OFFICE OF THE
HEALTH INSURANCE COMMISSIONER
STATE OF RHODE ISLAND

The Care New England and Lifespan Proposed Merger: Policy Considerations Related to the State of Rhode Island Office of the Health Insurance Commissioner's Statutory Purpose

Executive Summary

The proposed merger between Rhode Island's two largest hospital systems, Care New England (CNE) and Lifespan, to create an integrated academic health system with Brown University as an affiliated partner promises to be the most consequential development in Rhode Island health care in decades. This working paper reviews the relevant policy considerations raised by the proposed merger that relate to the public interest objectives that guide the work of the State of Rhode Island Office of the Health insurance Commissioner (OHIC): access, affordability, and quality. It is important to note that because OHIC is not one of the governmental entities responsible for determining whether the proposed merger should be approved, the office and the paper does not take a position on this question.

The paper draws upon data and analysis from various public sources and reviews the literature on the effects of hospital mergers on prices, costs, and quality. Horizontal mergers between hospitals and vertical mergers between hospitals and physician practices are both the focus of the literature review as both types of transactions are relevant to the CNE and Lifespan proposed merger specifically, and in the case of vertical integration between hospitals and physician practices, more recent market developments in Rhode Island. However, OHIC avoids firm assertions about the magnitude of changes in market concentration and measures and claims of presumptive anticompetitive effects.

The paper first puts the Rhode Island hospital market in perspective. In doing so, it notes that that the competitive status quo is characterized by the following three empirical findings, presented in a simplified form:

1. The local hospital market in Rhode Island is relatively competitive compared to hospital markets nationally and appears to have grown more competitive over time.
2. Rhode Island enjoys some of the lowest relative commercial prices for hospital inpatient and outpatient care in the nation. However, relative commercial prices for professional services functionally related to the delivery of hospital inpatient or outpatient services are among the highest in the nation.
3. Health care service prices in Rhode Island are below the national median but utilization is well above the national median.

OHIC provides empirical support for each of these simplified findings.

Next, the paper describes the CNE and Lifespan systems specifically and discusses their financial performance and quality performance. The facts and data reviewed for each hospital system show that combining Rhode Island's two largest hospital systems will lead to a substantial increase in inpatient market share among the hospitals with the highest relative prices. Furthermore, given existing business

relationships between hospital systems and physician practices, the merged entity will command a significant footprint in the market for physician services. Both of these facts could have significant implications for health insurance premium affordability and health care quality.

The paper then turns to a review of the OHIC regulatory requirements currently in place that are relevant to the CNE and Lifespan proposed merger. These regulatory requirements are a part of the office's Affordability Standards, which were developed to systematize expectations and regulatory requirements that commercial health insurers must follow to demonstrate their efforts to improve affordability, considering the public's interest in affordable health insurance. The Affordability Standards leverage the mechanism of insurance oversight to mitigate provider cost growth to make health insurance more affordable. Current Affordability Standards that are most relevant to the issues likely to arise from the proposed merger of CNE and Lifespan are as follows:

- Hospital rate increase cap (230-RICR-20-30-4.10(D)(6)(e)
- Hospital quality incentive requirement (230-RICR-20-30-4.10(D)(6)(d) and 230-RICR-20-30-4.10(D)(6)(e))
- Aligned measure sets for value-based contracting (230-RICR-20-30-4.10(D)(5))
- Population-based contract trend cap (230-RICR-20-30-4.10(D)(2)(f))

It is OHIC's view that imposing such regulatory requirements on insurers is both necessary and proper and a vital component of ensuring that the office holds these organizations accountable for furthering affordability in the market. However, if the proposed merger between CNE and Lifespan is approved, given the size of the merged entity, accountability measures that directly bind the conduct of providers and align with OHIC's regulatory requirements to create a more balanced regulatory environment are worthy of the most serious consideration.

A literature review of the body of available research related to the effects of hospital mergers on prices and quality follows after the previous contextual sections on the Rhode Island market as a whole, the characteristics of the CNE and Lifespan systems, and the status quo regulatory environment resulting from OHIC requirements for insurers. OHIC's review finds that the available evidence clearly suggests that hospital consolidation leads to higher prices and that the evidence on the impact of hospital concentration on the quality of care is mixed.

Finally, OHIC provides its view of the critical components of a regulatory oversight model aimed at holding the merged entity accountable for improving affordability and improving population health and health equity on a statewide scale, in light of both the Rhode Island context for the proposed merger between CNE and Lifespan and the conclusions present in the research on such mergers. The five critical components outlined are as follows:

1. Comprehensive price caps
2. Quality Incentive requirements
3. Advanced value-based payment (VBP) adoption
4. Population health and health equity improvement requirements
5. Regulatory oversight model sustainable funding

These are the minimum necessary in OHIC's view, considering its statutory charge to promote affordability and improve quality and access. Other components may be advisable as well.

The proposed merger between CNE and Lifespan presents a host of risks and opportunities. However, it is OHIC's position that the risks outlined in this paper are significant and should command careful attention by regulators and the public. The office will continue to track developments around the proposed merger and may update this paper in light of additional information. OHIC will continually seek

to educate the public about the risks and opportunities connected to the proposed merger and will continue to advocate for policy measures that improve access, affordability, and quality.

Introduction

This working paper (defined in this context as a document meant to share ideas, serve as a basis for discussion, and elicit feedback) reviews the relevant policy considerations raised by the proposed merger between CNE and Lifespan that relate to the statutory purpose of OHIC. In doing so, the paper will assist the health insurance commissioner in strategically assessing how OHIC should carry out its statutory responsibilities in light of the proposed merger and inform the vital public conversation around the proposed merger's implications for the Rhode Island health care system as a whole.

The proposed merger to create an integrated academic health system with Brown University as an affiliated partner promises to be the most consequential development in Rhode Island health care in decades. This paper combines publicly available data on the local hospital market with a review of the literature on consolidation within hospital and physician services markets.

This information is used to assess the risks posed by increased consolidation and the creation of market power to the public interest objectives that guide OHIC's work: access, affordability, and quality— which are consistent with OHIC's statutory purpose outlined in State of Rhode Island General Laws (RIGL) § 42-14.5-2 which reads: *"*With respect to health insurance as defined in § 42-14-5, the health insurance commissioner shall discharge the powers and duties of office to:

(1) Guard the solvency of health insurers;
(2) Protect the interests of consumers;
(3) Encourage fair treatment of health care providers;
(4) Encourage policies and developments that improve the quality and efficiency of health care service delivery and outcomes; and
(5) View the health care system as a comprehensive entity and encourage and direct insurers towards policies that advance the welfare of the public through overall efficiency, improved health care quality, and appropriate access."

The paper then articulates the critical components of a regulatory oversight model aimed at holding the merged entity accountable for improving affordability and improving population health and health equity on a statewide scale should the proposed merger be approved in light of the aforementioned risk assessment.

