers May Drive up Costs*, THE BOSTON GLOBE (October 3, 2013), available online at http://www.bostonglobe.com/business/2013/10/02/health-care-leaders-warn-that-hospital-consolidation-could-drive-costs/ZAg3Wy0tomHOPK3UNiHw0J/story.html and articles such as: Robert A. Berenson, Paul B. Ginsburg and Nicole Kemper, *Unchecked Provider Clout in California Foreshadows Challenges to Health Reform*, 29 HEALTH AFFAIRS 4 (2010): 699-70 [The latter is critiqued in Margaret E. Guerin-Calvert and Guillermo Israilevich, *Assessment of Cost Trends and Price Differences for U.S. Hospitals* (March 2011)]. These same press articles, however, highlight the many pressures facing hospitals and the benefits from acquisitions or system affiliation and potential gains from transactions [*See*, Weisman (2013)].

4 As noted in the discussion below of antitrust review of hospital mergers, concentration alone is not predictive of anticompetitive effects or challenge to a merger. While hospital mergers have been challenged, these represent a small proportion of those subject to review and scrutiny by the antitrust agencies. Martin Gaynor and Robert Town, *The Impact of Hospital Consolidation – Update*, THE SYNTHESIS PROJECT (June 2012), available online at http://www.rwjf.org/en/research-publications/find-rwjf-research/2012/06/the-impact-of-hospital-consolidation.html or David M. Cutler and Fiona Scott Morton, *Hospitals, Market Share, and Consolidation* 310 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 18 (2013): 1964-1970

impacts and implications for future mergers, and to take into consideration the dynamic effects and impacts of mergers on non-price competition. For example: "There is disagreement about whether the current trend toward provider consolidation is a desirable development, but many think continued horizontal and vertical integration based around hospitals is inevitable... Whatever the merits of consolidation, *there is a need to understand the effect of that consolidation on prices, service use, access and quality...*" (Emphasis added.)[5]

Importantly, this reliance on past (and in some cases quite distant past) data or studies reveals the imperative for a more comprehensive understanding of current market conditions, current merger motivations and more rigorous examination of merger effects to evaluate the likely benefits or competitive risks of current and future hospital transactions.

The Federation of American Hospitals (FAH) commissioned The Center for Healthcare Economics and Policy to contribute to this understanding by undertaking research on trends influencing transactions and healthcare delivery and to assess the literature and empirical studies on the price, value (cost and quality) and access effects of hospital merger transactions. We were tasked to evaluate these research findings for today's dynamic environment of major systemic change in healthcare delivery in the US.

In this study, we examine the role played by and the effects of hospital realignment. Specifically, we seek to identify and evaluate research on the factors that lead to hospital transactions and examine studies on the attributes and realization of expected benefits. We also document current merger and acquisition activity and other marketplace changes. To do so, we perform a comprehensive assessment of the literature and review 75 studies and 36 primary sources.

In reaching the findings presented in this report and summarized in the Overview, we examined studies about hospital realignment to identify how it may provide a means for hospitals to adapt to changes in the industry as well as to address current challenges (Sections I and II). **For example, acquisitions or system affiliation can facilitate access to needed capital and speedier implementation of essential technology (such as electronic medical records).**

To understand the effects of hospital realignment, we turn to an extensive review of the existing literature on access, cost and efficiency, and quality (Section III). We also provide a review of key factors and trends facing healthcare delivery today to provide context.

As much of the discussion surrounding hospital mergers and acquisitions pertains to expected price effects, we conduct an exhaustive survey and analysis of pricing studies. In addition, we report and discuss findings from antitrust reviews and retrospectives to put mergers that may pose significant competitive risks (*e.g.*, those receiving close scrutiny or challenge) into context (Section IV). We end our analysis with a review of macro developments and cover, in particular, recent healthcare expenditure and price growth trends (Section V).

Consolidation can lead to better coordinated care and enhance delivery points of care to patients. Mergers can also reduce operating costs or improve outcomes through economies of scale, realignment, or expansion of services.

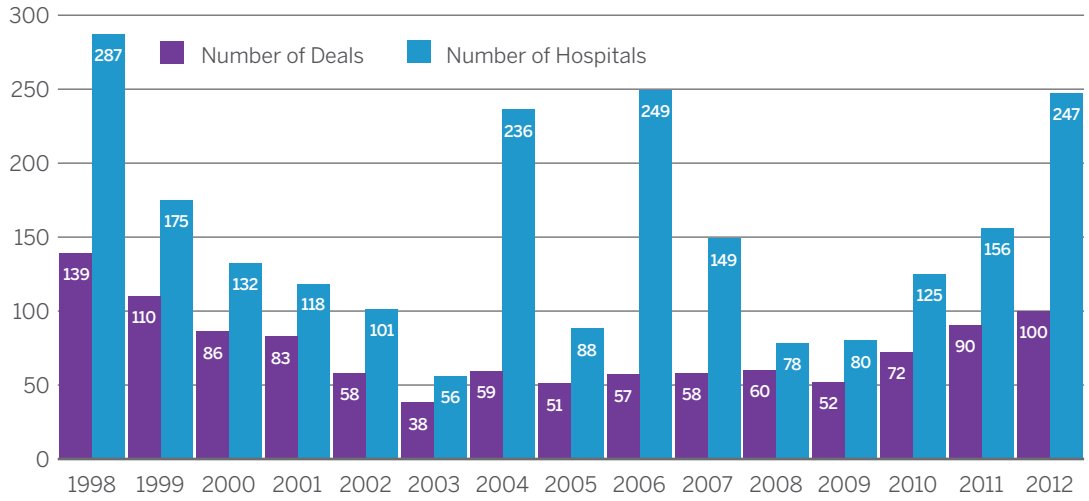
In today's challenging environment, mergers provide an opportunity to realign the healthcare delivery system to the benefit of patients and communities. Consolidation can lead to better coordinated care and enhance delivery points of care to patients. Mergers can also reduce operating costs or improve outcomes through economies of scale, realignment, or expansion of services.

5 Co-Chair G. William Hoagland quoted in a press release for a National Academy of Social Insurance project evaluating policy options that address the trend towards provider consolidation and its impact on health care spending, *Study Panel Announced for NASI Project to Address Pricing Power in Health Care Markets*, NATIONAL ACADEMY OF SOCIAL INSURANCE (July 18, 2013), available online at http://www.nasi.org/press/releases/2013/07/press-release-study-panel-announced-project-address-prici. Quoted in another press release on this project, he states that the study will "....explore the role of health plan consolidation on prices and quality and consider the role of factors besides consolidation on prices and quality." *NASI Announces New Project on Addressing Pricing Power in Health Care Markets*, NATIONAL ACADEMY OF SOCIAL INSURANCE (August 8, 2013), available online at http://www.nasi.org/press/releases/2013/06/press-release-announces-new-project-addressing-pricing-po.

B. Review of Hospital Merger and Acquisition Trends During the Past 20 Years

Facts about hospital consolidation activity over the last 20 years show some activity in each year—mergers are not uncommon but economic and financial factors likely play an important role in overall transaction activity. Figure 1 shows a steady baseline of mergers in each year; there have been 50 or more deals in every year but one (2003) since 1998. The graphic shows some variation in number of transactions and acquired hospitals per year – there generally have been more transactions in years of economic and financial pressures (*e.g.*, after 2008); these factors are also relevant in the mid-to-late 1990s. For example, the number of hospitals involved in transactions has increased in the last 3 years relative to the preceding years – similar trends are found leading up to 1998. Data on individual transactions reveals that more than half of acquired hospitals in recent years had fewer than 150 beds, suggesting financial and economic pressures and/or effects of healthcare reform may be significant factors for this category of hospitals. [6]

Figure 1: Announced Hospital Mergers and Acquisitions, 1998 – 2012



Source: AHA TrendWatch Chartbook 2013, Chart 2.9: Announced Hospital Mergers and Acquisitions, 1998 – 2012

In fact, merger activity is characterized largely by single firm acquisition rather than "mega-mergers" – the majority of hospitals involved in transactions since 2007 were stand-alone hospitals; and many of these combined via mergers or acquisitions with just one or two other hospitals.[7] System acquisitions tended to involve expansion into new geographies and acquisitions of stand-alone hospitals, whether in the same or different geographies.[8] While the number of hospitals in systems has increased over time, there remain a very large number (almost 2,000) of independent hospitals (Figure 2) — many of which are smaller hospitals in rural or smaller urban areas.[9]

...merger activity is characterized largely by single firm acquisition rather than "mega-mergers" — the majority of hospitals involved in transactions since 2007 were stand-alone hospitals; and many of these combined via mergers or acquisitions with just one or two other hospitals.

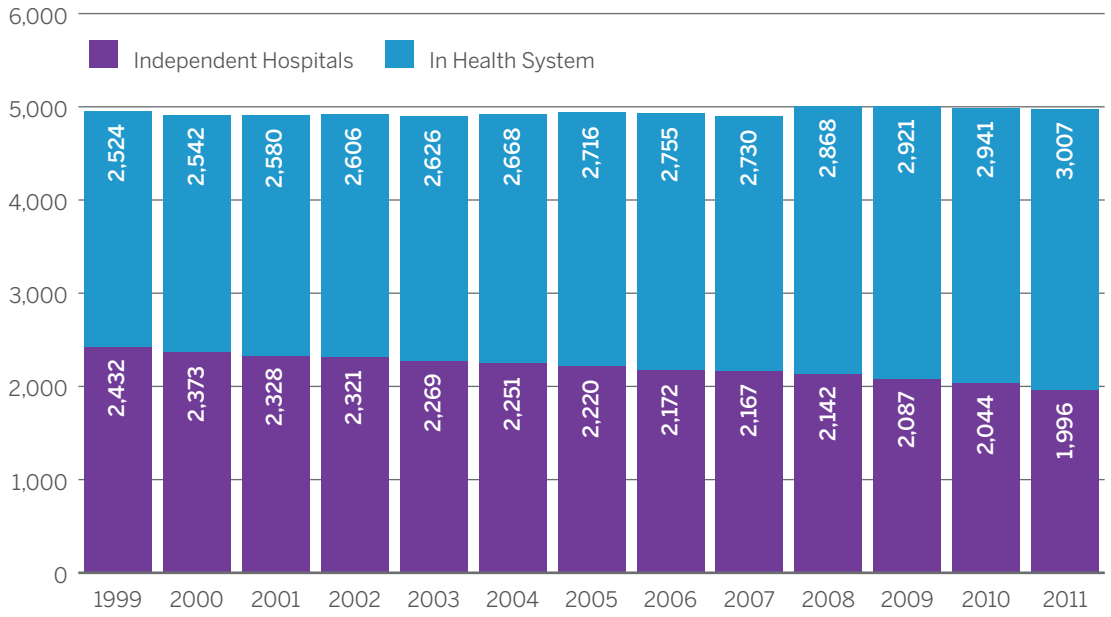
6 *AHA TrendWatch Chartbook 2013*, AMERICAN HOSPITAL ASSOCIATION (2013) Chart 2.9: Announced Hospital Mergers and Acquisitions, 1998 – 2012, available online at http://www.aha.org/research/reports/tw/chartbook/ch2.shtml. *See also, The Health Care Acquisition Report: Eighteenth Edition*, IRVING LEVIN ASSOCIATES, INC. (2012) at 3. The number of hospitals involved in mergers and number of transactions is affected by individual large transactions, such as HCA in 2006. Data from the mid-1990s also showed an increasing number of transactions and associated hospitals in the years leading up to 1998. For transactions before 1998 *see* AHA data reported in Allison E. Cuellar and Paul J. Gertler, *Trends in Hospital Consolidation: the Formation of Local Systems*, 22 HEALTH AFFAIRS 6 (2003): 677-687.

7 The Center for Healthcare Economics and Policy conducted an extensive study of hospital merger and acquisition activity for the period 2007 through June 2013; the study was commissioned by AHA. The study found that the average transaction size was small (on average one or two acquired hospitals), and a large proportion involved acquired hospitals with 150 or fewer beds, many of which were not previously affiliated with systems. The study also found that about half of all transactions involved hospitals in separate geographies (*e.g.*, non-overlapping) and overlap transactions predominantly occurred in metropolitan areas with 5 or more competitors. Metropolitan areas were defined using MSAs. *See How Hospital Mergers and Acquisitions Benefit Communities: Updated Study by the Center for Healthcare Economics and Policy*, CENTER FOR HEALTHCARE ECONOMICS AND POLICY AND THE AMERICAN HOSPITAL ASSOCIATION (September 2013), available online at http://www.aha.org/content/13/13mergebenefitcommty.pdf for detail and methodology.

8 Based on data referenced in footnote 8.

9 And, the average size of hospital systems is relatively small with just over 3 hospitals. *See*, Cutler and Scott Morton (2013) at 1965.

Figure 2: Number of Independent Hospitals and Hospitals in Health Systems in the US, 1999-2011



Source: AHA TrendWatch Chartbook 2013, Table 2.1: Number of Community Hospitals, 1991 – 2011

About half of transactions occurred between organizations located in separate geographies and of those that involved overlaps in the same geography, the majority occurred in metropolitan areas with five or more independent competitors. Indeed, a large proportion of transactions occurred in metropolitan areas with multiple independent competitors[10] that are characterized as moderately concentrated or unconcentrated in the 2010 US Department of Justice and FTC Horizontal Merger Guidelines.[11] A recent study estimates concentration measures ("HHIs") for over 300 geographies using hospital referral regions ("HRRs") as the geographic unit in which to measure shares and 2011 data.[12] Interestingly, the study finds that *over half* of these 306 geographic areas are unconcentrated or moderately concentrated (suggesting that mergers in such areas would be less likely to raise a challenge under the 2010 Merger Guidelines on structural grounds).[13] These areas include many of the major metropolitan areas in the country such as Boston, Chicago, Los Angeles and New York, which account for a substantial proportion of US population.[14] Indeed, a population-adjusted map in the study shows that many of the moderately or low concentrated areas are geographies with larger populations and include large numbers of hospital competitors implying substantial alternatives for merging parties.[15]

10 *See* footnote 8 for detail. Competitors may also include other firms than those physically located in an area.

11 The 2010 Horizontal Merger Guidelines use the Herfindahl Hirschman Index (HHI) as a measure of concentration, and establish thresholds for unconcentrated (<1000), moderately concentrated (1000-2500) and highly concentrated (>2500) markets, and indicate the levels of HHI and change in concentration due to merger likely to precipitate more extensive scrutiny or possible challenge. *See Horizontal Merger Guidelines*, U.S. DEPARTMENT OF JUSTICE AND THE FEDERAL TRADE COMMISSION (2010) available online at http://ftc.gov/os/2010/08/100819hmg.pdf. Market shares and concentration involve assessment of relevant markets and are just one part of merger review, which involves substantial analyses.

12 David M. Cutler and Fiona Scott Morton, *Hospitals, Market Share, and Consolidation*. 310 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 18 (2013): 1964-70. HRRs are derived based on hospital service areas of hospitals and use methodologies based on Medicare data; these are developed by Dartmouth Atlas. *Appendix on the Geography of Health Care in the United States*, THE DARTMOUTH ATLAS OF CARE 1999, The Dartmouth Institute for Health Policy and Clinical Practice: Lebanon, New Hampshire (1999). HRRs tend to be relatively broad areas often encompassing a MSA and surrounding areas.

13 This assumes HRRs as proxies for "markets" in estimating HHIs. *See* Cutler and Scott Morton (2013) at 1966. The study also refers to changes in concentration from mid-1980s

14 *See, e.g.*, HHI measures and areas from Cutler and Scott Morton (2013) measuring concentration using hospital referral regions (HRRs).

15 Cutler and Scott Morton (2013) at 1966.

II. Key Policy, Demographic and Economic Factors Shaping Healthcare Delivery and Realignment

Major systemic changes are underway in the healthcare sector driven by government policy changes as well as economic conditions and demographics. The challenges facing the healthcare industry include the slow economic recovery, reduced reimbursements, difficulty in obtaining capital, a changing infrastructure for coordination of care, and an essential investment in and implementation of costly healthcare IT systems. Lower occupancy and excess or misaligned capacity are pressing concerns in many areas. The economic literature shows that these types of factors have been drivers of past mergers and of current ones.

Hospitals and health systems are under increasing pressure to deliver high quality, cost-effective healthcare that is integrated and coordinated across the delivery system in a community.

Hospitals and health systems are under increasing pressure to deliver high quality, cost-effective healthcare that is integrated and coordinated across the delivery system in a community. Pressures affect virtually all hospitals and geographies, albeit in varying degrees and have significant implications for mergers and realignment of healthcare delivery capacity. How these changes affect individual hospitals can vary considerably, depending on local market conditions, the specific situation of the hospital, and the healthcare needs of its community. Among important hospital-specific factors are: payor and service mix, age of plant and need for investments in plant or new technologies, patient volumes and occupancy rates, and financial circumstances including access to capital.[16]

Case in Point: *In an effort to increase efficiency and improve quality of care, the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 developed both financial incentives (and penalties) designed to encourage hospitals to implement EMR technology. However, adopting this technology requires significant investment and may be prohibitively expensive for some hospitals. Recent studies show a large proportion of hospitals, particularly smaller hospitals, face significant challenges in meeting these requirements.* ***DesRoches et al. (2013)*** *explores hospital EMR uptake.[17] They find that while 42.2 percent of hospitals have adopted EMR in 2012, the vast majority of their systems are very basic ones.[18] The authors note differences in uptake by hospital characteristics: small hospitals are much less likely to have even a basic system than large hospitals and rural hospitals were also less likely to have a system in place compared to urban hospitals.[19] Both types of hospitals often face financial and human resource constraints to purchase and implement technology, and they may fall behind the more able institutions. If EMR prove not only to increase efficiency and quality of care,[20] but stave off penalties and garner incentives, failing to implement this technology could result in significant, long term costs and relative cost differences among hospitals, and may adversely affect a hospital's ability to compete in the future.*

These legislative and policy changes occur in the context of a broader set of economic, demographic, and patient care pressures.[21]

Key factors shaping healthcare delivery and realignment are: (1) Efforts to achieve "Triple Aim" goals of enhanced patient care, improved health of population, and reduction in rate of increase in per capita costs. These aims are accomplished by a broader

16 There are many major changes confronting hospitals including actual and expected changes in reimbursements and modes of care delivery: reduced Medicare reimbursements and new payment models (*e.g.*, global risk and value-based reimbursement), and penalties for avoidable readmissions and hospital-acquired conditions; potential expansion of Medicaid and expanded coverage of currently uninsured, required investments in technologies such as electronic health records; and new forms of care delivery such as Accountable Care Organizations, or "ACOs." *See* Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 6001, 124 Stat. 119, 684-89 (2010). *See* also, *The Affordable Care Act Three Years Post-Enactment*, THE HENRY J. KAISER FAMILY FOUNDATION (March 2013), available online at http://kaiserfamilyfoundation.files.wordpress.com/2013/04/84291.pdf; and Douglas W. Elmendorf, Dir., Cong. Budget Office, *CBO's Analysis of the Major Health Care Legislation Enacted in March 2010*, US CONGRESS, COMMITTEE ON ENERGY AND COMMERCE, SUBCOMMITTEE ON HEALTH (March 30, 2011), available online at http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/121xx/doc12119/03-30-healthcarelegislation.pdf.