Methods

Data Review. This paper draws upon data and analysis from various public sources. A description of the local hospital market using the Providence-Warwick Metropolitan Statistical Area as a proxy relies on data and analysis published by the Health Care Cost Institute (HCCI) as part of its Healthy Marketplace Index (HMI) project. The paper also draws from the RAND 3.0 employer hospital price transparency study to assess hospital prices in a local and national context. OHIC also obtained a data run from the National Academy for State Health Policy (NASHP) Hospital Cost Tool to assess payer mix and profit/loss margins by line of business for Rhode Island's hospitals. Publicly available data from the Rhode Island Hospital Discharge Database for 2019 was also accessed. Finally, OHIC explored data on the distribution of attributed patients by provider accountable care organization (ACO) from the total medical expense reporting collected by the office through the Rhode Island Health Care Cost Trends Project.

Literature Review. OHIC reviewed the literature on the effects of hospital mergers on prices, costs, and quality. The focus of the review was centered on the effects of horizontal mergers between hospitals and vertical mergers between hospitals and physician practices. Both types of transactions are relevant to the CNE and Lifespan proposed merger specifically, and in the case of vertical integration between hospitals and physician practices, more recent market developments in Rhode Island. A host of studies examining the empirical relationship between competition and price in health care markets have been published over the last twenty years. OHIC placed an emphasis on more recently published studies and meta-analyses in this paper. This paper also drew upon technical assistance provided to Rhode Island state officials supported by the Milbank Memorial Fund that included the presentation, Rhode Island: Legal and Regulatory Options for Addressing Health System Consolidation.

Limitations. This paper draws inferences about the present state of the Rhode Island market and the probable effects of increased market concentration based on an analysis of publicly available information and peer reviewed literature. These inferences should be read in light of the following limitations.
OHIC does not possess the technical knowledge or resources to empirically define the market within which CNE and Lifespan compete from an antitrust regulatory perspective. Antitrust regulators retain experts who will employ sophisticated economic research methods to define the relevant market(s) within which the health systems compete. In light of this limitation, OHIC employs proxy measures of the local health care services market. This limits OHIC's ability to infer directional conclusions about changes in market structure that may arise from the CNE and Lifespan proposed merger. In this paper, OHIC, therefore, avoids firm assertions about the magnitude of changes in market concentration measures, such as the Herfindahl-Hirschman Index, and claims of presumptive anticompetitive effects. Descriptions of the local market provided herein should not be confused with, and will not substitute for, analyses that will be conducted by the applicable federal and state regulatory authorities. Finally, OHIC is not one of the governmental bodies responsible for determining whether the proposed merger should be approved. The office does not have access to the regulatory filings submitted by CNE and Lifespan in support of the proposed merger and any evidence or data presented by the parties will not be assessed in this working paper.

Putting the Rhode Island Hospital Market in Perspective

Rhode Island's general and specialty hospitals serve the state's 1,097,379 residents,[1] as well as the residents of adjacent communities in Connecticut and Massachusetts. The differentiation and distribution of health care services across Rhode Island's hospitals and their physician partners have important implications for access to care, consumer perception of the value of health insurance networks, the outcome of contract negotiations, and the affordability and quality of health care provided in the state. In this section, OHIC provides background on the local hospital market by describing Rhode Island's hospitals and the structural characteristics of the local hospital market, broadly defined.

Rhode Island's hospitals are organized into several health systems with one hospital in southern Rhode Island remaining independent. Most hospitals in Rhode Island are owned by locally organized non-profit corporations.

Lifespan, a Providence-based non-profit corporation founded in 1994, is the state's largest health system and comprises Rhode Island Hospital, Hasbro Children's Hospital, The Miriam Hospital, Newport Hospital, and Bradley Hospital. CNE, a non-profit corporation based in Providence and organized in 1996, is the second largest system and comprises Women and Infants Hospital, Kent Hospital, and Butler Hospital.

1. "Quick Facts: Rhode Island," United States Census Bureau, accessed June 21, 2021, https://www.census.gov/quickfacts/fact/table/RI/POP010220#POP010220.

CharterCARE, which comprises Roger Williams Medical Center and Our Lady of Fatima Hospital, is owned by for-profit California-based Prospect Medical Holdings and is the third largest system in the state. Westerly Hospital joined the Yale New Haven Health system in 2015. Landmark Medical Center in Woonsocket was purchased by California-based Prime Healthcare and subsequently converted to non-profit status under ownership of the Prime Healthcare Foundation. South County Hospital, located in Wakefield, Rhode Island, is an independent non-profit hospital. Most of Rhode Island's hospital systems extend their footprint in the market through ownership of physician practices or partnerships with independent practice associations (IPAs).

Rhode Island's hospitals are listed in Table 1 which presents data derived from the Medicare cost reports for fiscal year 2019.[2] The hospitals are listed by system affiliation/ownership with accompanying data on bed size, percent of total beds in the state, and inpatient occupancy rates. The data on bed size is meant to convey the relative size of Rhode Island's hospitals and is not put forward as a measure of market share.

Table 1: Rhode Island's Hospitals, Bed Size, and Occupancy Rates, 2019

Hospital Name	System/Ownership	Bed Size	Percent of Total Beds	Inpatient Occupancy
Rhode Island Hospital	Lifespan	635	28%	80%
Miriam Hospital	Lifespan	246	11%	83%
Newport Hospital	Lifespan	102	4%	45%
Women & Infant's Hospital	Care New England	247	11%	76%
Kent Hospital	Care New England	323	14%	52%
Butler Hospital (Psych)	Care New England	143	6%	93%
Roger Williams Medical Center	Prospect/CharterCARE	148	6%	55%
Our Lady of Fatima Hospital	Prospect/CharterCARE	163	7%	23%
South County Hospital	Independent	79	3%	74%
Landmark Medical Center	Prime	123	5%	45%
Westerly Hospital	Yale New Haven	79	3%	39%

The proposed merger between CNE and Lifespan, the state's two largest systems, will reshape the local health care landscape and significantly alter the market conditions faced by consumers, health insurers, and competing health care providers. As a starting point for the analysis and discussion of the proposed merger between CNE and Lifespan in the subsequent sections, a description of prevailing conditions in the local hospital and health services market, with reference to competition, price, and utilization is provided here.

The competitive status quo is characterized by the following stylized facts (defined in this context as a simplified presentation of an empirical finding):

1. **Stylized Fact 1:** The local hospital market in Rhode Island is relatively competitive compared to hospital markets nationally and appears to have grown more competitive over time.
2. **Stylized Fact 2:** Rhode Island enjoys some of the lowest relative commercial prices for hospital inpatient and outpatient care in the nation. However, relative commercial prices for professional

2. The closure of Memorial Hospital in 2018 took 294 beds offline. OHIC relies on 2019 data from the Medicare cost reports to show occupancy rates. More recent data on bed capacity can be obtained from the State of Rhode Island Department of Health (RIDOH). Table 1 does not list the following hospitals: Hasbro Children's Hospital (included under Rhode Island Hospital), Bradley Hospital (70 beds based on RIDOH licensure data), Providence Veterans Affairs Medical center, and Eleanor Slater Hospital (230 beds based on RIDOH licensure data). The denominator for the percent of total beds calculation is the sum of total beds across only those hospitals listed in Table 1.

services functionally related to the delivery of hospital inpatient or outpatient services are among the highest in the nation.

3. **Stylized Fact 3:** Health care service prices in Rhode Island are below the national median but utilization is well above the national median.

Empirical corroboration for each stylized fact presented above follows.

Stylized Fact 1. The local hospital market in Rhode Island is relatively competitive compared to other hospital markets nationally and appears to have grown more competitive over time.

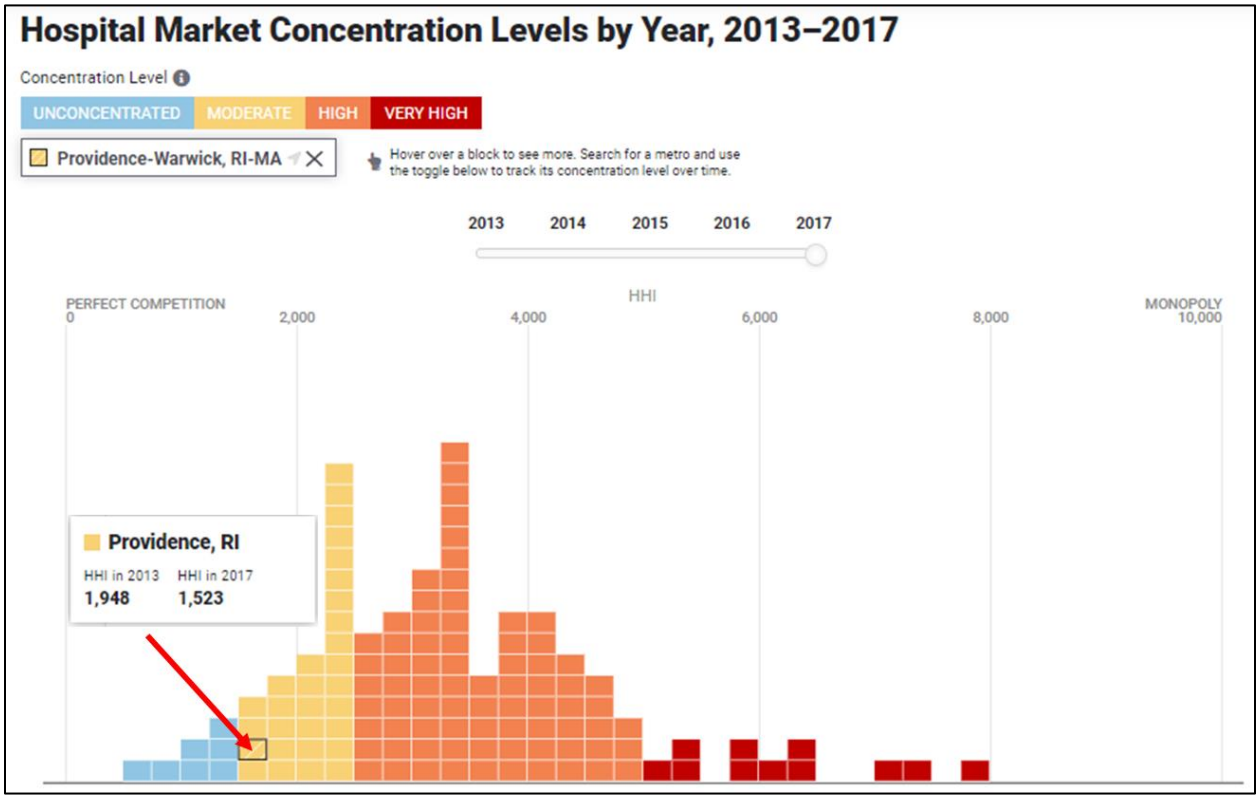
From a national perspective, Rhode Island appears to enjoy a relatively competitive hospital market.[3] This observation is derived from reports by HCCI. HCCI reports examine changes in market concentration, average prices, utilization, and costs as part of its HMI project.[4] The HCCI data covers the Providence-Warwick Metropolitan Statistical Area (MSA), which includes Rhode Island and parts of Bristol County, Massachusetts. The Providence-Warwick MSA serves as a useful, but perhaps conservative, proxy for the geographic bounds of the local hospital market and should not be treated as a substitute for more sophisticated market definition outputs from economic research methods used in antitrust analysis.

Market concentration is measured using the Herfindahl-Hirschman Index (HHI). The HHI generates an index value by summing the squared market share of each firm participating in a defined market. The index ranges from a de minimis value approximating zero, indicating perfect competition, to 10,000, indicating monopoly. Figure 1 shows the Providence-Warwick MSA HHI for inpatient services fell 425 points between 2013 and 2017, indicating an increase in competition and a market that may be characterized as moderately concentrated.

3. It is worth restating the limitation described earlier that using a proxy measure for the market, such as an MSA, is not a substitute for a more rigorously defined market based on research methods employed in antitrust reviews. In the past, other studies have looked at Rhode Island's market structure. In 2012, OHIC released a report on Variation in Payment for Hospital Care in Rhode Island, and among the factors believed to influence variation, was the structure of the Rhode Island market for hospital services. The HHI is a commonly used measure of market concentration and was calculated across a slate of hospital service domains. The index value was (2,559) for all inpatient stays, (3,236) for mental health stays, (6,689) for obstetric stays, (7,711) for pediatric care, (2,338) for outpatient visits, and (2,836) for orthopedic stays. A market bearing an HHI value in excess of 2,500 is considered to be "highly concentrated" according to United States Department of Justice (DOJ) guidelines. However, OHIC notes that the 2012 study computed the HHI for a dataset limited to Rhode Island hospitals and did not specifically address the question of market definition from an antitrust perspective. Therefore, the 2012 concentration measures, while instructive, are not dispositive of baseline levels of concentration in the market.

4. The HCCI data described above produces measures of market concentration for core-based statistical areas as units of analysis. A principle limitation of the HCCI data is that it does not include claims data from Blue Cross & Blue Shield plans.

Figure 1: Providence-Warwick MSA HHI Change from 2013 to 2017



Source: "Hospital Concentration Index," Health Marketplace Index, Health Care Cost institute, accessed June 21, 2021, https://healthcostinstitute.org/hcci-originals/hmi-interactive#HMI-Concentration-Index.

In fact, the Providence-Warwick MSA was one of the least concentrated metropolitan areas in the nation in 2017.

Market concentration is an important economic variable because changes in the degree of competition between hospitals is correlated with hospital prices.[5] Markets that are more concentrated tend to experience higher prices for hospital services. Ultimately, these higher hospital prices are passed on to consumers and employers as purchasers of health insurance through higher premiums and out-of-pocket expenses. This empirical relationship between competition and price is borne out in the HCCI data.