17 The study uses data from the American Hospital Association (AHA) 2012 health IT supplement. Catherine DesRoches, Dustin Charles, Michael Furukawa, Maulik S. Joshi, *et al.*, *Adoption of Electronic Health Records Grows Rapidly, But Fewer than Half of US Hospitals had at least a Basic System in 2012*, 32 HEALTH AFFAIRS 8 (2013):1-9.

18 While they are compliant with the stage 1 guidelines which require compliance as of July 1, 2014, only 5.1 percent would comply with the stage 2 federal requirements. As more advanced systems (*i.e.*, those that meet stage 2 requirements) are thought to provide a larger benefit, there is still substantial improvement which has yet to be realized. DesRoches *et al.* (2013) at 1.

19 Of the 2,796 survey respondents, 483 reported having a comprehensive EMR system, 792 had a basic system, and 1,521 had no system at all. There are marked differences in system type adoption among small, medium and large hospitals. 61.7 percent of small hospitals reported having no EHR system in 2012, while 25.3 percent had a basic system and 13.0 percent had a comprehensive system. For large hospitals, 38.1 percent had no system, 33.6 percent had a basic system and 28.3 percent had a comprehensive system. There also appears to be an urban/rural divide as 66.5 percent of rural hospitals reported having no system, 23.1 percent had a basic system and 10.4 percent had a comprehensive system. Among urban hospitals, 52.3 percent reported having no system, 28.8 had a basic system, and 18.9 percent had a comprehensive system. DesRoches *et al*. (2013) at 4, Exhibit 2.

20 Because EMR technology is a precursor to full participation in a regional health information organization (a facilitator of information sharing among stakeholders), the disadvantage the hospitals which fail to adopt the technology may be further compounded. Similar to the findings presented for EMR adoption, Furukawa *et al*. (2013) studies regional health information organization activity and finds that providers in rural locations had lower levels of exchange activity than did their urban counterparts. Michael F. Furukawa, Vaishali Patel, Dustin Charles, Matthew Swain and Farzad Mostashari, *Hospital Electronic Health Information Exchange Grew Substantially in 2008-12*, 32 HEALTH AFFAIRS 8 (2013):1346-1354.

21 Hospitals in the US have experienced a decline in inpatient admissions over the past several years, due in part to shifts to outpatient care (discussed in more detail below) as well as economic conditions. *AHA TrendWatch Chartbook 2013,* AMERICAN HOSPITAL ASSOCIATION, (2013) Table 3.1, available online at http://www.aha.org/research/reports/tw/chartbook/2013/table3-1.pdf. and Moody's Investor Services, *U.S. NOT-FOR-PROFIT HEALTHCARE OUTLOOK REMAINS NEGATIVE FOR 2012*, OUTLOOK (2012).

focus on coordinated care delivery for populations rather than episodes of care, and through more efficient delivery systems of integrated and coordinated care.[22] Shifting from individual patient episodes and fee-for-service to managing population health effectively requires significant movement from unaligned and fragmented entities toward systems of healthcare providers.[23] In turn, this may result in increased restructuring of care delivery with increased coordination or ownership change, and is likely to implicate more transactions involving hospitals given the large number of hospitals that are stand-alone facilities.[24] (2) Shifts from inpatient to outpatient care and excess inpatient capacity. Improvements in technologies enabling less invasive procedures and shorter stays have resulted in a significant increase in outpatient care and a reduction in inpatient care. Outpatient care now accounts for about 60 percent of patient care, and an increasing proportion of that care is delivered in free standing facilities rather than in hospital-owned facilities.[25] The number of such facilities has increased significantly in the last decade.[26]

Key factors shaping healthcare delivery and realignment are ...Efforts to achieve "Triple Aim" goals of enhanced patient care, improved health of population, and reduction in rate of increase in per capita costs.

And (3) Development of integrated delivery systems or integrated delivery networks (IDS or IDN) is expanding considerably with systems of hospitals (community and tertiary) and physicians, and in some cases with insurance plans, to deliver a full spectrum of care to a community. This has been accomplished by adding hospitals or providers to a system, or by expansion and outreach efforts of a health system to serve a wider community and population with outpatient or physician offices.[27]

The net effect of economic factors (including decline in employment, shifts of industries from one area to another) and population shifts, along with the shift in location of care from inpatient to outpatient already has resulted in significant under-utilized inpatient capacity at many hospitals and financial pressures.[28] We turn to these factors specifically in the following and examine in detail the implications for access to capital and hospital executive perceptions of the impact of economic and financial conditions, as well as the impact of capacity on costs.

Financial trends and implications for hospitals' operations, access to and cost of capital in 2013 and beyond: Reductions in the healthcare spending trend along with other factors exert pressure on hospital profit margins. Moody's Investors Service (2012) revised its not-for-profit hospital industry outlook to negative (from stable) in 2008 and reports in 2012 that the outlook is expected to remain negative for the foreseeable future.[29] The slow economic recovery has resulted in a reduction in inpatient volume and a weakening in payor mix (i.e., there is an increased proportion of revenue derived from Medicaid and Medicare which offer less generous reimbursement than do commercial payors), both of which lead to increased financial pressures.[30] Moody's

22 *See*, Atul Gawande, *The Cost Conundrum*, THE NEW YORKER (June 1, 2009), available online at http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande.and and Donald M. Berwick, Thomas W. Nolan and John Whittington, *The Triple Aim: Care, Health, And Cost*, 27 HEALTH AFFAIRS 759 (2008): 759-769.

23 *See*, Berwick (2008) at 763-64 (noting that the integrator has the ability to take a defined population and coordinate services to address care, health, and costs).

24 As shown in Figure 2 above, about 1,900 hospitals in the US are stand-alone hospitals. This number is down by about 450 since 2010 due to affiliations with systems or formation of systems, as well as some closures. *AHA TrendWatch Chartbook 2013* at Table 2.1, available online at http://www.aha.org/research/reports/tw/chartbook/2013/table2-1.pdf. Many are smaller hospitals. *See, Hospital Statistics by State*, AMERICAN HOSPITAL DIRECTORY (2012), available online at http://www.ahd.com/state_statistics.html.

25 For statistics on inpatient care changes including decline in rate of admissions as well as change in acuity of care provided at hospitals *see, Report to the Congress: Medicare Payment Policy*, MEDICARE PAYMENT ADVISORY COMMISSION (March 2013); *Ambulatory Surgery in US Hospitals*, U.S. DEP'T OF HEALTH & HUMAN SERV., AGENCY FOR HEALTHCARE RESEARCH & QUALITY, AHRQ Publication No. 07-0007 (2007): 26-40 available online at http://archive.ahrq.gov/data/hcup/factbk9/factbk9.pdf; and Beth Kutscher, *Outpatient Care Takes the Inside Track*, MODERNHEALTHCARE.COM (AUG. 4, 2012) available online at http://www.modernhealthcare.com/article/20120804/MAGAZINE/308049929. There are also significant changes in payment methodologies and contracting. *See, e.g.*, Zirui Song, Dana G. Safran, Bruce E. Landon, Mary Beth Landrum, *et al.*, "*The 'Alternative Quality Contract,' Based on a Global Budget, Lowered Medical Spending and Improved Quality* 31 Health Affairs 9 (2012):1:10.

26 Between 2006-2008 the number of Medicare approved Ambulatory Surgical Centers increased at an average rate of 5.1 percent per year. *Report to the Congress: Medicare Payment Policy*, MEDICARE PAYMENT ADVISORY COMMISSION (March 2013) at 111.

27 *See*, Emily R. Carrier, Marisa Dowling and Robert A. Berenson, *Hospitals' Geographic Expansion In Quest Of Well-Insured Patients: Will The Outcome Be Better Care, More Cost, Or Both?*, 31 HEALTH AFFAIRS 827 (2012)827-835; Douglas McCarthy, and Kimberly Mueller, *Organizing for Higher Performance: Case Studies of Organized Delivery Systems*, THE COMMONWEALTH FUND (2009); McCarthy, Douglas, Kimberly Mueller and Ingrid Tillmann, *HealthPartners: Consumer-Focused Mission and Collaborative Approach Support Ambitious Performance Improvement Agenda*, THE COMMONWEALTH FUND (2009); Douglas McCarthy, Kimberly Mueller, and Jennifer Wrenn, *Geisinger Health System: Achieving the Potential of System Integration through Innovation, Leadership, Measurement, and Incentives*, THE COMMONWEALTH FUND (2009); and Kathleen H. McCarthy and Alan M. Zuckerman, *Realizing the Full Financial Benefits of True Integration*, 64 HEALTHCARE FINANCIAL MANAGEMENT 11 (Nov 2010): 78-82, 84, 86 *passim*, available online at http://www.hfma.org/Content.aspx?id=2740.

28 Trends in occupancy rates are provided in *Health, United States, 2010*, U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES, CENTERS FOR DISEASE CONTROL & PREVENTION, (2010) available online at http://www.cdc.gov/nchs/data/hus/hus10.pdf (listing trends in occupancy). Significant excess capacity can result in higher operating costs per patient; reduction or elimination of excess capacity may be difficult to achieve absent mergers or consolidation. *See, e.g.*, Kathleen Carey, *Stochastic Demand for Hospitals and Optimizing "Excess" Bed Capacity*, 14 JOURNAL OF REGULATORY ECONOMICS 2 (1998):165-187; and Esther Gal-Or, *Excessive Investment in Hospital Capacities*, 3 JOURNAL OF ECONOMICS & MANAGEMENT STRATEGY 1 (1994):53-70.

29 Moody's Investor Services, *U.S. Not-for-Profit Healthcare Outlook Remains Negative for 2012*, OUTLOOK (2012). Hospital credit ratings by state are listed on pages 18-32.

30 In part, revenue growth reduction can be attributed to reductions in reimbursement in Medicare and Medicaid which represent 43 percent and 11 percent of a hospital's net revenue, respectively. For the federal fiscal years 2011 and 2012, Medicare payments were reduced by 2.9 percent per year, for a total reduction of 5.8 percent, and a number of states are implementing reductions in Medicaid reimbursement. *Ibid*., at 4.

notes: **"Hospitals are faced with an unprecedented threat to revenues…we expect revenue growth to continue to be weak and not able to keep pace with normal spending inflation."**[31]

A second 2012 Moody's report states that: "Consolidation offers the promise of greater operating efficiency and risk diversification across larger organizations, likely leading to stronger and more stable bond ratings for affected hospitals."[32] The economic logic underlying these statements is that size and scale can play a role in spreading semi-fixed and fixed costs, a significant portion of overall hospital costs, over a greater volume of business, as well as in providing variable cost efficiencies.[33] Transactions or affiliations with systems can provide access to capital that may otherwise be unavailable or prohibitively expensive.[34] A recent study estimates that less than 20 percent of almost 500 hospitals' debt rated by Moody's had a high bond rating, implying higher costs of capital or greater difficulty in accessing capital.[35]

Perspectives from hospital executives: Surveys of industry executives provide perspectives on the implications of these financial, regulatory and economic trends. A recent survey about capital constraints fielded to non-federal hospital CEOs revealed that nearly half of the hospitals surveyed reported putting capital projects on hold (including stopping ones currently in progress).[36] Projects included facility upgrades, acquisition of clinical technology and the acquisition of health information technology. Various surveys of hospital executives echo these concerns and indicate that the current healthcare environment is exceptionally challenging, with pressure coming for all angles.[37] A Deloitte (2011) study reported that many hospital CEOs believe that navigating the current healthcare environment poses the biggest challenge of their professional careers. Their responses suggest that significant realignment may be necessary for long-term survival.[38] Mergers may provide a means to address these concerns as transactions can include cash transfusions to the acquired party, allowing stalled projects to continue. In addition, mergers allow the potential for realignment which can lead to decreased costs. This reduction in cost would ameliorate some of the financial pressures these firms currently face.

Utilization Trends and "Excess" Capacity: Analyses of bed capacity for U.S. major metropolitan areas show that potentially higher available capacity at the MSA level is a widespread phenomenon: Many cities have above average bed capacity – and in some cases substantial capacity relative to expected usage.[39] Statistics on inpatient utilization trends show an overall decline in inpatient utilization which are likely to be exacerbated where Triple Aim efforts succeed in shifting more patients to preventive care or reduce inpatient

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31 *Ibid*., at 2.

32 Moody's Investor Services, *New Forces Driving Rise in Not-for-Profit Hospital Consolidation*, OUTLOOK (2012) at 1.

33 John Commins, *Pace of Hospital M&As Likely to Accelerate*, HEALTHLEADERS MEDIA (March 19, 2012) available online at http://www.healthleadersmedia.com/print/FIN-277847/Pace-of-Hospita.

34 Capital and scale issues have a disproportionate effect on smaller hospitals. Smaller stand-alone hospitals are more vulnerable to changes and may struggle to cope with new regulations stemming from the ACA. They may find implementing IT features such as electric medical records (EMR) would create excessive financial burden. *See, US Hospital M&A Generally Positive for Bondholders*, FITCHRATINGS (July 2012) available online at http://www.fitchratings.com/gws/en/fitchwire/fitchwirearticle/US-Hospital-M%26A?pr_id=754425; Ryan S. Gish and Kit A. Kamholz, *To Stand Alone or to Seek a Partner: A question…or an imperative?* TRUSTEE (September 2009): 23-26; Daniel M. Grauman, John M. Harris and Christine Martin, *Access to Capital: Implications for Hospital Consolidation*, 65 HEALTHCARE FINANCIAL MANAGEMENT 4 (April 2010)57-66; Frederick A. Hessler, *The Capital Challenge: Think Outside the Box*, HEALTH AND HEALTH NETWORKS DAILY (May 2012); and *Financing the Future II: Report 6: The Outlook for Capital Access and Spending*, 60 HEALTHCARE FINANCIAL MANAGEMENT 8 (2006):40-41.

35 Cutler and Scott Morton (2013) at 1965.

36 *AHA Report on the Capital Crisis: Impact on Hospitals*, AMERICAN HOSPITAL ASSOCIATION (January 2009) at 3, available online at www.aha.org/content/00-10/090122capitalcrisisreport.pdf. Specifically, 82 percent report putting facilities projects on hold, 65 percent have put clinical technology projects on hold and 62 percent have put information technology projects on hold.

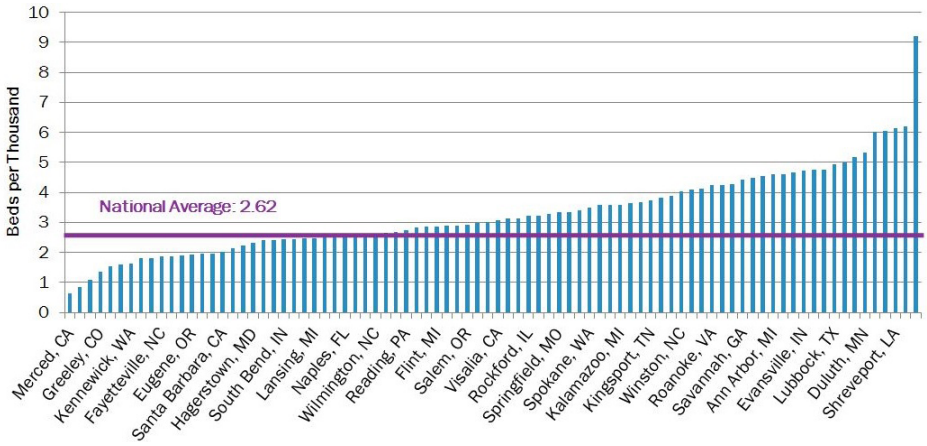
37 Collectively, the survey responses indicate that the current healthcare environment presents significant challenges and that the business model hospitals employed in the past is no longer relevant. Many of the respondents plan to explore consolidation possibilities within the near future (one study found that half of respondents believed that it was extremely likely that their organization would be absorb or be absorbed by another hospital system [U.S. News, 2011]). Findings from a Huron Healthcare (2013) report highlight the perceived benefits from consolidation. Specifically: "CEOs recognize that spreading fixed costs through consolidation or collaboration is one way to create efficiencies in process and pricing. This approach can also help organizations quickly acquire new capabilities at a lower cost structure. In the long term, CEOs are considering how consolidation may help provide more effective population health management," *Inventing the Future of Healthcare: Top CEOs on the Real Work of Transforming the Healthcare Industry*, HURON HEALTHCARE (2013) at11-12, available online at http://healthcareceoforum.com/report/. *See, Issue Brief: A look Around the Corner: Healthcare CEO's Perspective's on the Future*, DELOITTE (June 2012), available online at http://www.deloitte.com/view/en_US/us/Industries/life-sciences/28714218f4f08310VgnVCM2000001b56f00aRCRD.htm#; *Annual Executive Survey*, CRANEWARE (February 2012), available online at http://www.craneware.com/stoptheleakage/blog/post/The-results-are-in-Cranewares-Annual-Executive-Industry-Survey.aspx; *Top Issues Confronting Hospitals: 2012*, AMERICAN COLLEGE OF HEALTHCARE EXECUTIVES (January 2013), available online at http://www.ache.org/PUBS/research/ceoissues.cfm; *Eighty-Eight Percent of Healthcare Services Execs Will Pursue M&A in the Next Year, Shows GE Capital Healthcare Survey*, GE CAPITAL (September 2013), available online at http://www.genewscenter.com/Press-Releases/Eighty-Eight-Percent-of-Healthcare-Services-Execs-Will-Pursue-M-A-in-the-Next-Year-Shows-GE-Capital-42b5.aspx#downloads; *Hospital Executives Survey*, U.S. NEWS (July 2011), available online at http://health.usnews.com/health-news/best-practices-in-health/articles/2011/07/18/healthsurveytables; and *CEO Report: Optimism on the Upswing*, HEALTHLEADERS MEDIA, 2013, available online at http://www.healthleadersmedia.com/intelligence/detail.cfm?content_id=287883&year=2013.

38 "The bottom line: Many hospital CEOs stated that the new normal represents the biggest test thus far in their professional career. They anticipate two eventualities for their organization: it will be paid less for the entirety of services provided; and its portfolio of acute clinical services is likely to become a cost center in a bigger, more complex organization that is focused on care for the healthy, not just the sick." Deloitte (2012) at 2.

39 Bed capacity per capita serves as a rough proxy for available capacity (total bed capacity may also be a useful measure). Above average bed capacity is determined by using the average number of hospital beds per thousand population for MSAs in the country. Other capacity or available capacity measures used include utilization or occupancy rates.

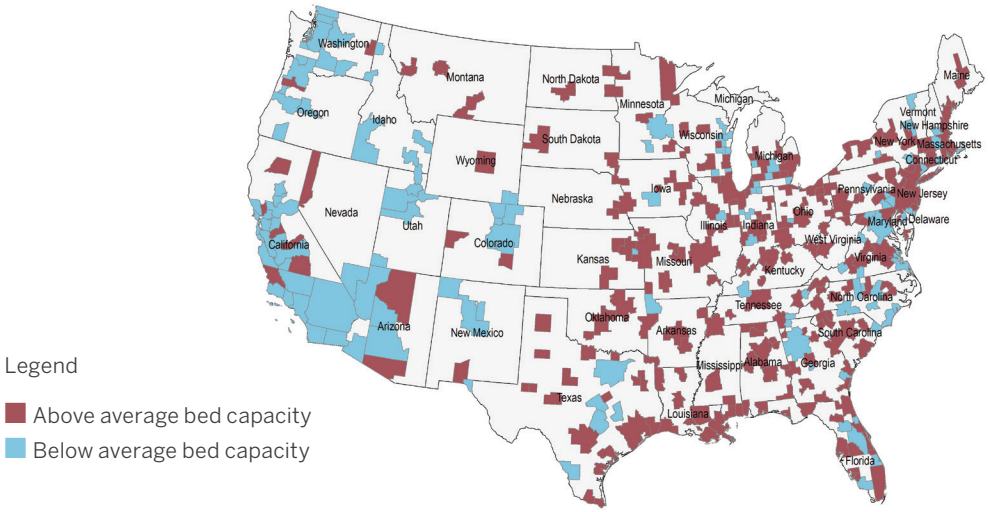
utilization, or where there are increased pressures to reduce readmissions.[40] The following graphics (Figures 3 and 4) depict estimates of bed capacity by MSA. The first graphic presents bed-capacity for small to medium-sized MSAs and demonstrates that many of these areas are likely to have excess bed capacity at least as measured by this proxy of beds per thousand. Our focus on smaller cities comes from the fact that these include cities with a number of stand-alone hospitals.[41] To get a national perspective, the map depicts MSAs (regardless of population size) with above or below average capacity across the US. This provides a perspective on the location of geographies where *current* configuration of capacity may well exceed needed capacity in the future. These figures present geographies where consolidation or realignment may be relevant as a means to improve costs and quality of care.[42]

Figure 3: Estimated Bed Capacity by Metropolitan Statistical Area (MSA) for Selected MSAs
(Limited to MSAs with a population of 250,000 to 500,000)



Source: Author's Calculations using 2011 AHA Survey data.
Notes: Bed count presented in this graph is not limited to general acute care (GAC) facilities only but represents beds in all hospital facilities located within the specified MSA.

Figure 4: Estimated Bed Capacity by Metropolitan Statistical Area (Map)



Dartmouth Atlas of Health Care, DARTMOUTH INST. FOR HEALTH POLICY & CLINICAL PRACTICES (2009) at 2-3. The map and graphic show regional variation at the MSA level in capacity per capita; above average capacity per capita may be indicative of overall potential excess of capacity relative to demand at the MSA level; individual hospitals within an MSA may have higher utilization.

40 Over the past two decades there has been a shift from inpatient to outpatient care. Inpatient admissions per 1,000 have declined since 1991 from 123.2 to 111.8 in 2011. Inpatient Days per 1,000 have similarly declined from 883.9 in 1991 to 600.4 in 2011. From 1991-2011, the average length of stay has declined from 7.2 to 5.4 days. Conversely, outpatient visits per 1,000 have risen from 1,273.4 to 2,105.6 over that time period. The change is more pronounced in recent years. From 2006 – 2011, inpatient admissions have declined by 5.4 percent while outpatient visits have risen by 5.2 percent. *AHA TrendWatch Chartbook 2013*, AMERICAN HOSPITAL ASSOCIATION (2013): Table 3.1 Trends in Inpatient Utilization in Community Hospitals, 1991 – 2011, available online at http://www.aha.org/research/reports/tw/chartbook/2013/table3-1.pdf. *AHA TrendWatch Chartbook 2013*, AMERICAN HOSPITAL ASSOCIATION (2013): Table 3.4, Outpatient Utilization in Community Hospitals available online at http://www.aha.org/research/reports/tw/chartbook/2013/table3-4.pdf.

41 The table depicts hospital bed capacity per capita for those 83 MSAs with a population between 250,000 and 500,000 as of 2011.

42 Average bed capacity is about 2.6 beds per thousand people for metro MSA areas in the US. *See* also, David C. Goodman, Elliott S. Fisher, and Kristen K. Bronner, *Hospital and Physician Capacity Update: A Brief Report from the Dartmouth Atlas of Health Care*, DARTMOUTH INST. FOR HEALTH POLICY & CLINICAL PRACTICES (2009) at 2-3. The map and graphic show regional variation at the MSA level in capacity per capita; above average capacity per capita may be indicative of overall potential excess of capacity relative to demand at the MSA level; individual hospitals within an MSA may have higher utilization.

Reduction in *actual* excess capacity at the hospital level or at the city level could result in significant operational cost savings; realignment and restructuring through mergers may provide a means to accomplish cost reduction. A study of capacity utilization by US hospitals determined there was potentially significant excess capacity measured at the hospital level. Where substantial excess capacity was present and could be reduced, it has been estimated that operating costs could be reduced.[43] Restructuring (i.e., turning general acute care beds into other uses) that can be accomplished by merger may be an effective tool to address excess capacity. Mergers and acquisitions may provide an effective market mechanism to yield better alignment of capacity with demand. Studies of hospital decision-making suggest that independent decision-making, while beneficial in many respects, can lead to over-investment and excess capacity relative to market demand, and that mechanisms for joint investments or decision making may lead to closer alignment of capacity with market demand.[44] Taking unnecessary costs out of a hospital system frees up funds to invest in unmet healthcare needs or to use in reducing overall healthcare costs.

Reduction in actual excess capacity at the hospital level or at the city level could result in significant operational cost savings; realignment and restructuring through mergers may provide a means to accomplish cost reduction.

III. Review of Literature on Merger Rationale and Effects: Value (Cost, Quality) and Access

A. Overview

In this section, we review the economic literature regarding the role that mergers and acquisitions play in responding to financial and policy pressures, changing demographic and economic conditions, and changes in demand or supply conditions in healthcare. One key driver of mergers has been the ability to maintain services in a community that might otherwise be reduced or eliminated through downsizing or closure of hospitals.[45] Studies show that financial circumstances, reduction in redundant services, efficient realignment and improved access to capital have all contributed to the trend. Many hospitals anticipated and made significant changes in service offerings post-merger, including re-organization. The alternative to merger or acquisitions is shown by some studies to be hospital closures, downsizing, or reduction in service mix such as elimination of maternity services or lower volume tertiary services. Hospital closures can reduce access to care and can result in substantial welfare effects for the local community; the literature shows some impact on mortality rates.

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The literature identifies a number of potential benefits from mergers that fall into the categories of value (cost, quality) and access. Among the benefits identified in the literature are:

- Administrative and overhead savings
- Reduced costs or reduced rate of cost/expense growth through improved operating efficiency or reduction/elimination of redundant services
- Improved overall operations and efficiency
- Realignment of services to achieve greater scale of operations or to improve quality of care delivered
- Reduction of excess capacity
- Access to capital and improved ability to make necessary investments such as technology and update facilities or services
- Ability to maintain or expand services in a community (and thereby maintain quality of services or care and/or access to care)

43 Carey (1998) uses data from the AHA and the Hospital Cost Reporting Information System (HCRIS) for the period 1987-1992 in order to determine the optimal number of excess beds a facility should hold. Carey defines the optimal level of bed capacity as occurring "where the ratio of the hospital's cost of staffing the last bed to the cost of not having the bed available is equal to the probability that the hospital is full." Carey (1998) at 179.

44 Gal-Or (1994).

45 Realignment resulting from a merger may reduce service line duplication which could have a negative impact on access.

These benefits provide the ability to respond to the pressures and challenges facing stand-alone hospitals.

In the following section, we examine the literature on price effects of mergers. The majority of this empirical literature on hospital transactions is based on studies of mergers from the 1990s and early 2000s. We start our review by examining the economic literature on both the drivers and consequences of hospital mergers. For comparative purposes, we also survey the literature on outcomes for hospitals that faced comparable challenges but did not merge. We review numerous studies addressing a very diverse set of market conditions, transactions, and sources of benefits. Many studies involve large numbers of transactions as well as hospitals (including those not involved in transactions) from the 1990s; many are recent studies and trends. This review spans decades of data and information on transactions often not studied in detail–predominantly because the vast majority of mergers raise no significant competitive risks, and their benefits may not be scrutinized or quantified expressly. We are not predicting that specific benefits found in studies from the 1990s will be replicated in each merger in the future, but believe they are informative of the types of benefits achievable by many mergers in the future, particularly where assessment of the current environment suggests increased demand for improvements in quality, access, and costs. Moreover, these studies provide insight into the gains from addressing those contemporaneous challenges.

B. The Role of Mergers and Acquisitions in Realigning the Healthcare Delivery System

As in any industry, a firm will remain viable in the long run only if it is able to adapt to changes in both supply and demand as well as adjust to overall changes in the environment. The hospital industry, in particular, currently faces many challenges that adversely impact hospitals' operations and ability to operate in their original configuration and capacity. The previous section enumerated myriad challenges facing the healthcare industry including slow economic recovery, reduced reimbursements, difficulty in obtaining capital, and a changing infrastructure that stresses the coordination of care and requires the use and implementation of expensive healthcare IT systems. In addition to these challenges, lower occupancy and excess capacity remain pressing concerns. These environmental factors and trends can drive consolidation activity.

Studies on restructuring through consolidation show that mergers and acquisitions can prove an effective means to deal with excess capacity/lower occupancy and financial pressures. ***Bazzoli et al.* (2002)** examine reasons for hospital restructuring and reorganization during 1989-1996.[46] In comparing the acquired and acquiring hospitals, the authors found that the acquired hospitals had lower occupancy rates, on average, than did the acquiring hospitals.[47] Self-reported reasons for merging demonstrate the importance of several factors, among which the desire to improve operating efficiency emerges as a primary objective.[48] Expansion was also indicated as an important reason to merge. 54.4 percent stated that the desire to expand market share was an important consideration, as was the desire to expand access to care (53.2 percent), and to expand the scope of services provided (44.3 percent).[49]

The hospital industry, in particular, faces many challenges that adversely impact operations and the organization's ability to operate in its original configuration and capacity.... Studies on restructuring through consolidation show that mergers and acquisitions can prove an effective means to deal with excess capacity/lower occupancy and financial pressures.

The reasons that motivate consolidation indicate that hospitals perceive growth through merger as an effective way to meet current demand and adjust to the changing healthcare environment. Realignment of services can lead to an organization that is better able to meet the needs of the community and maintain service offerings in challenging times – factors which contribute to hospital survival. Review of the literature suggests that many transactions in the 1990s actually resulted in significant realignment and provides some evidence of administrative and other savings due to consolidation. Bazzoli *et al*. (2002) explore actual changes in service mix among hospitals both pre and post-merger and provide useful insights into what many mergers actually accomplished in

46 Gloria J. Bazzoli, Anthony LoSasso, Richard Arnould and Madeline Shalowitz, *Hospital Reorganization and Restructuring Achieved through Merger*, 27 HEALTH CARE MANAGEMENT REVIEW 1 (Winter 2002): 7-20. Using AHA annual hospital survey data, they identified mergers occurring during the specified time period. They further limited their sample to those mergers which involved only two hospitals. Of the 153 mergers which met their selection criteria, 80 (52.3 percent) responded to a survey developed by the study authors.

47 The reported average occupancy rate of the acquired hospitals during the 1989-1996 period was 57.3 percent while the occupancy rate of the acquirer during this same time period averaged 62.5 percent. Occupancy rates post-transaction were not reported. *Ibid*., at 11.

48 Respondents were asked to rate a given set of reasons in matter of importance using a Likert-type scale, where 1 indicates "not important" and 7 indicates "very important." The top three reasons were to strengthen financial performance (83.5 percent), to achieve operating economies (79.7%) and to consolidate services (70.9). *Ibid*., at 11.

49 Less commonly reported reasons include expanding the size of the system (22.8 percent), reducing bed capacity (17.7 percent), and expanding bed capacity (8.9 percent). *Ibid*.

terms of reorganization during the 1990s.[50] The results they present suggest significant realignment of services occurred, primarily through reduction in service duplication.

To explore the magnitude of realignment resulting from mergers, the study reports the percentage of hospitals where both hospitals offered a service prior to merger and the percentage where both offered that same service post-merger. During the period 1989-1996 (the pre-merger period), 82.7 percent of hospitals offered both inpatient medical service and emergency care. Post-merger, only 42.7 percent of the pairs both retained inpatient medical services and 49.3 percent retained emergency medical care at both facilities.[51] Bazzoli notes that the significant reduction is likely related to the fact that many hospitals were located nearby one another.[52] Nearby hospitals that consolidate provide a greater opportunity for service realignment and repurposing.

In addition to service mix realignment, the authors note that many of the merging pairs report administrative downsizing. The parties reported significant reductions in CEO/COO staffing as well as reductions in order of 12 to 37 percent of general administrative staff. The declines highlight the potential for economies of scale and the associated reduction in cost which may result from a merger. These savings are particularly relevant as labor comprises a significant portion of a hospital's operating costs.[53]

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***Spetz et al.* (1999)** studied hospitals in California to examine the characteristics of merging hospitals.[54] Of 296 ownership changes between 1986 and 1996, 13 included conversions from not-for-profit to for-profit, and 12 switched from for-profit to nonprofit. Approximately 80 percent of the changes did not include any changes in profit status. Most of the ownership changes during this time were the result of consolidations and mergers between hospital corporations. Multi-hospital systems grew during the period under review with more than half of all hospitals in California affiliated with multi-site hospital corporations. Less than 10% of merger activity during this period occurred in rural areas.

Mergers can be an effective tool in responding to marketplace needs and can help ameliorate resource constraints. Benefits from affiliations include gaining access to personnel, expertise, and/or capital. *Bazzoli et al.* (2006) employs a case study design to explore both the reason for and response to demand and supply conditions in local healthcare geographies.[55] Hospital executives reported that expected population growth or changes in insurance coverage lead to an increase in perceived demand and estimates of the required level of capacity to meet future needs.[56] However, results suggest that there may be several constraints facing hospitals in their ability to respond to marketplace conditions, including physical space, regulation, capital, and personnel. Merger and acquisitions may provide a means for hospitals to overcome these constraints.

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50 This and related studies provide insights into the role that realignment plays in the hospital sector both in form and in the types of benefits, suggesting benefits that likely occurred during the period under their study that may not be captured in other studies.

51 Changes among other service lines were reported as well. Pre-merger, 40.0 percent of the hospital pairs had inpatient OB-GYB, 38.7 had inpatient pediatrics, and 23.0 percent had inpatient rehabilitation. In the post-merger period, the percentage in which both hospitals offered the service line dropped with 8.0 percent retaining inpatient OB-GYN, 9.3 retaining inpatient pediatric services, and 12.2 percent retaining inpatient rehabilitation at both facilities. The authors find that consolidation of departments was a very common occurrence. Among similar hospitals (those having common services), 96.4 percent report consolidating or merging two or more departments or programs compared with 86.1 percent at dissimilar hospitals. Similar hospitals as defined as those hospitals that offered 50 percent or more of the same major services. *Ibid*., at 15.

52 The merging hospitals tended to be located near to one another. The average distance between urban hospital merging pairs was 4.91 miles, while the distance between rural hospital merger pairs was 11.14 miles (Bazzoli 2002, page 11). Among the hospitals in the sample, 5 percent of rural hospitals and 8 percent of urban hospitals closed. 52 percent of rural hospitals retained acute care services as did 61 percent of urban hospitals. Significant realignment occurred as a result of the merger as 43 percent of rural and 31 percent of urban hospitals were converted to other uses. *Ibid*., at 14.

53 The study did not report changes in outcome measures or improvements resulting from realignment/consolidation or staffing changes.

54 Joanne Spetz, Jean Ann Seago and Shannon Mitchell, *Changes in Hospital Ownership in California*, PUBLIC POLICY INSTITUTE OF CALIFORNIA (1999).

55 The study uses data collected during 1995-2003 for the Community Tracking Study (CTS), a study which collects data on health system change for a randomly selected, nationally representative sample of 60 communities. The CTS is a study directed by the Center for Studying Health System Change. The randomly selected communities are defined as MSAs with populations of 200,000 or more. Although the CTS includes in-depth interviews in 12 of the 60 sites, four cities (Boston, Cleveland, Miami, and Phoenix) were selected for inclusion in the study as they are located in major metropolitan areas and had diverse hospital resources. The survey questions developed to elicit information regarding capacity constraints are as follows: To what extent has your hospital (or the hospitals in your system) experienced capacity constraints in the past year? In what specific service lines, units, or patient care departments has your hospital (or hospitals in your system) experienced capacity problems? What are the major factors that have caused capacity problems in your hospital (or hospitals in your system)? How is your hospital currently responding to capacity problems? Have there been any community-led efforts to address capacity problems? Gloria J. Bazzoli, Linda R. Brewster, Jessica H. May and Sylvia Kyo, *The Transition from Excess Capacity to Strained Capacity in U.S. Hospitals*, 84 THE MILBANK QUARTERLY 2 (2006): 273-304.

56 However, estimated service demand may not be well aligned with actual future demand.

In the sections below, we highlight findings from key studies that contribute significantly to the literature on access, efficiency, and value (quality).[57]

C. Evaluation of Outcome Measures from Mergers and Acquisitions

1. Access

Studies of hospital mergers generally explore mergers' impact on cost, efficiency, quality, and price. These outcomes focus on what happens in the event of a merger. However, it is as useful to consider what might happen if a merger does not take place since the status quo often is not an alternative, *e.g.,* a merger may prevent a hospital from entering into bankruptcy.

Becker and Dunn (2010) note that during 2000-2010, there were approximately 70 hospital bankruptcies.[58] They identify seven factors that drive bankruptcy including high levels of competition, an aging physical plant, poor physician alignment (resulting in low patient referrals), coping with a dominant commercial payor or an especially large percentage of Medicare/Medicaid reimbursement, poor cost structure, poor management, and poor quality. **Yarbrough and Landry (2009)** explore the precursors to poor financial performance and identify factors related to bankruptcy.[59] They investigate the 36 urban bankruptcies that occurred during 2000-2006. They find that reimbursement challenges including reductions in Medicare and Medicaid payments led to poor financial performance. In exploring characteristics of those firms that file for bankruptcy, they find that both smaller hospitals and independent hospitals are more vulnerable.[60]

Unstable or poor financial health are often times precursors to merger activity as the firm may need financial assistance and merging with another firm provides a means to access that capital and cash flow. Actual merger activity bears this theory out as many mergers and acquisitions result in a cash infusion for the target. If not for the financial support, many of these institutions would be at risk of bankruptcy and closure. Many studies indicate that hospital closure can have disruptive effects on the local community. Hospital closure potentially reduces access to care at least in the short to medium term and vulnerable populations (*e.g.,* the elderly or those with low-income) are more likely to be adversely impacted. Not only can a closure negatively impact access, it may influence health outcomes as well; with literature suggesting a link between hospital closure and increased mortality.[61] Although cost savings may occur from a closure, the savings are not shared equally by stakeholders. The literature suggests that the local community loses while government parties and the payors absorb gains.[62]

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Kirby *et al.* (2005) analyze the hospital industry in California, uncovering trends that highlight challenges facing hospitals and their responses to these challenges.[63] The hospital industry in California has faced both income reductions and increased expenses.[64]

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57 We note that this listing is not exhaustive; several of the reviewed studies have extensive bibliographies of related research.