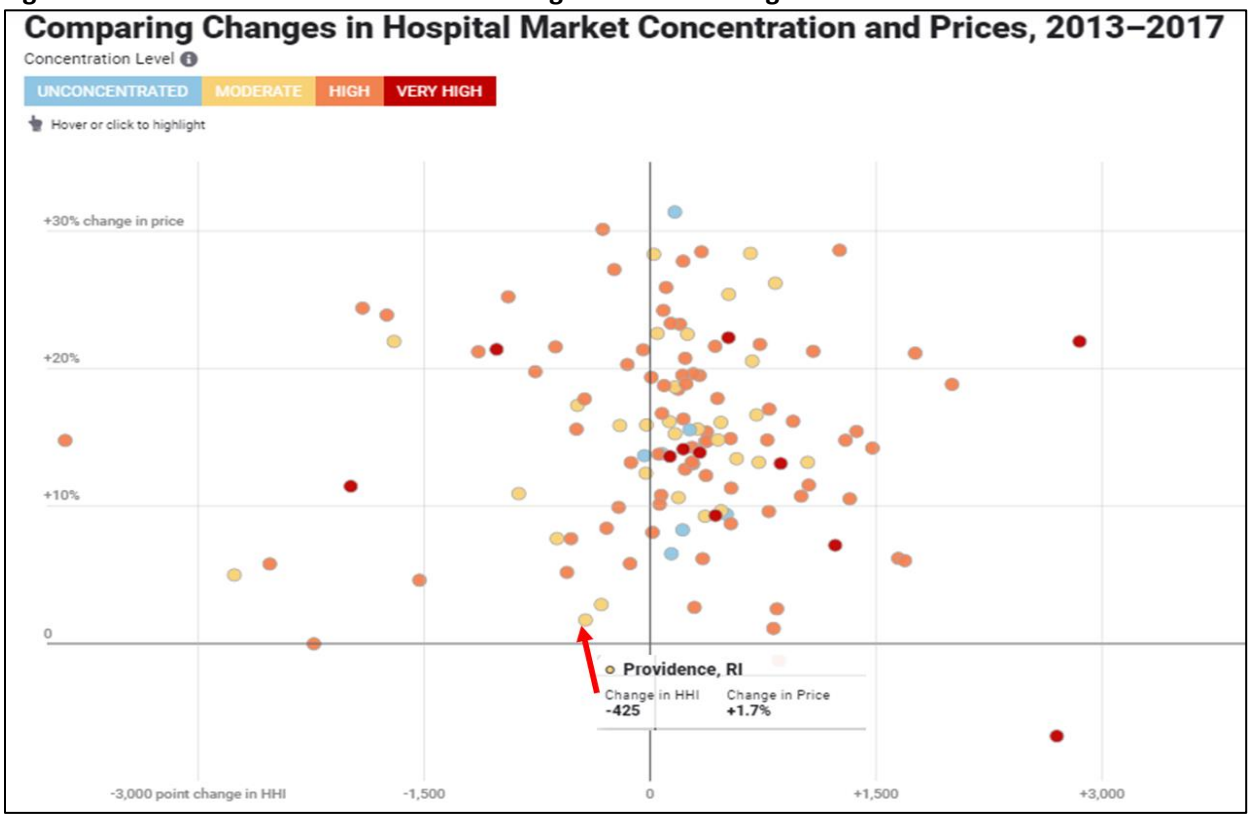
Figure 2 shows that between 2013 and 2017, while the HHI for inpatient services fell 425 points, inpatient prices rose only 1.7%, one of the lowest rates of price growth in the nation.[6] MSAs that experienced a higher increase in the HHI for inpatient services tended to experience a higher rate of inpatient price growth according to the HMI study. It should be noted that the HCCI analysis does not prove causality between the magnitude of change in inpatient market concentration and the magnitude of price growth. Other factors, such as changes in insurer market structure, patient utilization patterns unrelated to

5. "Hospital Concentration Index," Health Marketplace Index, Health Care Cost institute, accessed June 21, 2021, https://healthcostinstitute.org/hcci-originals/hmi-interactive#HMI-Concentration-Index. Also see Martin Gaynor and Robert Town, *The Impact of Hospital Consolidation: Update*. (Princeton, NJ: The Robert Wood Johnson Foundation, June 2012), 1, https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf73261.

6. Unfortunately, more recent data on the Providence-Warwick MSA is not available. Since 2017, CNE closed Memorial Hospital in Pawtucket, Rhode Island. While Memorial suffered a low average daily census and did not account for a significant portion of inpatient discharges, it would be interesting to understand how the inpatient services HHI changed after Memorial's cases shifted to other hospitals.

provider market structure, and local laws and regulations theoretically play a role in determining these outcomes.

Figure 2: Providence-Warwick MSA HHI Change and Price Change from 2013 to 2017



Source: "Hospital Concentration Index," Health Marketplace Index, Health Care Cost institute, accessed June 21, 2021, https://healthcostinstitute.org/hcci-originals/hmi-interactive#HMI-Concentration-Index.

In the literature review below OHIC examines the body of research on the relationship between market structure and price more fully.

Stylized Fact 2. Rhode Island enjoys some of the lowest relative commercial prices for hospital inpatient and outpatient care in the nation. However, relative commercial prices for professional services functionally related to the delivery of hospital inpatient or outpatient services are among the highest in the nation.

Rhode Island has the third lowest commercial prices for hospital inpatient and outpatient services in the nation when measured relative to what Medicare would have paid for the same services. The RAND 3.0 employer hospital price transparency study, which included data from the Rhode Island all-payer claims database, examined the prices paid by private insurers for hospital inpatient and outpatient services in 49 states and the District of Columbia. RAND's analysis linked facility and professional claims to derive the total amount paid for an inpatient or outpatient service and compared this value to what Medicare would have paid for the same service. The analysis also benchmarked the facility and professional price components to Medicare to allow for a more nuanced evaluation of facility and professional relative prices by state. Professional prices refer to those professional services that are functionally related to the delivery of hospital inpatient or outpatient services and do not reflect the totality of professional services delivered in any state.

In 2018, the average commercial price for hospital inpatient and outpatient services in Rhode Island was 196% of the Medicare rate, compared to the national average of 247%. Stated differently, Rhode Island consumers paid 1.96 times the Medicare rate for hospital inpatient and outpatient services, compared to the national average multiple of 2.47. It is well known that private insurers pay a multiple of Medicare prices for the same services, but it is beyond the scope of this paper to evaluate the reasons why this is the case.

Table 2 shows the RAND 3.0 results for Rhode Island across several dimensions of inpatient and outpatient care along with Rhode Island's national ranking in 2018.

Table 2: RAND 3.0 Results for Rhode Island Hospitals

Service	Relative Price	Rank
Inpatient & outpatient	195.9%	Third lowest
Inpatient	214.2%	Thirteenth lowest
Outpatient	171.3%	Second lowest
Professional	256.1%	Sixth highest
Inpatient facility	199.3%	Second lowest
Outpatient facility	164.4%	Lowest

These results suggest that Rhode Island has been effective at keeping hospital inpatient and outpatient facility prices in check. The finding that professional prices are among the highest in the nation deserves further scrutiny from an analytic and policy perspective.

From a comparative perspective, the Rhode Island market has done a reasonably effective job keeping prices in check. It is reasonable to suggest that this outcome is a function of provider competition, insurance market structure, and OHIC regulations that curb hospital price inflation. However, weights cannot be assigned to the relative contributions of each of these factors without a more robust analysis that is beyond this paper's scope.