58 Scott Becker and Lindsey Dunn, *7 Factors to Assess the Sustainability of a Hospitals: Assessing a Hospital's Viability, Its Financial Situation and the Severity of the Threats it Faces*, BECKER'S HOSPITAL REVIEW (September 30, 2013), available online at http://www.beckershospitalreview.com/hospital-management-administration/7-factors-to-assess-the-sustainability-of-a-hospital-assessing-a-hospitals-viability-its-financial-situation-and-the-severity-of-the-threats-it-faces.html.

59 Amy Yarbrough and Robert J. Landry III, *Factors Associated with Hospital Bankruptcies: A Political and Economic Framework* 54 JOURNAL OF HEALTHCARE MANAGEMENT 4 (2009): 252-272

60 The mean bed size of the filing hospitals was 148 compared to 226 for the non-filing hospitals. Only 14 percent of filing hospitals were part of a system. *Ibid*., at 263.

61 Thomas C. Buchmueller, Mireille Jacobson and Cheryl Wold, *How Far to the Hospital? The Effect of Hospital Closures on Access to Care*, 25 JOURNAL OF HEALTH ECONOMICS 4 (Jul 2006): 740-761.

62 *See*, Corey Capps, David Dranove and Richard Lindrooth, *Hospital Closure and Economic Efficiency* 29 JOURNAL OF HEALTH ECONOMICS 1 (Jan 2010): 87-109.

63 Paul B. Kirby, Joanne Spetz, Lisa S. Maiuro and Richard M. Scheffler, *Hospital Service Changes in California: Trends, Community Impacts and Implications for Policy*, THE NICHOLAS C. PETRIS CENTER ON HEALTH CARE MARKETS AND CONSUMER WELFARE (2005).

64 Reimbursement rates from public sector payors such and Medi-Cal and Medicare have declined and the high managed care penetration and cost containment practices they employ (*i.e.*, utilization management such as restrictions on covered procedures, etc.) further reduce revenue from these payors. Meanwhile, operating expenses are high as California hospitals have to contend with some of the highest wages in the country, comply with nurse-to-patient staffing requirement, and implement seismic retrofitting for hospital buildings. *Ibid*., at 10.

The authors find that in an effort to re-align and improve financial performance, struggling hospitals eliminate unprofitable service lines. During the 1995-2002 study period, approximately half of all hospitals made a change in their service offerings and one-fourth dropped one or more services.[65] Hospitals that closed four or more services tended to be financially troubled, rural, and small. Hospitals that closed completely tended to be small and less efficient. Scott-Morton and Cutler (2013) note that about 15% of hospitals in the US closed over the period 1981 to 2011.[66]

Hospital closure would reduce access and may negatively impact local community-level health and wellbeing. Studies that explore the relationship between reduced access and health highlight the impact hospital closure may have on community welfare. **Buchmuellar *et al.* (2006)** explore the impact of urban hospital closure on healthcare access and outcomes.[67] The impact of a hospital closure increases not just travel time for those residents located near the closed facility, but may increase demand at remaining hospitals and result in reduced access to care. Waiting time may increase and this may cause some to delay receiving care initially (when more easily treatable), and instead seek care once the illness is more severe. The authors explore a rash of hospitals closures in LA County during the late 1980's and early 1990's. Due to financial pressures, 10 percent of the total 131 LA county hospitals were closed between 1997 and 2002.[68] To explore the impact of hospital closure, the authors use Los Angeles County Health Surveys (LACHS) for the period 1997-2003 and California's Department of Health Services cause-specific mortality data for the period 1997-2001. Hospital closures do appear to increase utilization of usual source of care for some populations.[69] However, for those individuals over age 65, a one-mile increase in the distance to the hospital reduces perceived ease of access by four percentage points. This may lead some individuals to postpone preventative care.

As hospital closure without offsetting changes in the existing healthcare infrastructure could increase the distance some residents will have to travel to obtain care, the authors focus on events for which timely treatment is crucial to achieving positive outcomes. Specifically, they examine death from heart attack (AMI) and unintentional injury sustained from home.[70] They find that a one-mile increase in distance to the nearest hospital leads to a 6.5 percent increase in AMI deaths. For unintentional injuries, the effect of an increase in distance is even more extreme. A one-mile increase in distance to the nearest hospital leads to an 11-20 percent increase in deaths due to unintentional injuries. The results presented in this paper provide evidence that hospital closures can have significant negative social welfare effects.

Capps *et al.* (2010) explore the change in social welfare due to a local hospital closing.[71] Using data from the State Inpatient Database of Healthcare Cost and Utilization for two states in the mid- to late-1990s,[72] they study five hospital closures. Their findings suggest that the local community experiences large losses from a hospital closure and that the equivalent utility of the loss ranges from $270,000 to $3.9 million.[73] However, if it is the inefficient hospitals that close, their closure would result in cost savings to payors (Medicaid, Medicare, and commercial payors). The authors find that at the national level, these cost savings overwhelm the decline in local level utility.

The set of available studies, while informative, is based on historical data and has a narrow geographic focus. Expanding the sample size and using current data especially on service offerings and impacts would prove to be directly relevant to the current discussion regarding the cost and benefits of some proposed hospital mergers and acquisitions. Changes in the healthcare environment in which hospitals operate today is significantly more challenging than in the period when the vast majority of these studies took place.

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65 The most common type of service closure was for those lines related to labor and delivery. Surprisingly, the authors note that there was little negative impact resulting from the closure of obstetrics services as the average incremental increase in travel time to the next nearest hospital was a only two-tenths of a mile. However low-income expectant mothers may have been adversely impacted by increased travel time. *Ibid*., at 8-9.

66 Cutler and Scott Morton (2013) at 1965.

67 Thomas C. Buchmueller, Mireille Jacobson and Cheryl Wold, *How Far to the Hospital? The Effect of Hospital Closures on Access to Care*, 25 JOURNAL OF HEALTH ECONOMICS 4 (Jul 2006): 740-761

68 The authors include three Orange County hospitals in the analysis as they were the closest general acute care facility for some LA County residents. Four hospitals closed in 1998, eight in 1999, one in 2000, and two in 2002. Of the 15 hospitals that closed, 12 hospitals were for-profit and all but five had an emergency department. *Ibid*., at 742.

69 This may be through redirecting individuals from the local emergency room to their primary care provider.

70 As a specification check, the authors test the relationship between deaths from two causes which should not be influenced by an increase in travel time: cancer and chronic ischemic heart disease. Their findings show that the mortality rate for either of these conditions does not appear to be sensitive to changes in distance. Buchmueller *et al*. (2006) at 744.

71 Corey Capps, David Dranove and Richard Lindrooth, *Hospital Closure and Economic Efficiency* 29 JOURNAL OF HEALTH ECONOMICS 1 (Jan 2010): 87-109

72 The authors study the Tampa market in 1995 and 1996, the Tucson market in 1998, and the Phoenix market in 1997. They narrow their analysis to focus on the data required for the analysis is available from HCUP and because each area has a well-defined geographic market and contains small to medium sized MSAs. Reasons for each of the hospital closures are not provided.

73 The loss is measured using a consumer discrete choice model that captures the extra distance an individual will have to drive when his "first choice" hospital is no longer an option. The model measures willingness to pay (WTP) and the authors convert this to dollars using two estimates of the average value of travel time (low end: $16/hour, high end: $20/hour). Travel time is calculated not as actual travel time but effective travel time (this is the calculated as expected length of stay times actual travel time). Assuming that only one person travels round trip to the hospital per day, and time is valued at $16.00 per hour, the low end estimate of the utility loss from closure is $270,000. The high end estimate, $3.9 million is calculated assuming that travel time is valued at $20 per hour and two people visit the patient each day. Capps *et al*. (2010) at 94.

As noted elsewhere in this report, significant differences in the operating environment include technology advances, different reimbursement frameworks and payor mix, technological changes such as the drive to increase adoption of electronic medical records, and a shift from inpatient to outpatient care. As access to care is a fundamental component of achieving the Triple Aim, more studies along these lines of those presented here should be undertaken that consider the challenges of today's hospital operating environment, including financial challenges, and the impact of hospital transaction activity.

2. Cost and Efficiency

As evidenced in studies about views of hospital industry executives and financial experts, many believe consolidation can lead to substantial value creation. Consolidation provides the opportunity to realize operating efficiencies, including consolidation of operations, and operating expense reductions. Studies find that consolidation may lead to realignment of services and a reduction in excess capacity as well as slower cost growth and increases in economies of scale and scope.[74]

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Alexander *et al.* (1996) analyze 92 hospital mergers that occurred between 1982 and 1989 to explore the short-term effects of a merger on scale of activity, staffing, and operating efficiency.[75] Their empirical findings indicate that although the occupancy rate declines during the study period, the decline is significantly less drastic among the merging sample than among those in the control group of non-merging hospitals. A similar result emerges in cost growth. Costs increased for both merging and non-merging hospitals, but the observed increases were more modest among the former. The study finds evidence of reorganization and realignment as a result of mergers with changes occurring primarily within operating areas. However, these changes are not equally distributed among all hospitals within the sample and are instead a function of the characteristics of the merging organizations and conditions of the respective transaction. For example, mergers that occurred later in the period tended to have larger efficiency impacts than did those occurring earlier. Mergers between similarly sized hospitals resulted in the largest change in operating characteristics.

"...merging hospitals experience significantly lower cost growth, 10.1 percentage points lower than that of non-merging hospitals. They find similar results for price growth and noted that it was 7.9 percentage points lower than among non-merging hospitals. Spang et al. (2001).

Several studies find that consolidation leads to significantly slower cost growth. Spang *et al.* (2001) explore this topic by examining how cost and price growth over an extended period of time differ between firms that merge and those that do not.[76] They find that merging hospitals experience significantly lower cost growth, 10.1 percentage points lower than that of non-merging hospitals. They find similar results for price growth and noted that it was 7.9 percentage points lower than among non-merging hospitals.[77] **Dranove and Lindrooth (2003)** undertake a study to determine if hospital consolidation leads to cost savings.[78] The analysis includes both hospital mergers and system consolidation and compares the estimated differential effects between the two. **The results suggest that the median hospital merger resulted in a cost reduction of 14 percent and that these cost savings persist.** The savings were evident in the follow-up period extending two, three, and four years following the consummation of the transaction. They note that having significant service overlap appears to be a driver of the observed cost reduction. However, among the system acquisition sample, they do not find statistically significant cost reductions during the four-year period following the merger event. [79]

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74 For example, a recent study by Cutler and Scott Morton reference "robust" findings of studies with regard to benefits such as the ability of larger health systems to undertake more costly investments; while noting that empirical findings on other benefits are mixed, the authors note the prospect of improved efficiency from more efficient care coordination, citing this as one of the rationales for ACOs. Cutler and Scott Morton (2013). In a 2009 study, Fisher *et al*. examine opportunities for cost savings and note that increases in efficiency and reductions in cost may be possible through coordinated/integrated care. Eliot S. Fisher, Mark B. McClellan, John Bertko *et al*., *Fostering Accountable Health Care: Moving Forward in Medicare* 28 HEALTH AFFAIRS 2 (2009):w219-w231.

75 Jeffrey Alexander, Michael T. Halpern and Shoou-Yih D. Lee, *The Short-Term Effects of Merger on Hospital Operations* 30 HSR: HEALTH SERVICES RESEARCH 6 (February 1996):827-847.

76 Heather R. Spang, Richard J. Amould and Gloria J, Bazzoli, *The Effect of Non-Rural Hospital Mergers and Acquisitions: An Examination of Cost and Price Outcomes*, 49 QUARTERLY REVIEW OF ECONOMICS & FINANCE 2 (2009): 323-342

77 Spang *et al*. (2001) at 154.

78 David Dranove and Richard Lindrooth, *Hospital Consolidation and Costs: Another Look at the Evidence*, 22 JOURNAL OF HEALTH ECONOMICS 6 (2003):983-97

79 *Ibid*., at 991-993.

Contrary to the findings of Dranove and Lindrooth (2003), **Spang *et al.* (2009)** do find significant cost savings resulting from system acquisition.[80] Their results suggest that pre-consolidation, hospitals in their sample had both higher costs and higher prices than the average hospital in the comparison group. They postulate that these factors may have driven these firms toward consolidation in an effort to become more efficient and competitive by reducing costs and lowering price. In testing for differential effects by ownership status, the authors find that the observed cost and price savings which resulted from the merger were present for for-profit hospitals only.

Economies of scale are one vehicle through which consolidation may lead to efficiency gains. **Harrison (2011)** employs a novel approach that disentangles cost savings occurring from changes in output mix with savings that occur from actual economies of scale.[81] She finds that cost savings due to achieving economies of scale amount to a two percent reduction in pre-merger costs and that hospitals experience these costs savings almost immediately. However, Harrison notes that savings due to economies of scale may not persist over time. Long term cost saving is likely due to changes in output levels.

Available empirical evidence on recent mergers supports findings of improvement in performance (*e.g.* patient volumes) for merged hospitals. Although the vast majority of studies focus on merger activity during the mid-1990s, **Deloitte (2013)** recently released a study analyzing a set of transactions occurring in 2007-2008.[82] The report provides some useful basic insights about the outcomes of more recent hospital transactions. Analyzing 101 hospital transactions consummated during this time period, the study evaluates basic performance measures of merging hospitals over time, and relative to a comparison group. Although the report finds that the hospitals involved in a transaction typically track below those in the comparison group on some measures, they find that over the 2008-2010 period, acquired hospitals, as a group, realized substantial increases in patient volumes. This is a significant finding suggesting that these hospitals not only remained in operation, but may have improved quality or altered service mix to attract these higher volumes. More comprehensive controls and econometric estimation of these and other metrics for acquired and control hospitals could provide greater insights into benefits for consolidation generally and as compared to the status quo of no transaction.

The literature reviewed in this section presents strong evidence that hospital mergers can lead to increased efficiency and reduced cost, particularly where they permit economies of scale or realignment of services. The costs savings that result from mergers appear to be persistent and are not limited to a level drop, but produce slower cost growth overtime. Economies of scale resulting from hospital mergers could amount to a cost savings of two percent operating expenses. Another benefit is that merging hospitals have improved occupancy rates compared to non-merging hospitals. In addition, poor performing or inefficient hospitals (hospitals with high price and high costs) are able to benefit from consolidation by reducing costs and prices, becoming more competitive. The findings from these studies combine to provide strong evidence that hospital mergers and acquisitions result in significant efficiency improvements and cost declines.

3. Quality

Mergers and system acquisitions have the potential to impact quality through many different mechanisms. Consolidated operations may be able to increase the volume of certain types of procedures, thereby increasing the experience level (and performance) of the physicians as well as increase utilization of other hospital resources and technologies.[83] This is an important consideration as seemingly modest improvements in hospital quality can have a significant effect on patient welfare. As Section III points out, access to capital is a growing concern as many planned or in-progress projects are forced to be put on hold for lack of funds. An acquired struggling hospital may benefit from a capital infusion which permits increased investment in staff, technology, or facilities, all of which may lead to increased quality of service. **Another benefit of consolidation is that successful operating practices and procedures established at one location may be adopted by the other party in the transaction, thereby offering an opportunity for improvement.**

Cuellar and Gertler (2005) explore the effects of system consolidation on quality as measured by inpatient mortality, overuse of procedures, and patient safety indicators.[84] They find that the rate of overused procedures declines by 1.2 percent following a system consolidation, but that this finding applies to managed care patients only. They fail to find any other change among the quality

80 Heather R. Spang, Richard J. Amould and Gloria J, Bazzoli, *The Effect of Non-Rural Hospital Mergers and Acquisitions: An Examination of Cost and Price Outcomes*, 49 QUARTERLY REVIEW OF ECONOMICS & FINANCE 2 (2009):323-342

81 Theresa D. Harrison, *Do Mergers Really Reduce Costs? Evidence from Hospitals*, 49 ECONOMIC INQUIRY 4 (2011):1054-1069

82 *Hospital Consolidation: Analysis of Acute Sector M&A Activity*, DELOITTE (2013), available online at http://www.deloitte.com/view/en_US/us/Insights/centers/center-for-health-solutions/3db1433c081de310VgnVCM1000003256f70aRCRD.htm?id=us_furl_hosconsol_052413

83 Volume impacts are recognized for example in a recent study on mergers by Cutler and Scott Morton (2013) at 1967 citing to Birkmeyer *et al*. (2002 and 2003).

84 Allison E. Cuellar and Paul J. Gertler, *How the Expansion of Hospital Systems Has Affected Consumers* 24 HEALTH AFFAIRS 1 (Jan-Feb 2005): 213-219 [2]. They restrict their analysis to hospitals in four states: Arizona, Florida, Massachusetts, and Wisconsin. They utilize patient-level discharge data, hospital financial data (obtained from the state), and AHA survey data for period 1995-2000.

measures selected for the analysis and conclude that there is little effect from system acquisition on quality. In interpreting these results, it is important to note that their study has several limitations. The authors note that the effects of implementing change that will materially improve hospital level quality takes time to show up in quality metrics. The relatively short duration of the observation period may not have allowed enough time for meaningful change to be observed. They also note that it may be that some changes which impact quality had been successfully implemented, but these factors may not have been captured by the outcome measures investigated in the study. In addition, the study focuses only on four states and the results presented may not be representative of transactions occurring in other states.

Mutter *et al.* (2011) perform a pre-post analysis of hospital consolidations in 16 states that occurred in 1999 and 2000.[85] Their findings indicate that evaluating the quality effects of a merger or acquisition is complex and that the results vary depending upon the entities' role in the transaction (acquirer or target) and the type of transaction (system acquisition or two-to-one merger). The authors find that hospital consolidation is associated with some increases in quality measures as well as some that suggest decreased quality.[86] In comparing the difference in quality effects between the target and acquirer, the authors find that acquiring hospitals experience some improvement for procedures with a likely volume-outcome relationship. However they note that overall, hospital consolidation did not appear to have a significant effect on the vast majority of quality indicators considered in the study.[87] General literature also addresses the volume-quality relationship and finds some strong relationships.[88] **Town (2011)** raises important considerations regarding Mutter's (2011) paper.[89] He notes that although Mutter concludes that there is no consistent impact on quality due to mergers, an alternative interpretation of his findings is that there was no observed impact for the *average* hospital in the sample. As the ability to improve quality depends upon many factors (market structure and patient characteristics, etc.), the effect of mergers on quality is expected to be heterogeneous. As such, the impact may not be detected using a linear framework.[90] In addition, Town points out that even relatively small changes in a quality measure could have a significant effect on patient welfare.[91]

Romano and Balan (2010) measure quality changes due to a merger by using Inpatient Quality Indicators (IQIs) and Patient Safety Indicators (PSIs) as well as risk-adjusted mortality for heart attacks, neonatal mortality, and obstetric trauma.[92] This study differs from those presented in this section as it focuses on a single transaction (the acquisition of Highland Park by Evanston Northwestern Healthcare) and attempts to identify changes that occurred in patient quality as a result of acquisition.[93] The results from these analyses do find some improvements at both Highland Park and Evanston. Several nursing sensitive PSIs at Highland Park Hospital indicate statistically significant improvements, however, risk adjusted obstetric PSI measures show some deteriorations post-merger. At Evanston, the authors find a post-merger decreased risk of adjusted pneumonia and stroke mortality. All other indicators are of mixed sign and are statistically insignificant.[94]

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85 Ryan L. Mutter, Patrick S Romano and Herbert S Wong, *The Effects of Us Hospital Consolidations on Hospital Quality* 18 INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS 1 (2011): 109-26. They employ the use of Healthcare Cost and Utilization Project (HCUP) data and measure patient quality using 25 of the Agency for Healthcare Research and Quality (AHRQ) Inpatient Quality Indicators (IQIs) and Patient Safety Indicators (PSIs).

86 The authors find that hospital consolidation is associated with decreased rates of failure to rescue and in-hospital mortality for pneumonia, increased rates of incidental appendectomy (for the elderly only), and increased rates of bloodstream infections. *Ibid*., at 119.

87 The research design the authors implement presents advancement over the methodology used in many other studies as it considers both parties separately, and specifically seeks to find the ways in which the acquirer may itself individually benefit. This is an important consideration as consolidating services may result in one party experiencing improvement in a selected outcome because they are able to benefit from the volume-outcome relationship. However, if quality measures selected for analysis in studies are those for which volume is not an influencing factor; the studies may not detect actual improvements in quality.

88 Birkmeyer *et al*. (2002) find an inverse relationship between hospital surgical volume and mortality (operative death) for each of the 14 inpatient procedures (six types of cardiovascular procedures and eight types of major cancer resections) they investigate. They note that the relative importance of surgical volume varies depending on procedure type and ranges between a difference of 12 percent (for pancreatic resection) at the high end of the range and a difference of 0.2 percent (for carotid endarterectomy) at the low end of the range. John D. Birkmeyer, Andrea E. Siewers, Emily V.A. Finlayson, *et al*., *Hospital Volume and Surgical Mortality in the United States*, 346 NEW ENGLAND JOURNAL OF MEDICINE 15 (2002):1128-1137. Birkmeyer *et al*. (2003) find that surgeon volume and operative mortality are inversely related for each of the eight procedures they investigate (cardiovascular procedures and cancer resections). They note that although hospital volume appears initially to be the driver of this volume-outcome relationship, surgeon volume that accounts for a large proportion of the effect they identify. For aortic-valve replacement, surgeon volume accounts for 100 percent of the effect (the high end of the range), while 24 percent of the effect (the low end of the range) is due to surgeon volume for lung resection. John D. Birkmeyer, Therese A. Stukel, Andrea E. Siewers *et al*., *Surgeon Volume and Operative Mortality in the United States*, 349 NEW ENGLAND JOURNAL OF MEDICINE 2 (2003): 2117-2127.

89 Robert Town, *The Effects of Us Hospital Consolidations on Hospital Quality: A Comment*, 18 INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS 1 (2011): 127-131.

90 A linear framework refers to the commonly utilized methodology relied upon to test for the effect of a merger by comparing observed rates pre-merger with observed rates post-merger for the sample under review.

91 Town presents a simple calculation under which a five percent decline in in-patient mortality would save 255 lives at a hypothetical hospital, representing an increase in consumer benefit of $127.5 million. Town (2011) at 128.

92 Patrick S. Romano and David J. Balan., *A Retrospective Analysis of the Clinical Quality Effects of the Acquisition of Highland Park Hospital by Evanston Northwestern Healthcare*, FTC BUREAU OF ECONOMICS WORKING PAPERS (2010).

93 The transaction of interest occurred in 2000 and the authors use data from 1998-2003.

94 Romano and Balan (2010) at 55.

Ho and Hamilton (2000) explore the quality effects of hospital mergers occurring in California.[95] Results both for patients as a whole and patients grouped by insurance type indicate that there was no change for inpatient mortality. However, patients receiving treatment in a merged hospital experienced a 1.7 percentage point increase in the probability of readmission compared to a 0.9 percentage points increase for those receiving treatment in a hospital acquired by a system. The probability of early discharge (for newborns) increased by 3.2 percentage points in those hospitals acquired by another system. Although this study is often cited when addressing the quality effects of mergers and acquisitions, it has several limitations.[96]

The literature reviewed in this section demonstrates that a fairly narrow range of outcomes are generally explored when attempting to identify the quality effects of hospital mergers and acquisitions. While most studies focus on readmission and mortality, some include IQIs and PSI. Although readmission and mortality have the advantage of being discrete events that are readily identified, they can present measurement challenges. Readmission can be used as a measure of quality with the justification that if a patient receives appropriate care, the probability of readmission should be lower. However, it is unclear over what length of time readmission should be measured. Additionally, ill patients may seek care at a different facility if they perceive the quality of care at their original institution as being suboptimal. Or at the extreme, critically ill patients may experience increased mortality preventing readmission from occurring. Most quality studies suffer from a significant limitation in that they fail to identify an appropriate control group. This is important as hospitals that merge (or are acquired) may be fundamentally different from those that do not. Identifying quality effects due to consolidation is difficult as the time period under review may be too brief to detect change. A longer time span would allow for implementation/adoption of new processes and procedures that may produce meaningful improvements in quality. In general, the results presented in this section highlight the need for caution when interpreting results and demonstrate the need for more research within this area of study.[97]

IV. Insights from Antitrust Review of Hospital Transactions: There is More to Hospital Merger Impact Assessment than Market Concentration and Share

A. Overview

Much of the popular press on hospital mergers and antitrust concerns focuses primarily on aggregate market share and concentration trends by city as the basis for competition concerns about future mergers – that is, that local metropolitan areas (*e.g.*, MSAs) may have fewer competitors or have experienced increased market shares of top hospitals or concentration today as compared to some point in the past.[98] This approach, however, does not connect the dots between concentration trends and the actual merger activity that has occurred – or is likely to occur in the future. Moreover, predictions about adverse effects on competition from this "trend" toward concentration typically are not based on any specific or fact-intensive inquiry into the effects of *recent* mergers, their

Moreover, predictions about adverse effects on competition from this "trend" toward concentration typically are not based on any specific or fact-intensive inquiry into the effects of recent mergers, their effects or motivations, but largely by reference to academic research evaluating price effects or studies examining relationships between price and structure conducted predominantly on data from the 1990s.

95 Vivian Ho and Barton H. Hamilton. *Hospital Mergers and Acquisitions: Does Market Consolidation Harm Patients?* 19 JOURNAL OF HEALTH ECONOMICS 5 (2000): 767-91. To investigate the effect of hospital mergers and acquisitions on quality, they identify 21 independent hospitals involved in a merger and 54 hospitals acquired by a system in California during 1992-1995. They use patient-level data from the California Office of Statewide Health Planning and Development (OSHPD) and AHA survey data. The outcomes measures of interest are inpatient mortality for heart attack and stroke patients, 90 day readmission rates for heart attack patients, and early discharge of newborns. The authors believe that quality effects may be due to changes in market power. If mergers and acquisitions increase market power by reducing competition, the hospitals within these markets may face less pressure to maintain or improve quality in order to stay competitive. They hypothesize that since a hospital may have little opportunity to exert market power to influence price, they may instead attempt to improve their bottom line by reducing cost via offering lower quality of care. The authors note that hospitals may have very limited ability to utilize increases in market power gained via mergers or acquisitions to influence price. This is because a large proportion of the hospital's volume stems from Medicare patients and the prices Medicare offers are essentially fixed. In addition, private insurers may use Medicare prices as a benchmark, so if Medicare prices remain steady, private payer prices may remain fixed as well.

96 The most significant limitation is in the failure to identify a better matched control group as hospitals that merge (or are acquired) may be fundamentally different from those that do not. In addition, the explanation for what drives the observed outcomes is at odds with findings from many other studies. Even if the findings were accurate for transactions which occurred in the early 1990s, results may not be applicable in today's operating environment, 20 years later. Information sharing and the availability of hospital performance measures along with financial penalties for poor performance (which are based on factors such as readmission and safety indicators) would moderate any desire to cut quality in order to reduce costs. Furthermore, the authors do not attempt to explain the mechanism through which quality reduction occurs.

97 For a more detailed review of the issues associated measuring quality in the empirical literature, see Guerin-Calvert and Israilevich (2011).

98 We note that this is sometimes portrayed as the increase in *average* concentration which can obscure the many cities that have lower concentration. For example, one study cites the increase in the average MSA level HHI from 2,440 in 1992 to 3,261 in 2006. Martin Gaynor, *The Three Ws of Consolidation and Competition in US Health Care*, Presentation to BIG HEALTH: CONSOLIDATION AND COMPETITION UNDER THE AFFORDABLE CARE ACT, The American Enterprise Institute, Washington, DC (March 1, 2013), slide 10, available online at www.aei.org/files/2013/03/05/-gaynor-slides_102018805600.pptx. Other studies that show concentration measures by geography reveal that many of the largest cities in the country are unconcentrated or moderately concentrated. *See, e.g.*, Cutler and Scott Morton (2003) who compare concentration in the mid-1980s to today (at 1966).

effects or motivations, but largely by reference to academic research evaluating price effects or studies examining relationships between price and structure conducted predominantly on data from the 1990s.[99] Few conduct systematic examination using data on actual transactions *in the past decade* or place mergers that were the subject to challenge in the context of overall merger activity.

This section provides a summary of antitrust review of hospital transactions to provide insights into whether recent transaction trends are consistent with concerns about anticompetitive effects across a large population of mergers – and also to assess the findings from the empirical literature on merger competitive effects:

- **Only a small proportion of actual hospital transactions raise significant risks of substantial lessening of competition. The vast majority of transactions occurred in separate geographies or in ones with numerous competitors. Only a minority of mergers involved prolonged review by the antitrust agencies and of those several were not challenged.**
- **These trends are more supportive of a conclusion that the majority of transactions are competitively benign or value-enhancing transactions.**
- **High concentration, high market shares and the number of competitors are not predictive of either hospital merger challenges or predicted or actual anticompetitive effects: Both retrospective and prospective hospital merger analyses in highly concentrated markets show that mergers even in concentrated markets were not predicted to bring about, nor resulted in, substantial increases in prices.**

- **There were approximately 333 hospital mergers from 2007-2011**
- **Approximately 111 of those were reported to the FTC under Hart-Scott-Rodino**
- **Approximately less than 1/10 of these triggered Second Requests**
- **Only four were challenged in court – less than two percent of all hospital mergers over the last five years**

Leibowitz (2012)

B. Summary of Recent Antitrust Review of Hospital Mergers

In evaluating the impact of hospital mergers on competition and pricing it is useful to turn first to some statistics regarding antitrust review of recent hospital mergers. Government statistics suggest that only a small proportion of actual hospital transactions raise any risk of substantial lessening of competition. This finding is consistent with overall merger review statistics, which show that the vast majority of transactions reviewed by the federal agencies are found to be unlikely to result in a substantial lessening of competition.[100] The FTC has handled the prospective review of the vast majority of hospital transactions in recent years.[101] According to Former FTC Chairman Leibowitz: "Let me pause here lest you get the impression that we never see a hospital merger we like. These are rough numbers, but according to public sources, 2007 to 2011 witnessed approximately 333 hospital mergers nationwide. About one third of those, approximately 111, were reported to the FTC under Hart-Scott-Rodino. Of those, approximately one tenth triggered Second Requests. We challenged only four in court – less than two percent of all hospital mergers over the last five years."[102]

99 Moreover much of this research focuses on highly concentrated "markets" or on mergers of geographically proximate competitors with few rivals. *See, e.g.*, William B. Vogt and Robert Town, *How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?* THE SYNTHESIS PROJECT, 9 (Feb 2006) available online at http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2006/rwjf12056/subassets/rwjf12056_1.

100 "Mergers between competing firms, i.e., "horizontal" mergers, are a significant dynamic force in the American economy. The vast majority of mergers pose no harm to consumers, and many produce efficiencies that benefit consumers in the form of lower prices, higher quality goods or services, or investments in innovation… (Forward) The core concern of the antitrust laws, including as they pertain to mergers between rivals, is the creation or enhancement of market power…Most mergers between rivals do not create or enhance market power…However, the Agencies challenge mergers that are likely to create or enhance the merged firm's ability--either unilaterally or through coordination with rivals--to exercise market power…The Agencies focus their attention on quickly identifying those transactions that could violate the antitrust laws, subjecting those mergers to greater scrutiny…For more than 95% of the transactions reported under HSR, the Agencies promptly determine…that a substantial lessening of competition is unlikely." US DOJ/ FTC Commentary on the Horizontal Merger Guidelines. March 2006 at Forward and Introduction. http://www.justice.gov/atr/public/guidelines/215247.htm.

101 The FTC reviews transactions under the Hart-Scott-Rodino Act, and has also reviewed hospital transactions that do not meet HSR criteria.

102 Jon Leibowitz, Chairman, Federal Trade Commission, *Are Titanic Health Care Costs Sinking Us? What the FTC is Doing to Keep Patients Afloat,* Remarks at the ANTITRUST IN HEALTHCARE CONFERENCE, American Bar Association/American Health Lawyers Association, Arlington, VA (May 3, 2012)(emphasis added), available online at http://www.ftc.gov/speeches/leibowitz/120503antitrusthealthcare.pdf. This speech and Maureen Ollhausen provide a summary of the challenged transactions. Maureen K. Ohlhausen, *Protecting Consumer Welfare in the U.S. Health Care Sector*, Remarks at the FORUM FOR EU-US LEGAL-ECONOMIC AFFAIRS, the Mentor Group (September 13, 2013). See also Jeffrey W. Brennan and Margaret E. Guerin-Calvert, *Assessing Hospital Mergers and Rivalry in an Era of Health Care Reform*, 27 ANTITRUST 3 (Summer 2013).

Although about half of all transactions between 2007 and 2012 occurred within the same geography, statistics show that the vast majority of hospital merger transactions passed anti-trust review without need for extensive additional information. Moreover, not all of the healthcare transactions that triggered Second Requests led to challenges or threatened challenges (and/or abandonment) even though the alleged geographic markets were highly concentrated and had few hospital competitors in each of these transactions. This suggests other factors provided sufficient evidence of post-merger competitive discipline or consumer and community benefits from these specific transactions, including the absence of "customer complaints."[103]

...the absence of antitrust action for the vast majority of hospital transactions is inconsistent with concern that hospital mergers routinely implicate anticompetitive behavior, triggering higher prices.

While the challenges indicate that some mergers were regarded as posing significant risks to competition, the absence of antitrust action for the vast majority of hospital transactions is inconsistent with concern that hospital mergers *routinely* implicate anticompetitive behavior, triggering higher prices. First, the statistics suggest that the market structure in which many of the mergers occurred were not likely to raise competitive concerns. As noted previously, a large proportion of the acquisitions in the last six years did not involve overlapping geographies or, where there was an overlap, involved hospitals in areas with numerous competitors.[104] The transactions data also confirm that system acquisitions or formations infrequently have resulted in antitrust challenges, even though there have been a number of such transactions in the past two decades. Many of the larger healthcare systems in the US have facilities in a number of states, and acquisitions often have involved geographic expansion into new areas or states.[105]

The transactions data also confirm that system acquisitions or formations infrequently have resulted in antitrust challenges, even though there have been a number of such transactions in the past two decades.

Second, the overview of hospital antitrust review highlights the fact-intensive nature of the inquiry involved in assessing the likely competitive effects and expected benefits of transactions. Merger review in the hospital sector as in other industries examines whether the specific transaction is likely to result in a substantial lessening of competition, or alternatively be pro-competitive with benefits manifested in efficiencies or quality.[106] The record from antitrust review and merger retrospectives (discussed below) makes clear that market structure alone is not a sufficient basis from which to infer competitive effects. In assessing the relative merit of a merger transaction, several factors are considered including:

- The sufficiency of competitive alternatives (hospital rivals for the merging firms) and rivalry among hospitals
- The factors that promote or limit the ability of payors to negotiate competitive rates post-merger (including the importance of payors to hospitals and mechanisms that encourage use of higher value/lower cost alternatives)
- The rationale for the transaction and its quality and access benefits in the form of improved value relative to the "status quo."

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103 *See*, Darren Tucker, *A Survey of Evidence Leading to Second Requests at the FTC*, 78 ANTITRUST LAW JOURNAL 3 (2013):591-617 at Table 4, which shows 11 hospital transactions received Second Requests and most were in markets that FTC staff considered to be highly concentrated with few competitors. While there were no closing statements issued, other tables in the Tucker article suggest that reasons for conclusions that the transactions would not substantially lessen competition or warrant challenge could be absence of customer complaints or other factors with offsetting benefits or lower risks of competitive concerns (such as financial condition, capacity, or efficiencies). *See also*, closing statement on one FTC retrospective discussed below. For a discussion of possible efficiencies or benefits from transactions that could meet staff's concerns *see*, *e.g.*, Jeffrey H. Perry and Richard H. Cunningham, *Effective Defenses of Hospital Mergers in Concentrated Markets*, 27 ANTITRUST (Spring 2013):43-47.

104 *See*, discussion above in Section I. *See, The Hospital Acquisition Report*, IRVING LEVIN ASSOCIATES INC. (2012) at 15-228 and *How Hospital Mergers and Acquisitions Benefit Communities: Updated Study by the Center for Healthcare Economics and Policy*, CENTER FOR HEALTHCARE ECONOMICS AND POLICY AND THE AMERICAN HOSPITAL ASSOCIATION (September 2013), available online at http://www.aha.org/content/13/13mergebenefitcommty.pdf. The largest cities (as measured by Metropolitan Statistical Areas or MSAs) tend to be unconcentrated; based on measures of hospital systems and bed counts. *See, AHA Hospital Statistics*, AMERICAN HOSPITAL ASSOCIATION (2013) for bed counts and hospital affiliations, and for population and definition of MSAs, *Metropolitan and Micropolitan Statistical Areas*, U.S. CENSUS BUREAU, POPULATION DIV., available online at http://www.census.gov/popest/data/metro/totals/2011. *See also*, Thomas C. Brown, Jr., *et al*., *Current Trends in Hospital Mergers and Acquisitions*, 66 HEALTHCARE FINANCIAL MANAGEMENT 114 (2012).

105 *See, The Hospital Acquisition Report*, IRVING LEVIN ASSOCIATES, INC. (2012) at 6 for listing of transactions involving systems. Antitrust concerns raised in system transactions are infrequent and tend to involve overlaps in specific geographies. *See, e.g.*, In the Matter of Inova Health System Foundation, and Prince William Health System, Inc., File No.: 061 0166, which was abandoned after FTC challenge. Some of the litigated hospital cases have involved systems, such as FTC and State of Missouri v. Tenet Healthcare Corporation and Poplar Bluff Physicians Group, File No. 971 0090; US v. Long Island Jewish Medical Center and North Shore Health System, Inc; and California v. Sutter Health System, No. C99-03803 MMC. These were cases where the Courts ultimately concluded that there were sufficient competitors even within the local area, and that payors had the ability to discipline pricing post-merger by making increased use of these alternatives.

106 As noted herein, there are many potential sources of pro-competitive efficiencies from mergers, including quality and cost-savings; *see*, Joseph Farrell, David J. Balan, Keith Brand and Brett W. Wendling, *Economics at the FTC: Hospital Mergers, Authorized Generic Drugs, and Consumer Credit Markets*, 39 REVIEW OF INDUSTRIAL ORGANIZATION 4 (2011): 271-296 for discussion in hospital industry. Assessment of these effects form a fundamental part of evaluating horizontal merger effects. *See*, Robert D. Willig, *Incremental Consumer's Surplus and Hedonic Price Adjustment*, 17 JOURNAL OF ECONOMIC THEORY 2 (1978):227-253 and *Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions* 39 REVIEW OF INDUSTRIAL ORGANIZATION 1 (2011):19-38. For examples in other industries *see*, Heyer, Ken, Carl Shapiro and Jeffrey Wilder, *The Year in Review: Economics at the Antitrust Division, 2008–2009*, 35 REVIEW OF INDUSTRIAL ORGANIZATION 4 (2009):349-367 and Mark, Israel, Bryan Keating, Daniel Rubinfeld and Robert Willig, *Airline Network Effects and Consumer Welfare: A Preliminary Overview of Methodology and Findings*, Unpublished Working Paper (2011).