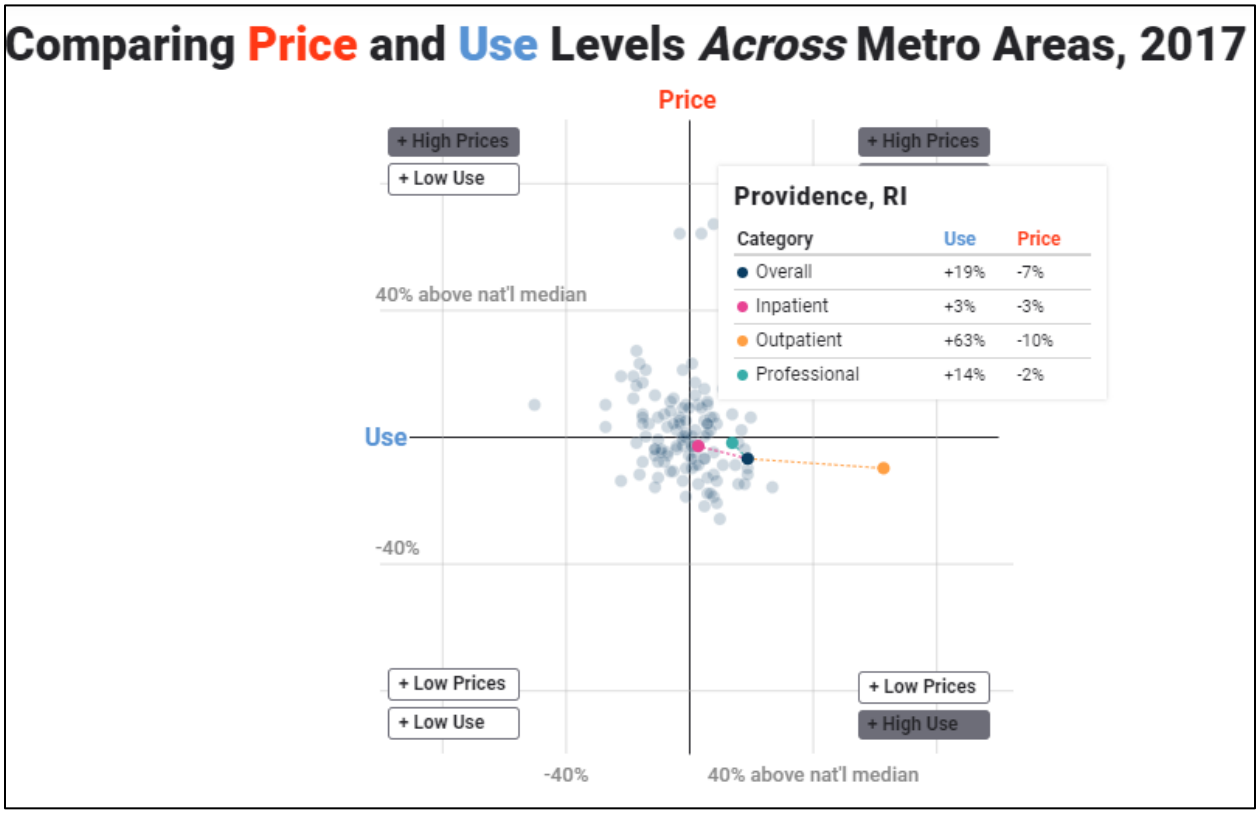
Importantly, the RAND 3.0 data does not tell us that health care or health insurance in Rhode Island is affordable. Affordability is a relative concept that is dependent on consumer income and purchasing power in relation to prices and the total cost of care. To address the affordability question, the burden of the total cost of care on consumers must be measured.

Stylized Fact 3. Health care service prices in Rhode Island are below the national median but health care utilization is well above the national median.

In 2017 health care price levels were 7% below the national median and utilization levels were 19% above the national median in the Providence-Warwick MSA. This observation is derived from HCCI's price and utilization indices.[7] When one decomposes price and utilization levels into distinct inpatient, outpatient, and professional service categories, the pattern of higher utilization and lower prices relative to the national median holds. Figure 3 shows HCCI's price and utilization relativity measures for the Providence-Warwick MSA across each service category.

7. "Comparing Price and Use Indices," Health Marketplace Index, Health Care Cost institute, accessed June 21, 2021, https://healthcostinstitute.org/hcci-originals/hmi-interactive#HMI-Price-and-Use.

Figure 3: Providence-Warwick MSA Price and Utilization Levels, 2017



Source: "Hospital Concentration Index," Health Marketplace Index, Health Care Cost institute, accessed June 21, 2021, https://healthcostinstitute.org/hcci-originals/hmi-interactive#HMI-Price-and-Use.

Inpatient prices were 3% below the national median while inpatient utilization was 3% above the national median. Outpatient prices were 10% below the national median while outpatient utilization was 63% above the national median. Professional[8] prices were 2% below the national median while professional utilization was 14% above the national median. The finding that outpatient use was 63% above the national median is particularly striking and deserves further exploration to determine whether it is a spurious finding due to data anomalies.

Discussion. These stylized facts paint a useful portrait of the local health services market in terms of competition, prices, and utilization. In view of a moderately concentrated market, relatively low inpatient and outpatient facility prices, and relatively high utilization, a significant change in market structure, such as the proposed merger between CNE and Lifespan, presents a host of risks and opportunities.

With respect to prices, given Rhode Island's baseline relatively high rates of utilization, any upward pressure on prices, or substitution of higher price providers for lower price providers, could have significantly deleterious effects on affordability, all else being equal. On the other hand, with respect to utilization, a large integrated delivery system facing thoughtfully structured economic incentives for efficiency and quality could leverage best practices in VBP to deliver population health management and prevention services on a wide scale. Such a system could improve affordability by reducing unnecessary

8. The HCCI data on professional services is not comparable to the RAND 3.0 data. The HCCI data on professional services is more comprehensive while the RAND 3.0 data represents the subset of professional services that are functionally related to the delivery of hospital inpatient or outpatient care.

emergency department visits, reducing ambulatory care sensitive inpatient admissions, and promoting disease prevention.

CNE and Lifespan Systems Description, Financial Performance, and Quality Performance

The proposed merger between CNE and Lifespan will significantly alter prevailing market conditions by combining the two largest hospital systems in the state. Below OHIC describes the CNE and Lifespan systems with a focus on system composition, share of beds and Rhode Island inpatient discharges, payer mix, and financial performance by payer type. OHIC also describes the footprint of each system in the market for physician services and the "market for attributed patients." The latter perspective sheds light on the scope and implications of vertical integration between hospitals and physician practices in Rhode Island within the context of a changing health care business model.

CNE: System Composition, Payer Mix and Market Share. CNE is Rhode Island's second largest health system and is comprised of Women and Infants Hospital, Kent Hospital (the second largest hospital in the state), and Butler Hospital, an inpatient psychiatric facility. It also owns The Providence Center, an ambulatory behavioral health provider, and Visiting Nurses Association of Care New England, a provider of home health and hospice services. CNE's hospitals account for 31% of bed capacity[9] in the state and garnered approximately $930 million in net patient revenues in fiscal year 2019, according to analysis of Medicare cost reports. These hospitals also accounted for 23.3% of Rhode Island resident inpatient discharges among hospitals in the state.

Table 3 shows fiscal year 2019 financial performance by payer type for Women and Infants Hospital, Kent Hospital, and Butler Hospital. The data are derived from the NASHP Hospital Cost Tool analysis of the Medicare cost reports. Using the Medicare cost reports, NASHP was able to allocate costs and patient revenues to different payer types. After accounting for net patient revenues allocable to Medicare and Medicaid, the balance of revenues reflects commercial payers, including fully insured plans and self-funded employer plans. Also represented are private Medicare Advantage plans and smaller payers, such as TRICARE and the Federal Employee Health Benefit Plan. This broad category is referred to as commercial/other in Table 3. NASHP backs into costs allocable to commercial/other payers by deducting Medicare, Medicaid, charity care, bad debt, and uninsured charges from total charges, then applying the Medicare cost-to-charge ratio to the balance of charges to derive costs allocable to commercial/other payers.