Value and access benefits may be firm-specific – *e.g.*, improving the operation and performance of a given hospital, or market-specific – *e.g.*, enabling restructuring that aligns capacity more efficiently or enables hospitals and providers to better meet needs of a community in a more cost effective way. Moreover, benefits may be significant relative to what the hospital would do absent a merger; as discussed below, hospitals that do not merge may be forced to close or to downsize in staffing or in service lines.

Finally, **the statistics and review suggest that measures of share and concentration in local geographies are not necessarily a good predictor of competitive concerns in *prospective* merger review or indicative of anticompetitive results from actual transactions.** The variability in findings in FTC economists' studies of FTC hospital merger retrospectives provides insights. These reports are based on actual consummated mergers where the merging firms were two of relatively few competitors in what are alleged to have been highly concentrated markets. Only one of these cases (Evanston) was ultimately challenged by the FTC, and the investigation in one was actually affirmatively closed based, in part, on the majority of the Commission's assessment that the transaction had *not* resulted in significant price impact or other adverse impact for payors or consumers despite high shares and high concentration.[107] The other two cases examined in the FTC retrospective studies (Sutter, New Hanover) involved mixed evidence of estimated price impacts in the FTC authors' analyses, and countervailing factors or explanations such as failing firm, efficiencies, or quality effects offered by the authors or other commentators.[108]

These retrospectives, however, are frequently cited as the primary basis for concern about the likely anticompetitive effects of hospital mergers and for the magnitude of possible price effects. For example, Cutler and Scott Morton (2013) refer to Martin Gaynor's 2011 Congressional testimony about two of these studies (on the Evanston and Sutter-Summit mergers) as a primary basis for concern about merger price effects. Gaynor and Town refer to these two retrospectives as well as one in North Carolina (Cape Fear-New Hanover) as bases for concern that hospital mergers could lead to 20-40 percent price increases.[109]

These specific case studies and related hospital merger literature (such as that referenced in Gaynor and Town 2012) appear to have influenced perceptions of likely price impact of mergers and concerns that structural change in concentrated markets would routinely lead to higher prices. The following section provides a brief overview and assessment of these studies.

C. Review of Studies on the Estimated Price Effects from Hospital Mergers

A commonly voiced concern about hospital consolidation is that it leads to higher prices.... Many studies examine changes in concentration over time – not discrete events (i.e. merger transactions). No consistent quantified relationship is found, however, between changes in market concentration and observed hospital price increases across studies.

A commonly voiced concern about hospital consolidation is that it leads to higher prices. Mergers and acquisitions are thought to increase market concentration by reducing alternatives available to payors. Fewer competitors, it is argued, equates to increased bargaining power for both the newly consolidated firm and those within the same market. This change in market concentration may ultimately influence price negotiations. Support for the assessment that mergers are likely to result in enhanced market power reference selected academic studies of price effects of mergers in the 1990s or early 2000s to draw inferences about market power impact and motivations for current and future transactions. As discussed below, some of the studies rely on payor negotiation models based on conditions more prevalent in the late 1990s – namely, broad and all inclusive networks where bargaining tended to be characterized as inclusion (or exclusion) of hospitals from a network.

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107 Statement of the Federal Trade Commission in re: Victory Memorial Hospital/Provena St. Therese Medical Center. File No. 011 0225. FTC economists conducted a retrospective analysis of the pricing impact of this transaction using a difference-in-difference (DID) approach, and concluded that the transaction did not resulted in statistically significant increases in prices to payors relative to chosen cohorts. *See*, Deborah Haas-Wilson and Christopher Garmon, *Hospital Mergers and Competitive Effects: Two Retrospective Analyses*, 18 INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS 17 (2011):17-32.

108 While the methodology used to estimate relative price increases at merged hospitals relative to cohorts has been critiqued, these studies show mixed results about the effects of transactions in seemingly similar market structures. In the Cape Fear-New Hanover merger (Thompson), for example, there are mixed findings for three payors studied; in Sutter-Summit (Tenn), there was no finding of statistically significant increase for the acquiring firm (Sutter Alta Bates) but only for the acquired firm (which may be explained by adjustments due to its financial condition, or as suggested by Gowrisankaran in his comment due to quality increases). The Vista transaction found little evidence of significant increases instead finding statistically significant decreases for some payors. *See*, Haas-Wilson and Garmon (2011) for an overview. *See also*, Steven Tenn, *The Price Effects of Hospital Mergers: A Case Study of the Sutter-Summit Transaction*, 18 INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS 17 (2011): 65-82; Gautam Gowrisankaran, *Evaluating the Impact of a Hospital Merger Using the Difference-in-Difference of Prices (Comment on article by Steven Tenn.)* (October 2010); Aileen Thompson, *The Effect of Hospital Mergers on Inpatient Prices: A Case Study of the New Hanover-Cape Fear Transaction*, 18 INTERNATIONAL JOURNAL OF THE ECONOMICS OF BUSINESS (2011):91-101, and Decision, California v. Sutter Health System, No. C99-03803 MMC for discussion of the financial condition of Summit and the finding that Summit met the failing firm defense.

109 *See, e.g.*, Martin Gaynor, *Health Care Industry Consolidation*, Statement before THE U.S. CONGRESS, HOUSE COMMITTEE ON WAYS AND MEANS HEALTH SUBCOMMITTEE Congress, (September 9, 2011). Gaynor references other studies based on simulations, price-concentration studies, and other methodologies, which are discussed below.

Importantly, this reliance on past (and in some cases quite distant past) merger activity and assumptions reveals the imperative for a more comprehensive understanding of *current* market conditions, *current* merger motivations and more rigorous examination of merger effects to evaluate the likely benefits or competitive risks of current and future hospital transactions. Fundamentally different market conditions could imply that this past research is ill-suited – if not misleading – to inform current understanding of likely merger effects. Past research may not capture dramatic changes ongoing in the healthcare industry, including transformative changes on the provider and insurer side, and the pressures and results of healthcare reform – particularly requirements for new technologies, new business models, and reduced reimbursements. **Most of the oft-cited studies are based on mergers or data from the 1990s, under substantially different market conditions than current conditions.** As importantly, the studies should be kept in perspective as to their ability to inform prospective merger review across all mergers and for likely price impacts of actual mergers.

Fundamentally different market conditions could imply that this past research is ill-suited – if not misleading – to inform current understanding of likely merger effects. Past research may not capture dramatic changes ongoing in the healthcare industry....

In an effort to consolidate the many pricing studies and draw together common themes and findings, Gaynor and Town (2012) and Vogt and Town (2006) prepared synthesis reports on effects of hospital consolidation.[110] They summarize the findings of a number of studies examining merger effects and changes in concentration, including price-concentration studies, merger retrospectives, studies assessing specific mergers or sets of mergers and merger simulations using hypothetical mergers or actual mergers and specific econometric models.

They conclude from their review of selected merger retrospectives and a study by Leemore Dafny (addressed below) that "price increases exceeded 20% when mergers occurred in concentrated markets" (Gaynor and Town, 2012). As a starting point, it is important to note that the studies they reference are *specific cases* involving selected transactions or data from mergers in highly concentrated markets and thus are not generalizable to all mergers and acquisitions or even to *all* mergers in highly concentrated markets: (1) The majority of hospital acquisitions occur between firms located in different markets and would not be subject to the same market forces that study authors hypothesize drove price increases. (2) Many "in-market" mergers occur in the largest metropolitan areas with many competitors and do not involve material changes in concentration. (3) Even the selected case studies show mixed results – concentrated markets alone did not yield significant price increases.

- **Many studies examine changes in concentration over time – not discrete events (i.e., merger transactions). No consistent quantified relationship is found, however, between changes in market concentration and observed hospital price increases across studies.[111]**

We review here some of the most frequently cited concentration studies and their findings. The studies attempt not only to determine if a relationship exists, but to quantify the impact increases in market concentration may have on the price level. **Vogt and Town (2006)** provide a summary of many of these studies and, importantly, report mixed findings. According to the authors, Structure-Conduct-Performance Studies find estimated price effects with findings ranging from negative to positive (a price change of *negative* three percent to positive 17 percent) while selected event studies also find price increases, including one study which finds increases of 40 percent.[112] These studies they review are based on data from the late 1980s and 1990s and utilize a range of methodologies.

Additional studies that are somewhat more current but largely based on historical data include **Antwi *et al.* (2009)**. They explore price and market concentration changes in California during the period 1992-2006.[113] They find that hospital prices almost doubled[114] and market concentration increased significantly during this period.[115] However, when disaggregating by market area, they do not find any correlation between the rate of hospital price growth and HHI. This result suggests that changes in market concentration did *not* cause

110 William B. Vogt and Robert Town, *How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?* THE SYNTHESIS PROJECT, 9 (Feb 2006) available online at http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2006/rwjf12056/subassets/rwjf12056_1; Martin Gaynor and Robert Town, *The Impact of Hospital Consolidation – Update*, THE SYNTHESIS PROJECT (June 2012), available online at http://www.rwjf.org/en/research-publications/find-rwjf-research/2012/06/the-impact-of-hospital-consolidation.html. Gaynor's 2011 Congressional testimony refers to eight of these studies, and summarizes additional literature on price variation and simulations.

111 *See*, Gaynor and Town (2012) at Table 1 for a summary of results.

112 *See*, Vogt and Town (2006) at 6-8 for a detailed summary of several structure-performance studies, and their review and critique of them.

113 Yaa Akosa Antwi, Martin Gaynor and William Vogt, *A Bargain at Twice the Price? California Hospital Prices in the New Millenium*, 12 FORUM FOR HEALTH ECONOMICS AND POLICY 1 (2009).

114 Price is measured by net revenue per discharge.

115 During 1992-2003, market concentration in the average county in California increased from 2,046 to 2,824. This change is consistent with the nationwide increase in HHI during this period. Antwi *et al.* (2009) at 8.

increases in hospital price. The authors mention increased costs[116] and HMO backlash as potential contributing factors, but are not able to identify the cause of the price increases they find. **Moriya *et al.* (2010)** analyze the relationship between insurer and hospital market concentration and hospital prices.[117] Using commercial claims data covering 11 million commercially insured lives during 2001-2003, their findings suggest that hospital concentration is *not* significantly associated with price increases.[118] However, the authors do find that insurer market concentration is associated with a statistically significant reduction in hospital prices.[119] **Dranove *et al.* (2008)** examine whether the market concentration-hospital price relationship began to weaken during the 1990's through early 2000's.[120] To do so, they use data from California and Florida for the years 1990-2003.[121] This study presents results about the hospital price-market concentration relationship; review of the study suggests that it declined and possibly reversed after peaking in 2001.[122] Although not specifically addressed in their study, it may be that the recent shift in payor concentration and changes in payment mechanisms may have played a role in the results they find. Payment mechanisms that encourage consumers or physicians to take relative costs of care into account may increase the ability of payors to discipline pricing in geographies.[123]

- **It is difficult to generalize about merger effects from some studies due to methodology and approach; several are based on simulations or models that either have not been validated against actual mergers or whose key assumptions may no longer be consistent with market realities. Price predictions may thus be overstated – possibly substantially.**

One frequently cited study regarding the price effects of hospital mergers is the 2009 study by **Dafny**.[124] This study is characterized as an "event study" by Town and Vogt. To address the concern of selection, namely that firms that merge tend to be different than firms that do not, Dafny instruments for rival mergers using rival co-located pairs.[125] The author's main results are based on the particular estimation technique used, *i.e.*, instrumental variable analysis.[126] The author compares the results obtained using the instrumental variable approach with the results obtained from using actual mergers.[127] While the former indicate large and statistically significant price changes, the latter, *finds no price increase*. This highlights the fact that the results presented as main findings are highly sensitive to the methodology employed.[128] Finally, the analysis focuses only on markets with co-located merging hospital pairs and may have limited external validity. The author notes "Caution must be exercised, however, when extrapolating these conclusions to hospital mergers in general. The estimates I obtain rely on responses to mergers of co-located hospitals, which likely enjoy especially strong post-merger increases in market power."

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116 Two items which could have contributed to cost increases during this time are the newly adopted mandatory nurse-patient staffing levels and the seismic retrofitting mandate for hospital buildings.

117 Asako Moriya, William Vogt and Martin Gaynor, *Hospital Prices and Market Structure in the Hospital and Insurance Industries* 5 HEALTH ECONOMICS, POLICY AND LAW 4 (2010): 459-479.

118 Price is measured by actual transaction price. Although the coefficient on hospital concentration was positive, it was imprecisely measured as evidenced by the large standard errors. In a sensitivity test using different subset of states, the correlation between prices and hospital HHI remained statistically insignificant in every specification and was of varying sign. The hospital market was defined using Hospital Services Areas which consists of several counties.

119 It is unclear whether this is associated with monopsony power or other effects.

120 David Dranove, Richard Lindrooth, William White and Jack Zwanziger, *Is the Impact of Managed Care on Hospital Prices Decreasing?* 27 JOURNAL OF HEALTH ECONOMICS 2 (2008): 362-367.

121 Hospital financial data and patient-level discharger from California Office of State Health Planning and Development (OSHPD) and Florida State Center for health Statistics (SCHS) was obtained for: 1990, 1995, 1999, 2001, and 2003. Price is the weighted average of the net revenues received by the hospital for 10 common DRGs.

122 Both OLS and IV estimates demonstrate a statistically significant negative relationship between market concentration and hospital price. However, in estimating the relationship for each year individually, the estimates are positive, statistically significant, and increase through 2001, after which point they decline. Dranove *et al*. (2008) at Table 2.

123 See discussion below with regard to changes in marketplace changes.

124 Leemore Dafny, *Estimation and Identification of Merger Effects: An Application to Hospital Mergers*, 52 JOURNAL OF LAW AND ECONOMICS 3 (August 2009): 523-550.

125 The instrument, co-located pairs, is defined as hospitals located within 0.3 miles from each other and no more than 5 blocks apart. This produces a set of 191 pairs, of which 10 actually merged during the period under review. AHA annual survey and Medicare Cost Reports data are used in the analysis. Dafny used data for the time period 1989-1996 and limited her analysis to MSAs or counties with populations greater than 100,000. As there are factors that influence both the probability of merging and outcome measures, failing to control for these factors introduces bias. For example, a hospital suffering from poor management may be financially distressed and not able to maintain adequate staffing levels. This may lead to both sub-optimal outcomes as insufficient staff reduces the quality of care, as well as an increase in the probability of a merger since financially distressed firms may be more inclined to merge than healthy, self-sustaining organizations. However, since poor management (an unobservable factor) affects both the probability of merging and the quality of care (the outcome of interest), conventional techniques would produce biased estimates. In general, bias estimates result whenever an omitted factor is correlated with both the outcome of interest and the probability of merging. The author justifies the use of co-located pairs as an appropriate instrument because she reasons that the number of co-located pairs should be correlated with the probability of merging but should not influence any outcome measure. While the author does test the first assumption and finds that it holds, the second assumption, that the number of co-located pairs should not influence the outcome measure, is more suspect (especially since concerns regarding market concentration and price are so prevalent). To further address the concern of selection, Dafny looks not at the effect of a merger on the firm's own price, but on that of rival firms located within the same market.

126 As the number of co-located pairs likely experiences little variation over time, her identification is primarily based upon cross-market variation. This approach implicitly assumes that different geographic markets are very similar and remain so over an extended period of time. The main results are based on a ratio of estimates. This calculation is based on the first stage estimation of the relationship between the number of co-located pairs and number of rival mergers: 0.119 (this value is presented in Table 2, column 3, row 2) and the relationship between price growth and rival colocation: 0.045 (this value is presented in Table 3, column 3, row 1). The resulting IV value is obtained by dividing the two estimates and can be interpreted as representing a 46% increase (0.045/0.119 = 0.376; e.376 = 1.46).

127 Table 4 in the paper compares the value obtained using the instrumental variable (columns 1 and 2) with those obtained using actual mergers (columns 3 and 4).

128 In specific, the estimated effect found relies heavily on the validity of the instrument.

Several studies rely on merger simulation or similar methodologies to test the likely impact of mergers. The economic models of hospital mergers that are referenced in the "simulation" or "event" studies cited by Town and Gaynor, Town and Vogt, and Cutler and Scott Morton and that suggest significant price predictions for mergers do not take into account current realities of new network structures and benefit designs.[129] These new network structures involve greater cost accountability by consumers (higher co-pays, deductibles, co-insurance, or premiums for choices involving broader networks or use of specific providers) that can influence consumer choice and are increasingly prevalent even in marketplaces with relatively few hospital systems, but especially in larger cities with substantial hospital alternatives. These networks provide increased flexibility for insurers to make use of alternatives and to respond to pricing or other conditions by changes in offerings – whether benefit or tier design.

An increasing proportion of consumers with private insurance are enrolled in plans with higher deductibles and co-pays, as well as in narrower or tiered networks.[130] Narrower or tiered networks typically provide lower premiums than broader or more inclusive networks at time of choosing plans and offer lower co-pays, deductibles or co-insurance for choice of specific providers by consumers. Narrow or limited networks are those that include a subset of hospitals offering the full range of hospital services while tiered networks are those that place hospitals on lower tiers based on meeting quality standards at lower relative "cost" to consumers in the form of out-of-pocket costs, and typically lower costs for services. These provide the ability to use out-of-pocket costs or premiums to encourage consumers to choose specific plans, or once a plan is chosen to motivate use of lower cost providers.

The omission of these important current real-world market facts that differ substantially from the all-inclusive networks prevalent in the late 1990s after backlash from HMOs means that critical elements of current competitive dynamics are not well accounted for in reported merger simulations based on older models. These network and benefit designs change a key assumption in prior models, which largely assumed all-inclusive networks. The omission is critical not just for the potential disconnect with real world conditions but for the impact on price predictions: models that do not take into account these realities may overstate predicted price increases from mergers where the ability of insurers to be responsive to pricing by use of new tools for network reconfiguration and for enhanced in-network steering impacts model predictions.[131]

This section has focused primarily on the price effects of mergers. Antitrust review of mergers, however, consider the impact on both price and non-price competition, and attempts to take into account many dynamic factors including entry and reposition, customer alternatives and potential benefits such as discussed above with regard to access, value and efficiency. As noted above, a comprehensive evaluation of the welfare effects of mergers takes these into account.[132] Current simulation models for hospitals do not take into account these more dynamic factors and benefits.

Despite the role market concentration is thought to play in price increases, transactions between firms in disparate markets may also be subject to claims that such a transaction will result

The omission of these important current real-world market facts that differ substantially from the all-inclusive networks prevalent in the late 1990s after backlash from HMOs means that critical elements of current competitive dynamics are not well accounted for in reported merger simulations based on older models...The omission is critical not just for the potential disconnect with real world conditions but for the impact on price predictions....

129 For convenience, we summarize from Gaynor Congressional testimony the most frequently cited studies, which are based on econometric models based on specific assumptions: "Last, a few research papers have estimated the impacts of hospital mergers using simulation. These papers estimate models of hospital competition, then use the estimated parameters of those models to simulate the impacts of mergers (Town and Vistnes, 2001;Capps *et al.*, 2003; Gaynor and Vogt, 2003; Brand *et al*., 2011). These papers find estimated impacts of mergers ranging from 5 to 53 percent increases in price. Town and Vistnes (2001) examine mergers among hospitals in Los Angeles and Orange Counties, California, where there are more than 120 hospitals between the two counties. They find that many of the mergers they examine would result in price increases of 5 percent or greater, in spite of the large number of hospitals in these counties. Capps *et al*. (2003) examine a three hospital merger in the southern suburbs of San Diego County, California, and find a price increase due to the merger of over 10 percent. Gaynor and Vogt (2003) find that a three-to-two hospital merger in San Luis Obispo, California (which was attempted, but blocked by the FTC) would have raised prices by over 50 percent. Brand *et al.* (2011) consider the recent proposed acquisition of Prince William hospital in Manassas, Virginia by Inova health system in Northern Virginia. They estimate that the acquisition would have led to price increases at Prince William hospital of anywhere from 19 to 33 percent." At 7.

130 *Employer Health Benefits: 2013 Annual Survey*, THE KAISER FAMILY FOUNDATION AND HEALTH RESEARCH AND EDUCATIONAL TRUST (2013).

131 Authors and reviewers of simulation studies note the assumptions made in many models and possible impact: For example "The exclusion of any hospital from the [managed care organization] MCO may lead to changes in the negotiated prices and/or network inclusion status of other hospitals." Farrell *et al*. (2011) at note 10; "[T]he [FTC] model does not take into account the sophisticated bargaining strategies and contractual solutions often adopted by MCOs and hospitals. These bargaining strategies may (and increasingly do) include an MCO's *ex ante* commitment to limited or tiered networks in order to extract better terms from hospitals by inducing them to compete for membership in the network or for placement in the most attractive network tiers, both of which are likely to bring a larger volume of patients to hospitals in the network by restricting the number of other, competing hospitals in the network." *See* Bryan Keating, Paolo Ramezzana, Robert Willig, Margaret Guerin-Calvert and Nauman Ilias, *Comment on Farrell, Balan, Brand and Wendling (2011), 'Economics at the FTC: Hospital Mergers, Authorized Generic Drugs, and Consumer Credit Markets'* (2012) at 4-5; *See, also:* Kate Ho and Robin S. Lee, *Insurer Competition and Negotiated Hospital Prices*, NBER Working Paper 19401 (2013) at 7; Robert Town and Gregory Vistnes, *Hospital Competition in HMO Networks*, 20 Journal of Health Economics 5 (2001): 733–753 at 734; and Gautam Gowrisankaran, Aviv Nevo and Robert Town, *Mergers When Prices Are Negotiated: Evidence from the Hospital Industry*, National Bureau of Economic Research, Working Paper No. 18875 (2013).

132 *See*, Robert D. Willig, *Incremental Consumer's Surplus and Hedonic Price Adjustment*, 17 JOURNAL OF ECONOMIC THEORY 2 (1978):227-253 and *Unilateral Competitive Effects of Mergers: Upward Pricing Pressure, Product Quality, and Other Extensions* 39 REVIEW OF INDUSTRIAL ORGANIZATION 1 (2011):19-38.

in price increases. This bias is particularly troubling as the majority of merger and acquisition transactions that take place occur in different markets and have no direct impact on market concentration.[133] **Melnick and Keeler (2007)** undertake a study to investigate whether system affiliation alone can influence hospital price.[134] Using financial data and patient-level discharge data from California Office of State Health Planning and Development (OSHPD) for the years 1998-2003, they find that hospitals in large systems appear to be able to increase prices significantly more than those in small systems.[135] These differential price increases hold for both system-affiliated hospitals with and *without* local hospitals in the same system. The authors hypothesize that systems obtain this favorable pricing through their ability to negotiate. Specifically, they theorize a multi-hospital system could exert leverage even if they have only one hospital in a local market by threatening to pull out all member hospitals from the insurer's plan. Alternatively, the authors note that it may be that system affiliated hospitals provide greater quality and observed differential pricing is a reflection of the quality differences, which would be a more pro-competitive explanation. Either explanation would be consistent with their reported results.

> The Wall Street Journal *notes that medical prices are rising at the lowest rate of the past half century. According to the Altarum Institute's Health Care Price Index, the rate of health care price growth is at an all-time low.*

- **Price variation studies tend to be based on limited data or methodology. Empirical research demonstrates many factors account for price variation, including cost of patient care, severity of care, and health of populations served. Price variation is neither necessary nor sufficient to demonstrate market power exercise in differentiated products industries such as healthcare and differences in price levels are not indicative of market power.**

> *Moreover, empirical research demonstrates that a wide variety of factors account for price variation, including cost of patient care, the severity of illness, and the health of the populations served. ...price variation in and of itself is neither necessary nor sufficient to demonstrate market power exercise in differentiated products – indeed, FTC economists have noted that price levels and comparisons of levels are not indicative of market power in hospital services.*

Price variation studies that address concerns about market power or anticompetitive pricing by payors are another relevant subsection of the pricing literature. These studies attempt to reconcile observed geographic variation in prices paid by private insurers or Medicare and often attribute any residual or unexplained portion as indicative of market power. For example, economists Paul Ginsburg and Robert Berenson have conducted interviews of executives or examine price variation across geographic markets and concluded that there is substantial price variation among hospitals. They conclude that such price variation is supportive of market power concerns, but they do not control for factors that could explain price variation.[136] Taking a more rigorous approach, **Guerin-Calvert and Israilevich (2011)**[137] explore geographic variation in hospital prices across the US and find that 72 percent of the observed difference can be explained by regional costs, case mix, hospital investments in capital, and other factors. They find that the remaining difference is likely due to differences in quality of care, cost due to complying with state regulations, and errors in the data. Based on their study findings, they conclude that there is no basis to assume that price variation is due to provider market power.

Some price variation studies estimate the variation in prices for private insurers versus Medicare. **White *et al.* (2013)**[138] compare an estimated actual price paid for medical services by private insurers to an estimate of what Medicare would have paid for a comparable service in order to assess the magnitude of geographic variation in price. The study authors assume that Medicare represents an

133 *How Hospital Mergers and Acquisitions Benefit Communities: Updated Study by the Center for Healthcare Economics and Policy*, CENTER FOR HEALTHCARE ECONOMICS AND POLICY AND THE AMERICAN HOSPITAL ASSOCIATION (September 2013), available online at http://www.aha.org/content/13/13mergebenefitcommty.pdf.

134 Price is measured as average net price index per inpatient day for private pay patients. Multi-system hospitals referenced in the study include affiliated hospitals with and without local hospitals in the same system. Glenn Melnick and Emmett Keeler, *The Effects of Multi-Hospital Systems on Hospital Prices* 26 JOURNAL OF HEALTH ECONOMICS 2 (2007): 400-413.

135 The authors report a 34 percent increase in price growth for large systems and 17 percent for small systems. Market concentration was not correlated with the effect of hospital system affiliation on price. *Ibid*., at 400.

136 *See*, *e.g.*, Berenson *et al*. (2010).

137 Margaret E. Guerin-Calvert and Guillermo Israilevich, *Assessment of Cost Trends and Price Differences for U.S. Hospitals* (March 2011).

138 Chapin White, Amelia M. Bond and James D. Reschovsky, *High and Varying Prices for Privately Insured Patients Underscore Hospital Market Power*, RESEARCH BRIEF; FINDINGS FROM HSC 27 (September 2013).

appropriate benchmark for evaluation of commercial reimbursements and can be used as an indicator of competitive "price." The study concludes that market power, leverage, and "must-have hospital status" are responsible for estimated high prices and/or observed price variation. However, this conclusion is not supported by any standard economic analysis that relates "price" or "price" variation to market structure or competitive conditions (concentration, number of competitors, share, etc.). The paper excludes critical details that would allow for a thorough assessment of the methodological approach employed. The authors do not disclose sample size or service mix in any city included in their analysis. Nor do they account for the fact that the variation present could be due to comparing different types of physicians and hospitals with potentially widely varying services within and across cities. In addition, the policy recommendations presented in the study concerning price caps (such as setting commercial rates to be equal to Medicare) are unsupported by any analyses of whether medical services and access are sustainable at those rates.

As market conditions including financial pressures, excess capacity, the nature of hospital-insurer bargaining, the types of payment systems including shifts from fee-for-service, and other healthcare reform are changing over time, findings from these studies are ill-suited for inferring likely price impacts of transactions in 2013.

While the recent focus in price variation is attracting attention, studies that attempt to explain the source of the variation tend to be suggestive at best and do not provide conclusive evidence to support their findings. Moreover, empirical research demonstrates that a wide variety of factors account for price variation, including cost of patient care, the severity of illness, and the health of the populations served. Finally, price variation in and of itself is neither necessary nor sufficient to demonstrate market power exercise in differentiated products – indeed, FTC economists have noted that price levels and comparisons of levels are not indicative of market power in hospital services.[139]

The articles presented in this section highlight the fact that the relationship between market concentration and price is complex. **Mergers and acquisitions are thought to increase hospital prices through gains in market power (evidenced by increased concentration), but review of recent studies finds no consistent quantified statistical relationship between concentration and price.** Academic studies cited as supporting the concern that consolidation leads to increased prices tend to examine specific subsamples of hospitals. As such, the findings in these studies are not necessarily applicable or relevant for the broader sample of hospital mergers and acquisitions. Finally, many studies are based on transactions that occurred in the 1990s. As market conditions including financial pressures, excess capacity, the nature of hospital-insurer bargaining, the types of payment systems including shifts from fee-for-service, and other healthcare reform are changing over time, findings from these studies are ill-suited for inferring likely price impacts of transactions in 2013. These results suggest that the ultimate impact of consolidation on hospital prices is far from established and that the discussion would benefit from additional research on this topic.

V. "Price" Trends and Slowing of Rate of Growth

Changes in health care costs and prices attract significant attention and are among the most highly scrutinized trends in the healthcare industry. Recent data indicate that increases in the price of health care are at record lows.[140] *The Wall Street Journal* notes that medical prices are rising at the lowest rate of the past half century. According to the Altarum Institute's Health Care Price Index,[141] the rate of health care price growth is at an all-time low.[142] Hospital prices, a key driver of the index, experienced 1.5 percent year over year growth. This growth rate held steady from the August levels and is the lowest since 1998. Prices for physician and clinical services grew by only 0.2 percent while home health care prices fell by 0.4 percent. Data from the Bureau of Labor and Statistics tell a similar story. The September 2013 hospital Producer Price Index (PPI) increased 0.1 percent from the previous month.[143] For the 12-month period ending September 2013, annual hospital PPI increased 1.5 percent, significantly less than the 2.4 percent increase

139 *See*, Haas-Wilson and Garmon (2011).

140 Eric Morath and Louise Radnofsky, *Medical-Price Inflation is at Slowest Pace in 50 Years*, THE WALL STREET JOURNAL (September 17, 2013).

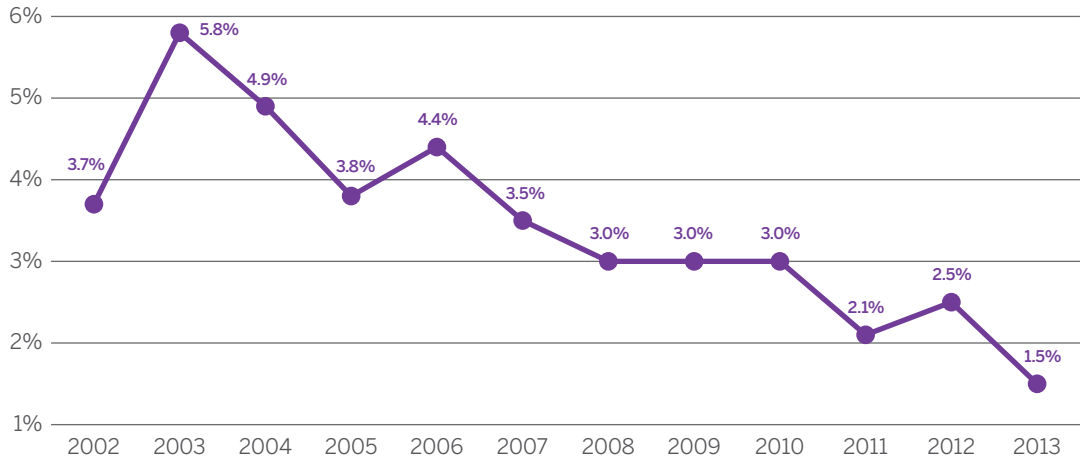
141 *Health Sector Economic Indicators: Insights from Monthly Price Indices through October 2013*, 13 ALTARUM INSTITUTE PRICE BRIEF 11 (November 13, 2013).

142 This represents a 23 year low as the data have been tracked since January of 1990.

143 The PPI is an industry-specific index that tracks price growth for that sector over time by measuring changes in price. The Consumer Price Index (CPI) calculates price growth for all items and is used as a measure of general inflation. Both measures are calculated by the Bureau of Labor Statistics (BLS). http://www.bls.gov/home.htm. The American Hospital Association routinely issues briefs reporting changes in hospital price growth. http://www.ahanews.com/ahanews/jsp/display.jsp?dcrpath=AHANEWS/AHANewsNowArticle/data/ann_103013_PPI&domain=AHANEWS

observed in the preceding 12 month period. This trend can have a significant impact on the government's finances as healthcare represents one of the biggest components of the federal deficit. Figure 5 presents the change in hospital PPI for 2002-2012 and depicts a downward trend in rate of change hospital prices over time a sustained period of time.

Figure 5: Annual Percent Change in Hospital Prices



Source: Bureau of Labor Statistics. Producer Price Index data, 2002-2012 for Hospitals

In a recent paper, Cutler and Shani (2013) indicate that overall healthcare spending growth is slowing and identify several reasons including improved efficiency in the delivery of healthcare. Both the Centers for Medicare & Medicaid Services (CMS) and the Congressional Budget Offices (CBO) have reduced their spending forecasts as projected healthcare spending exceeded actual spending by a large margin. The CMS budget for the period 2003-2012 projected an annual per capita health care spending increase of 3.9 percent. However, real per capita health care spending increased 1.9 percent, on average during this period. Accordingly, CMS reduced its 2018 forecast by eight percent and the CBO reduced its 2020 forecast by seven percent.[144]

Although the 2007 – 2009 recession is credited with a one-time decrease in the spending growth rate, Cutler and Shani find that this accounted for only 37 percent of the overall reduction in healthcare spending observed during the 2003-2012 period. A reduction in Medicare payment rates and a decline in commercial insurance coverage account for another eight percent of the observed decline.

They estimate that the remaining 55 percent of the reduction in spending is due to changes in the healthcare delivery system including greater provider efficiency and increased cost sharing, as well as a reduction in imaging technology proliferation and the advent of new pharmaceuticals.[145] **This slowing in the rate of growth of healthcare spending and in hospital PPI, on balance, suggests some benefit from changes in the health-care delivery system.**

Both the Centers for Medicare & Medicaid Services (CMS) and the Congressional Budget Offices (CBO) have reduced their spending forecasts as projected healthcare spending exceeded actual spending by a large margin.

VI. Conclusions

To contribute to the understanding of the likely effects of hospital mergers, we surveyed the literature (including both studies and articles in the press) to assess the competitive risks and benefits of consolidation. We focused on trends influencing transactions and healthcare delivery as well as literature on price, value, and quality effects. We find that the effects and in particular the benefits

144 David M. Cutler and Nikhil R. Sahni, *If Slow Rate of Health Care Spending Growth Persists, Projections may be off by $770 Billion*, 32 HEALTH AFFAIRS 5 (2013): 841-850. Slowdown in the rate of growth of healthcare spend is a positive development; the imperatives to strive for "Triple Aim" goals of enhanced patient care, improved population health, and reduction in rate of increase in per-capita costs in healthcare remain strong.

145 Efficiency gains refer to the reduction in hospital acquired infections and reduced readmissions. The percentage of workers with high deductible health insurance plans has increased by 24 percentage points since 2006 and copayments for doctors office visits have increased 1.9 percent annually (in real terms) between 2006-2012. Magnetic resonance imaging and computed tomography use growth rate leveled off in 2006 after growing rapidly during 1996-2005. Prescription drug spending growth was 10.1 percent annually during 1993-2003, but slowed to an annual rate 2.3 percent during 2003-2012. *Ibid*., at 845-846. For an additional empirical analysis of factors accounting for these trends, see: Henry J. Kaiser Family Foundation, Assessing the Effects of the Economy on the Recent Slowdown in Health Spending (Apr 22, 2013) available online at http://kff.org/health-costs/issue-brief/assessing-the-effects-of-the-economy-on-the-recent-slowdown-in-health-spending.

of hospital mergers are identifiable but broad-based current studies demonstrating these benefits are lacking. Academic studies and retrospective reviews, especially on price effects, present conflicting evidence and often rely on outdated data or assumptions about market realities. **There is considerable misinformation regarding the drivers of consolidation and the benefits due to realignment which include improvements in access, value, and efficiency. Despite significant concern that most mergers can unilaterally result in increased prices, FTC/DOJ reviews and enforcement actions suggest otherwise.** In addition, hospital price growth has been slowing and is at a record low, a fact that suggests that healthcare system redesign and realignment is yielding some benefits.

Realignment of services can achieve economies of scale and scope, improve quality of care and maintain or enhance access to care. Access to capital made possible by consolidation can enable facility and/or technology upgrades and investments.

Economic conditions and major systematic changes including the slow economic recovery, reduced reimbursements, increased demand for coordinated delivery of care, and implementation of costly healthcare IT systems (*i.e.*, electronic medical records) present significant challenges to the hospital industry as a whole. Mergers provide a means to face these challenges and adapt to the changing landscape. Consolidation allows for realignment of services which can be used to address issues of excess capacity and may lead to cost savings and increases in efficiency. Realignment of services can achieve economies of scale and scope, improve quality of care and maintain or enhance access to care. Access to capital made possible by consolidation can enable facility and/or technology upgrades and investments.

Despite concerns that mergers lead to anti-competitive pricing, FTC/DOJ reviews suggest that the risk of a substantial lessening of competition is not pervasive as only a handful of hospital mergers were actually challenged. High concentration or market share alone do not equate to anticompetitive effects. Prospective and retrospective merger analysis show that even in highly concentrated markets, the estimated effects on price often is mixed. In addition, although hospital mergers and acquisitions have not slowed, spending and price measures for the hospital industry indicate that price growth is slowing. The reliance on past (and in some cases quite distant past) merger activity and assumptions about market conditions to inform current policy reveals the imperative for a more comprehensive understanding of *current* market conditions, *current* merger motivations and more rigorous examination of merger effects to evaluate the likely benefits or competitive risks of current and future hospital transactions. **Fundamentally different market conditions could and do imply that past research is ill-suited – if not misleading – to inform current understanding of likely merger effects.** Past research may not capture dramatic changes ongoing in the healthcare industry, including pressures and results of healthcare reform – particularly requirements for new technologies, new business models, new benefit and network designs, and reduced reimbursements. Moreover, most of the oft-cited price-effect studies are based on mergers or data from the 1990s, under substantially different market conditions than current conditions, and using models that do not fully capture current conditions, thereby overstating merger effects potentially significantly. Further empirical study would be constructive to assess more fully the relevance of prior findings for today – such as the benefits from sustained operations and avoidance of service disruption or closure, and also to assess more completely the effects of mergers in this more complex environment.