Payer mix is an important determinant of hospital financial performance. The fact that commercial payers negotiate prices and tend to pay far more than Medicare or Medicaid for the same service means that hospital financial performance is largely dependent on garnering strong margins for services provided to the commercially insured. Whether these margins are indicative of a cost shift is subject to academic debate and speculation.

In 2019, CNE experienced a net operating gain, which was a positive change from previous years of operating losses. CNE's structural financial challenges have motivated its persistent efforts to partner with a stronger hospital system. In 2019, CNE generated margins on commercial/other of 34% at Women and Infants Hospital, 48% at Kent Hospital, and 9% at Butler Hospital.

9. Data are derived from NASHP analysis of the 2019 Medicare cost reports.

Table 3: CNE Payer Mix and Profit/Loss Margins

Hospital Name	Payer Mix			Profit or Loss Margin		
	Medicare	Medicaid	Commercial/ Other	Medicare	Medicaid	Commercial/ Other
Women and Infants	9%	35%	56%	1%	-32%	34%
Kent Hospital	21%	18%	59%	17%	-32%	48%
Butler Hospital	16%	0%	85%	-12%	0%	9%

Note: Payer mix will not sum to 100% because charity care, uninsured/bad debt, and other state programs are not shown. Payer mix is based on percent of charges attributed to each payer category. Profit or loss margin is expressed as the difference of patient revenues and costs divided by patient revenues for the specific payer type.

CNE also holds a significant footprint in the market for physician services. In addition to CNE's employed multispecialty practices, CNE has a business affiliation with Rhode Island Primary Care Physicians Corporation (RIPCPC). Together these entities, along with South County Hospital, comprise the Integra Community Care Network (Integra), the ACO responsible for the management of approximately 113,000 commercial, Medicare Advantage, and Medicaid Rhode Island resident attributed patients.[10]

Lifespan: System Composition, Payer Mix and Market Share. Lifespan is Rhode Island's largest health system and is comprised of Rhode Island Hospital, Hasbro Children's Hospital, The Miriam Hospital, and Newport Hospital. It also owns Bradley Hospital, a psychiatric hospital located in East Providence and Gateway Healthcare, which provides an array of clinical services to treat patients with mental health and substance use disorders. Lifespan's hospitals account for 43% of bed capacity[11] in the state and garnered $1.8 billion in net patient revenues in fiscal year 2019, according to analysis of the Medicare cost reports. In 2019, Lifespan also accounted for 53% of Rhode Island resident inpatient discharges among hospitals in the state.[12]

Table 4 shows fiscal year 2019 financial performance by payer type for Rhode Island Hospital, Miriam Hospital, and Newport Hospital. Table 4 shows that Lifespan's hospitals garnered strong margins from commercial/other payers in 2019, with margins ranging from 18% at Miriam Hospital to 33% at Rhode Island Hospital.

Table 4: Lifespan Payer Mix and Profit/Loss Margins

Hospital Name	Payer Mix			Profit or Loss Margin		
	Medicare	Medicaid	Commercial/ Other	Medicare	Medicaid	Commercial/ Other
Rhode Island Hospital	21%	25%	52%	16%	-6%	33%
Miriam Hospital	23%	17%	58%	11%	-45%	18%
Newport Hospital	26%	19%	53%	-22%	-31%	23%

Note: Payer mix will not sum to 100% because charity care, uninsured/bad debt, and other state programs are not shown. Payer mix is based on percent of charges attributed to each payer category. Profit or loss margin is expressed as the difference of patient revenues and costs divided by patient revenues for the specific payer type.

10. South County Health also participates in Integra. The approximation of attributed patients is derived from converting member months into member years.

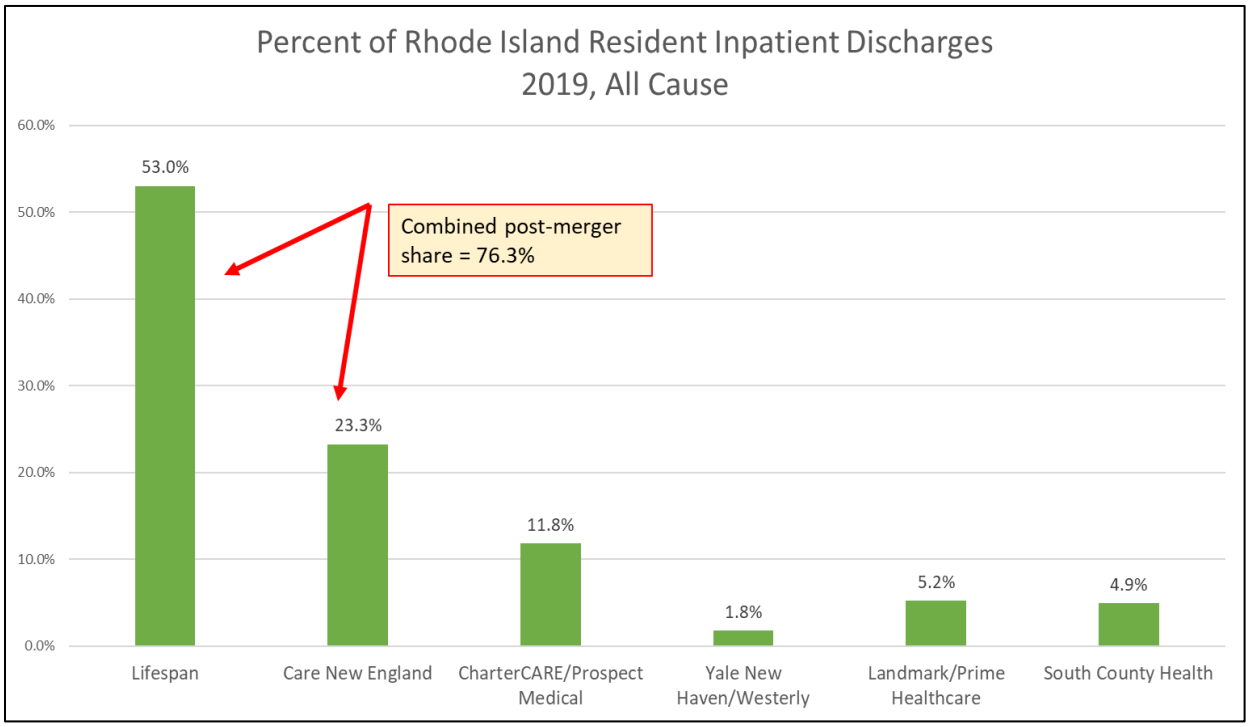
11. Data are derived from NASHP analysis of the 2019 Medicare cost reports. See Table 1.

12. "Hospital Discharge Data Web Query," State of Rhode Island Department of Health, accessed June 22, 2021, https://app.powerbigov.us/view?r=eyJrIjoiYzE0ZTM5N2QtZTA0Ny00MGJmLWI2ZTUtMTg1ZGM3MTEyNmY3IiwidCI6IjUyY2E2YTU0LTQ0NjUtNDYzNS1iZmYzLTY1ZDBhODQxMjI4OCJ9.

Lifespan's footprint in the market for physician services is expansive and commands significant brand recognition. Lifespan owns the large multispecialty Lifespan Physician Group and partners with the IPA Community Physician Partners, Inc., which includes Brown Medicine. In April 2021, Lifespan also acquired Coastal Medical, further growing and consolidating its share of the physician services market. Lifespan Health Alliance, LLC is the ACO sponsored by Lifespan that assumes clinical and financial accountability for the management of approximately 62,000 commercial and Medicare Advantage Rhode Island resident attributed patients.[13]

CNE and Lifespan: Combined Shares of Rhode Island Inpatient Discharges and Attributed Patients. The proposed merger between CNE and Lifespan will combine the two largest hospital systems in the state and several of the largest physician group practices. The combined inpatient market share of the merged entity will approach 80% based on 2019 hospital discharge data, as illustrated by Figure 5.

Figure 5: All-Cause Rhode Island Resident Inpatient Discharges, 2019



While avoiding inferences about probable anticompetitive effects from the magnitude of the change in market concentration due to the merger, qualitative claims about the resulting change in market structure can still be made.

Without question, the merger will increase the market share of the merged entity relative to the status quo where CNE and Lifespan are competitors. In addition to accounting for nearly 80% of Rhode Island resident inpatient discharges, the merged entity will own the only level 1 trauma center in the state as well as the only neo-natal intensive care unit. These acute care resources are essentially "must-haves" within any locally organized health insurance network because there are no local substitutes. In total the four largest hospitals in the state, by bed capacity, will fall under the control of the merged entity.

13. Lifespan does not participate in the Rhode Island Medicaid Accountable Entities Program. This figure does not include Coastal Medical. The approximation of attributed patients is derived from converting member months into member years.

Turning now to the "market for attributed patients," it should be noted that, as the business model for health care transitions from payment for acute episodic care to payment for the management of populations, ACOs have become important actors within the health care system. ACOs take different forms but the foundation of these delivery systems is a core network of primary care providers (PCPs) to which insured patients are attributed. Patient attribution methodologies take different forms as well but usually consist of prospective patient assignment through PCP selection by patients or attribution based on retrospective claims analysis of patient utilization patterns to determine where patients receive their care.

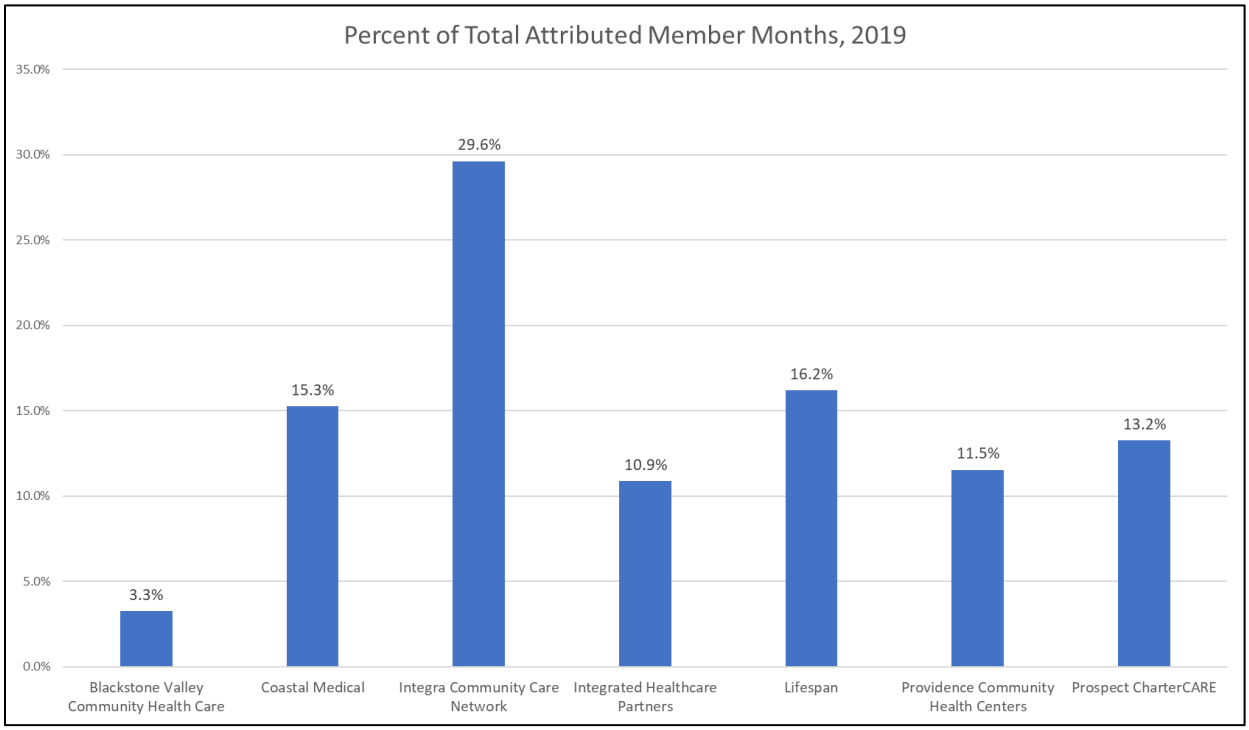
An ACO, which is a construct originally promoted by Medicare pursuant to new authorities under the Affordable Care Act, may include hospitals and multispecialty practices within their network and corporate structure. ACOs assume clinical and financial accountability for their attributed patients and manage within budget targets with opportunities for earning shared savings or incurring shared losses with the contracting insurer.

Figure 6 shows the share of attributed Rhode Island resident member months for each ACO in the state in 2019. Attributed member months is a subset of total insured member months. The data presented below reflects enrollment among the state's four largest insurers: Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, Tufts Health Plan, and UnitedHealthcare. Together these four companies accounted for approximately 681,000 Rhode Island resident enrollees in 2019.[14] In 2019, approximately 383,000 Rhode Island resident enrollees were attributed and 298,000 were not attributed. Non-attributed patients are not included in the attributed patients market share denominator.

In Figure 6, below, member months are pooled across the commercial, Medicaid, and Medicare Advantage markets. Integra commands the largest market share (29.6%), followed by Lifespan Health Alliance (16.2%) and Coastal Medical (15.3%). Now that Coastal Medical has been acquired by Lifespan it makes sense to view them as a single entity from a market share perspective. Doing so yields a combined market share of 31.5%, just exceeding Integra's market share.