...although hospital mergers and acquisitions have not slowed, spending and price measures for the hospital industry indicate that price growth is slowing.

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New Study Yields Critical Findings About Drivers, Benefits of Hospital Realignments

Posted on **January 23, 2014** by **FAH Hospital Policy Blog**

Hospital realignments provide significant benefits for patients and communities, according to a new comprehensive analysis of hospital realignment studies. This research finding recognizes the broader context for why hospital realignment is necessary, and challenges the narrow focus of outdated studies that have created misperceptions about the impact of realignments.

This comprehensive review and research by the *Center for Healthcare Economics and Policy* reviewed 75 studies spanning the years 1996-2013, as well as 36 primary sources for its study. The Center's analysis outlines improvements in health care for communities that result from mergers, including:

* Preserved and expanded access to essential medical care
* Improved service offerings and quality of care
* Sustained and necessary investment in technology, facilities and health IT
* Sensible reduction in excess capacity
* More competitive health care markets

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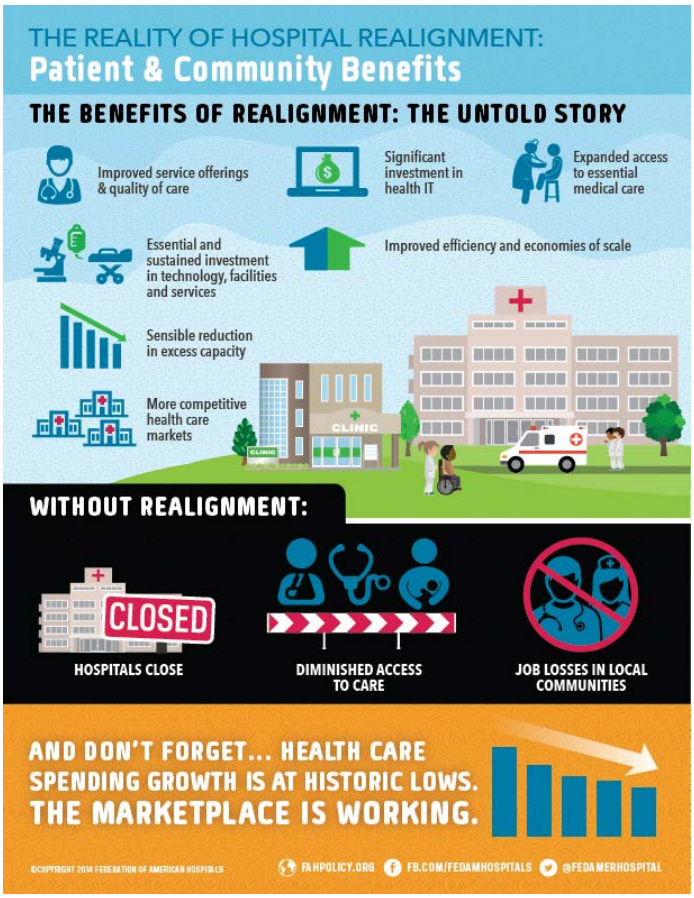
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Equally important, the report underscores that without realignment patients and communities may face disruptions in emergency services, other service lapses and potential hospital closures.

The study yields a critical finding on cost of care: there is no consistent statistical relationship between realignment and hospital price increases. And the reason these common misperceptions—perpetuated in reporting and by others in the health care sector—are not reflective of the current market realities? The Center points to outdated studies using old data dating back to the early 1990s, which reflect much different market conditions than currently exist. These studies have contributed to a biased perception of realignment today.



The Center's analysis of recent realignments shows the vast majority of mergers do not impede market competition. When you combine that with the inability to consistently link realignment and pricing, the study serves to debunk the two most common assertions criticizing hospital mergers.

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"This analysis is a reality check that turns the prevailing policy mantra about consolidation on its head," said Chip Kahn, President and Chief Executive Officer of the Federation of American Hospitals. "We now have a contemporary assessment demonstrating that hospital realignment preserves local communities' access to essential care and provides additional benefits to patients and communities."

"Perceptions about hospital consolidation and pricing also miss the big picture: keystone government and private studies show the U.S. is in the midst of a stunning and enduring health care spending slowdown," Mr. Kahn added.

The benefits from hospital realignment are substantial, and rooted in the continuing efforts of hospitals to preserve access to care as well as improve quality of care for patients in communities across the country. The sustaining of critical patient access to care, the improvements in hospital services due to realignment and the potential impact on a community where needed realignment does not take place cannot be overlooked in current dialogue about hospital mergers.

Another facet of the Center's study assesses the drivers behind realignments today. Currently, the nation's health care landscape is shifting toward integrated systems and coordinated care; according to the Center's study this shift creates sustainable market conditions for hospital care and services. It is this transition of the health care model in conjunction with other factors, including substantial public sector reductions in hospital funding, which necessitates many of these realignments – hospitals must adapt to survive and continue serving their patients.

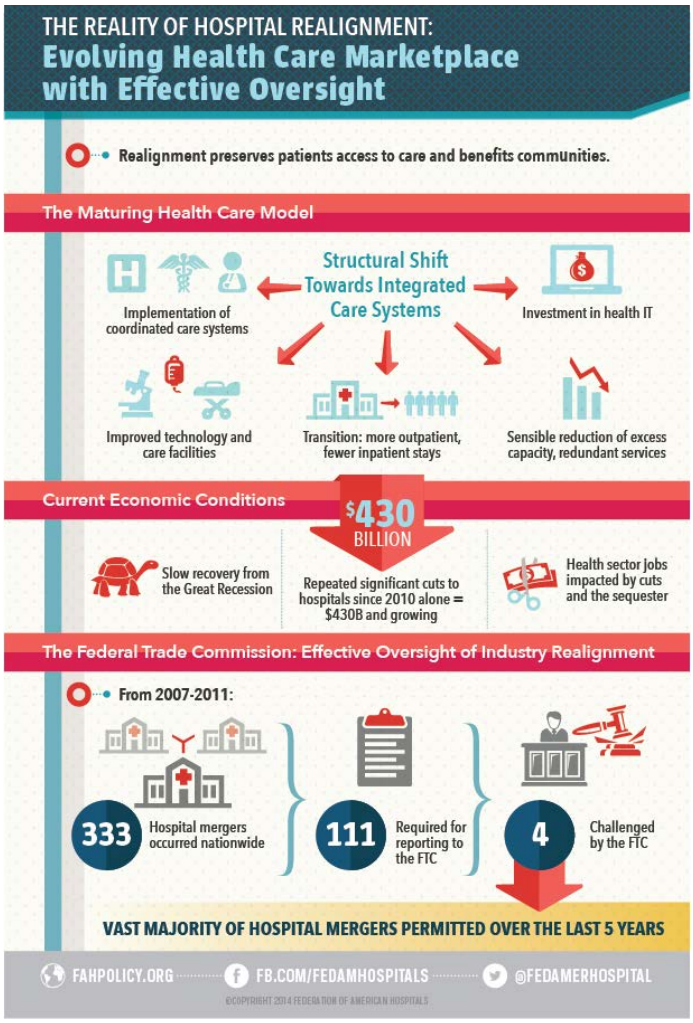
One thing is clear: by pursuing mergers and other realignment efforts, hospitals are able to maintain their presence in the community and preserve patient access to care. Some commonly-held views on these transactions do not hold up to contemporary analysis, as they are rooted in twenty-year old data and market conditions that no longer compare. Today's health care

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market is evolving and experiencing many severe constraints. Changes are necessary to ensure patients' access to essential and quality care is not jeopardized by massive public sector cuts and other factors in the current environment.



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FAH Hospital Policy Blog
Perspectives on health policy affecting America's hospitals and the patients we serve

Words Matter: Defining Hospital Costs, Payments and Charges – And The Numbers That Matter Most to Consumers

Posted on **October 8, 2013** by **FAH Hospital Policy Blog**

The issue of hospital financing was thrust into the fore earlier this year when TIME Magazine published "A Bitter Pill" – an article about the hospital chargemaster. Though a lengthy piece, the article falls short in explaining the issues surrounding hospital financing. The shortcomings of "A Bitter Pill" have led to confusion on a national scale.

The reality: "payments," "costs," and "charges" are three separate terms with three entirely separate definitions when it comes to hospital financing. Unfortunately, these words are often –and inaccurately – used interchangeably. Perhaps the most concerning part of the confusion perpetuated by "A Bitter Pill" is the myth that Medicare pays hospitals the "charges" they submit on a claim, when, in fact, Medicare payments and the beneficiary copayments are fixed by law.

The differences between payments, costs and charges matter, most importantly, to the patients we serve every day. It is important to disentangle these different words

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so consumers can clearly understand what is paid by their insurer, what they pay out of pocket, and why.

Defining Key Health Care Finance Terminology

COSTS are the expenses incurred by a hospital in providing patient care. This can include the direct costs of patient care such as nursing, room and board, medicines and supplies, as well as, and equally important, indirect costs such as overhead for administrative expenses including complying with federal and state regulatory requirements, infection control, medical records, building maintenance, and equipment.

CHARGES are the initial, individual list prices a hospital must set for what can be tens of thousands of items and services it provides. The internal list of all these charges for, among other things, procedures, pharmaceuticals and supplies is known as a "chargemaster." The historical chargemaster has little or no relevance to contemporary hospital patients and to the payments a hospital actually receives. The charge setting process is rooted in legacy systems that have evolved over decades and vary significantly across hospitals.

Although Medicare requires hospitals, for regulatory reporting purposes, to submit full charges (i.e., prices from the chargemaster) when submitting claims, the charges have no direct relation to the pre-determined Medicare payment that a hospital receives, nor to the out-of-pocket/copayment amount that a patient is expected to contribute for care.

While it is sometimes used as a benchmark or reference list price to negotiate payment rates with insurers, the chargemaster is irrelevant to the vast majority of patients, particularly those covered by Medicare and Medicaid. Medicare and Medicaid payments constitute approximately 50% of hospital revenue.

What is relevant? The fixed payments hospitals receive from Medicare and Medicaid and the payment rates hospitals negotiate with private insurers.

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Neither the government nor, in most instances, private insurers actually pay a hospital's full charges. Even patients not covered by Medicare, Medicaid or private insurance are almost never expected to pay full charges. Hospitals have generous discount payment policies for uninsured or underinsured patients which limit how much these patients ultimately will be expected to pay out of pocket. Typically, that payment amount is no more than the amount a private insurer would pay for the same service. In other words, uninsured patients are only very infrequently expected to pay "charges"; instead, they receive discounts similar to what the hospital negotiates with private insurance plans or the Medicare rate.

PAYMENT is the amount a hospital actually receives for providing patient care. The chief sources of payment are:

* Government (e.g., Medicare and Medicaid)
* Private insurers, and, to a much lesser extent,
* Patients.

It bears repeating that in the world of hospital financing, the ONLY term that appropriately refers to that which consumers, insurers or governments pay to hospitals for care is **PAYMENT**. The media's myopic focus on "charges" is unfortunate because it masks the truth about the disconnect between charges and payments, especially the amount that insured and uninsured patients are ultimately expected to pay.

Payment amounts for health care services vary, often widely, by the source:

Payments by the Government. In practice, the Federal government sets in advance a fixed payment rate for hospital care delivered to seniors and disabled Americans (Medicare beneficiaries). This includes the amount the government requires beneficiaries to pay the hospital directly as their share of the total payment, also known as cost-sharing. These payment amounts are based on the patient's diagnosis and the procedures and tests performed and are non-negotiable; a hospital must accept them as payment in full. Hospitals submit charges to Medicare as a formality because regulations

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require them to do so. In actual practice, government payments have nothing to do with "charges."

It is important to note that for eleven consecutive years, Medicare payments have fallen well below the cost of the hospital care provided to seniors and disabled Americans. This means that hospitals are operating at a financial loss even after they receive payment. The Medicare Payment Advisory Commission ("MedPAC") projects a Medicare hospital payment shortfall (i.e., the difference between "payment" and "cost") in 2013 of 6 percent.

Payments by Insurers. Private insurers set their payment rates through direct negotiations with hospitals. These negotiations result in a mutually agreed upon payment rate for services, but are separate from the process of determining the amount the insured person, or consumer, will pay "out-of –pocket." Those providing coverage (insurers and, in some cases, employers and unions) alone determine the premium amount the policyholder pays the insurer. Further, those providing coverage are solely responsible for determining the extent to which a policyholder is responsible for paying some portion of the care they receive directly to the hospital.

Payments by the Patient. Consumer payments for insured Americans, known as "out-of-pocket" payments, "copayments" or "cost sharing" (not to be confused with the "cost" of care defined above)**,** are the payments patients make directly to a hospital or other health care provider.

* For those Americans who are Medicare beneficiaries, out of pocket payments are determined by the government acting through the Centers for Medicare and Medicaid Services (CMS).

* Cost-sharing payments for Americans covered by private insurance are determined under the insurance policy they have with a private insurer. "Copayments" – partial payment for the service, and "deductibles" are common examples of out-of-

pocket payments.

Uninsured patients and others who may be financially challenged are generally asked to pay an amount that is often based on Medicare or negotiated insurer rates, or what they can reasonably afford based on their income and financial status.

Uncompensated care is, in general, the amount by which payments received fall short of the cost of the care provided. Uncompensated care includes charity care provided to uninsured patients for whom payment was not expected based on the individual's financial condition, as well as out-of-pocket amounts not paid by insured patients who do not meet their financial obligations. In 2011, the American Hospital Association reported that hospitals provided $41 billion in uncompensated care costs.

*****

At a time when major changes in national health care policy are being considered and implemented, and there is so much at stake, words really do matter — precision is important to avoid confusion and distortions. "Charges" are neither the fixed government nor insurer-negotiated payment a hospital receives for providing care. "Charges" are not the payment a patient is typically expected to pay upon receiving care.

It is the responsibility of all those in the health care sector to understand and explain these critical differences between cost, charges and payment. You, as the consumer, have every right to know the "how" and "why" that determines what you pay for your health care.

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ONE THOUGHT ON "WORDS MATTER: DEFINING HOSPITAL COSTS, PAYMENTS AND CHARGES – AND THE NUMBERS THAT MATTER MOST TO CONSUMERS"



Dan Enthoven on **October 17, 2013 at 4:12 pm** said:

Transparency is key. You have to ensure that everyone is speaking the same language or someone is going to be in for a very nasty surprise. The patient, the healthcare provider, and the insurance agency all need to have a handle on what is happening and who is responsible for what and when.

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Guiding Principles for Public Reporting of Provider Performance

The number of organizations issuing reports on hospital and physician quality performance has increased remarkably over the past decade. Differences in the measures, data sources, and scoring methodologies produce contradictory results that lead to confusion for the public, providers, and governing boards, and impair the public's ability to make well-informed choices about health care providers. A paper published in *Health Affairs* (2008), showed markedly divergent rankings of the same institutions by Hospital Compare, Healthgrades, Leapfrog Group, and *U.S. News & World Report*.[1] This variability continues today and points to concerns about validity and reliability among the measures used by these groups.

The hospital community supports the principle of accountability through public reporting of health care performance data. However, performance data that are not collected, analyzed, or displayed appropriately may add more confusion than clarity to the health care quality question. For data to be understood and for results to be comparable, publicly reported data should adhere to a set of guiding principles. With that goal in mind, the AAMC (Association of American Medical Colleges) convened a panel of experts on quality reporting to develop a set of guiding principles that can be used to evaluate quality reports. The principles are organized into three broad categories:

- Purpose
- Transparency
- Validity

Purpose: Public reporting and performance measurement occur for a variety of reasons, including consumer education, provider quality improvement, and purchaser decision making. Each website that reports performance data should explicitly state its target audience and the intended purpose of the report. The data, measures, and data display should fit the report's stated purpose. Stakeholders may have differing opinions on how well the measures and methodology meet the intended purpose; however, a discussion on divergent viewpoints cannot occur if the purpose is not well defined.

Transparency: Methodological details can impact both providers' performance data and the appropriate interpretation of the data. Transparency requires that all information necessary to understand the data be available to a reader; this information includes measure specifications, data collection methods, data sources, risk adjustment methodologies and their component parts, composite score methodologies, and reporting methods used to translate results into graphical displays. Details should be sufficient for independent replication of the results. Limitations in the data collection and methodology and relevant financial interests also should be disclosed.

Validity: Validity ensures that the methodology, data collection, scoring, and benchmarks produce an accurate reflection of the characteristic being measured. Ideally, measures, as well as composite and scoring methodologies, should be supported by clinical evidence, field-tested and, where appropriate, have National Quality Forum (NQF) endorsement. Validity is necessary to ensure that results are accurate and that providers are appropriately characterized.

Public reporting that adheres to these guiding principles will ensure appropriate interpretation of performance results.

[1] Rothberg MB, et al. Choosing the best hospital: the limitations of public quality reporting. *Health Affairs*. 2008;27(6):1680-1687.

Guiding Principles for Public Reporting of Provider Performance

Purpose: What Is the Goal of the Report?	**Transparency:** How Are the Measures Calculated? How Should the Results Be Interpreted?	**Validity:** Is the Measurement Appropriate?
• Dashboards should have a clear, concise purpose statement, including the intended audience(s). • Dashboard displays should be tailored to the specified audience. • Measures should contribute to the stated purpose. • Ratings, scores, and grades should be useful for the stated purpose. • Data timeliness should be relevant to the stated purpose.	• Methodology must be transparent addressing but not limited to: o Clearly identified data sources o Identified date ranges o Detailed specifications for individual measures and composites, with sufficient detail to facilitate replication of results o Detailed scoring methodology o Risk adjustment methodology with open architecture that includes documentation of reliability/validity and details of the variables and weights used o Disclosure of any proprietary methodology • Limitations or exclusions in the data reporting should be disclosed, including but not limited to: o Data timeliness o Small sample sizes o Validated vs. nonvalidated data o Use of proprietary measures/ methodologies o Disclosure of financial interests or other business related interests (consulting services, reports, etc.) o Limitations to accurately address differences in patient populations (such as socio-economic status) o Other limitations in data collection	• Measures should be tested, validated, and ideally endorsed by the National Quality Forum (NQF). • Measures need to be supported by the latest clinical evidence. • Data collection and data sources need to be rigorously defined, validated, and verified to ensure usefulness, relevance, and comparability. • Outcome measures should be risk adjusted and risk adjustment methodology validated to conform to industry standards. • Categories of performance (grades or ratings) should be developed using only robust statistical methods. • Methods should distinguish between missing data and poor performance. • Creating composites from disparate measures for ease of display should be avoided. Composite measures that receive NQF endorsement should be used.

The AAMC would like to thank volunteers in the Public Reporting Principles workgroup for their effort.

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Orgranizations listed above are for identification purposes only.

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The following organizations have endorsed these guiding principles:

American Hospital Association®
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Federation of American Hospitals®
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CHA Catholic Health Association of the United States
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