14. Estimate based on member years calculation derived from dividing member months by 12.

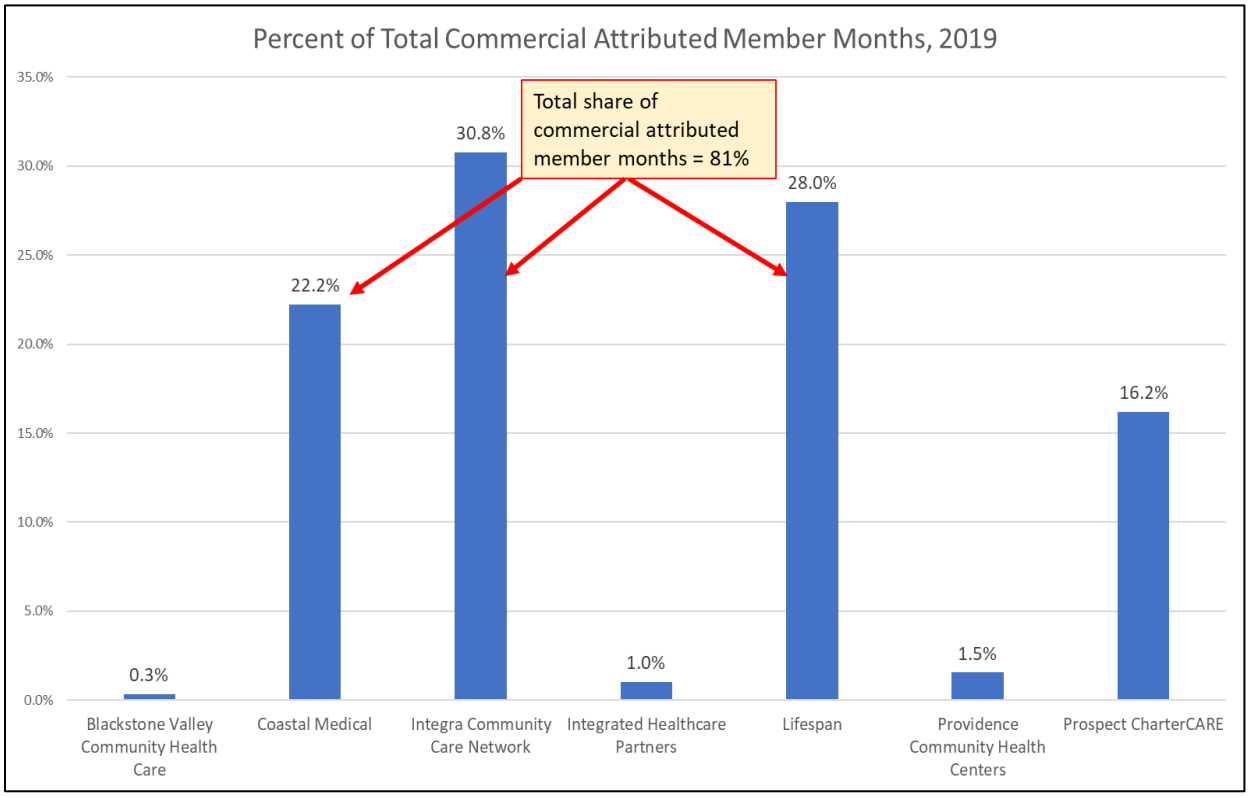
Figure 6: Distribution of Attributed Rhode Island Member Months Across ACOs, 2019



The data on attributed member months conveys information about the footprint of each hospital system and its physician partners within the market for physician services. OHIC does not have data on office visits by provider within each health system, so the distribution of attributed members months is useful as a proxy for physician market share. In total, the combined market share of Coastal, Lifespan, and Integra is 61.1% across commercial, Medicaid, and Medicare Advantage insurers.

Focusing on the commercial population, the share of attributed member months among these three entities is even greater at 81%, as illustrated in Figure 7.

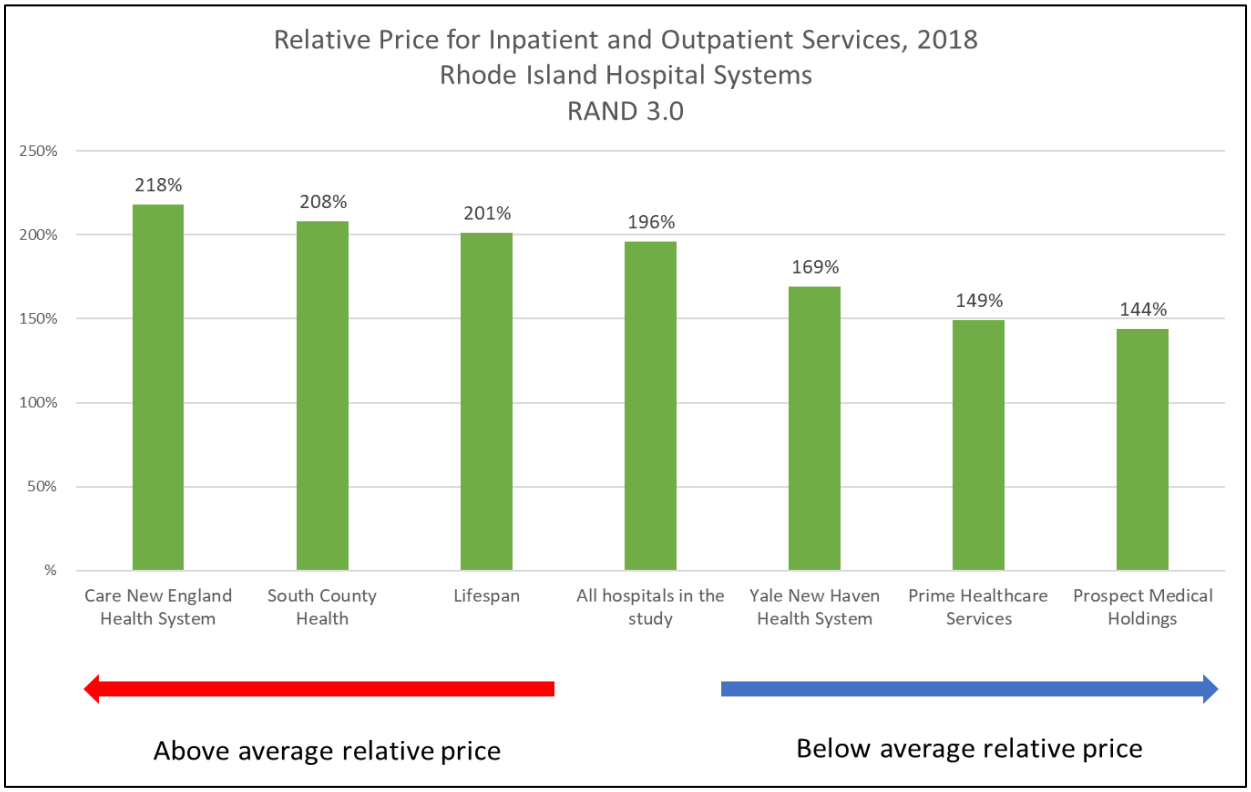
Figure 7: Distribution of Attributed Rhode Island Commercial Member Months Across ACOs



OHIC notes that that the size of the attributed population is a function of the number of providers within each ACO network and some professional providers within these networks are not necessarily owned or under the corporate control of CNE or Lifespan. For example, the CNE-sponsored ACO Integra Community Care Network includes the RIPCPC independent practice association (IPA). It is not clear whether the existing network of IPA and hospital system relationships will remain intact following the merger. If IPAs or large group practices choose to move in a different direction, then the market shares shown above could change.

CNE and Lifespan Relative Prices. CNE and Lifespan hospitals have among the highest prices for inpatient and outpatient services in the state. Figure 8 shows the relative price for inpatient and outpatient hospital services from the RAND 3.0 study for each of Rhode Island's hospital systems.

Figure 8: Rhode Island Hospital Systems Relative Price for Inpatient and Outpatient Services, 2018

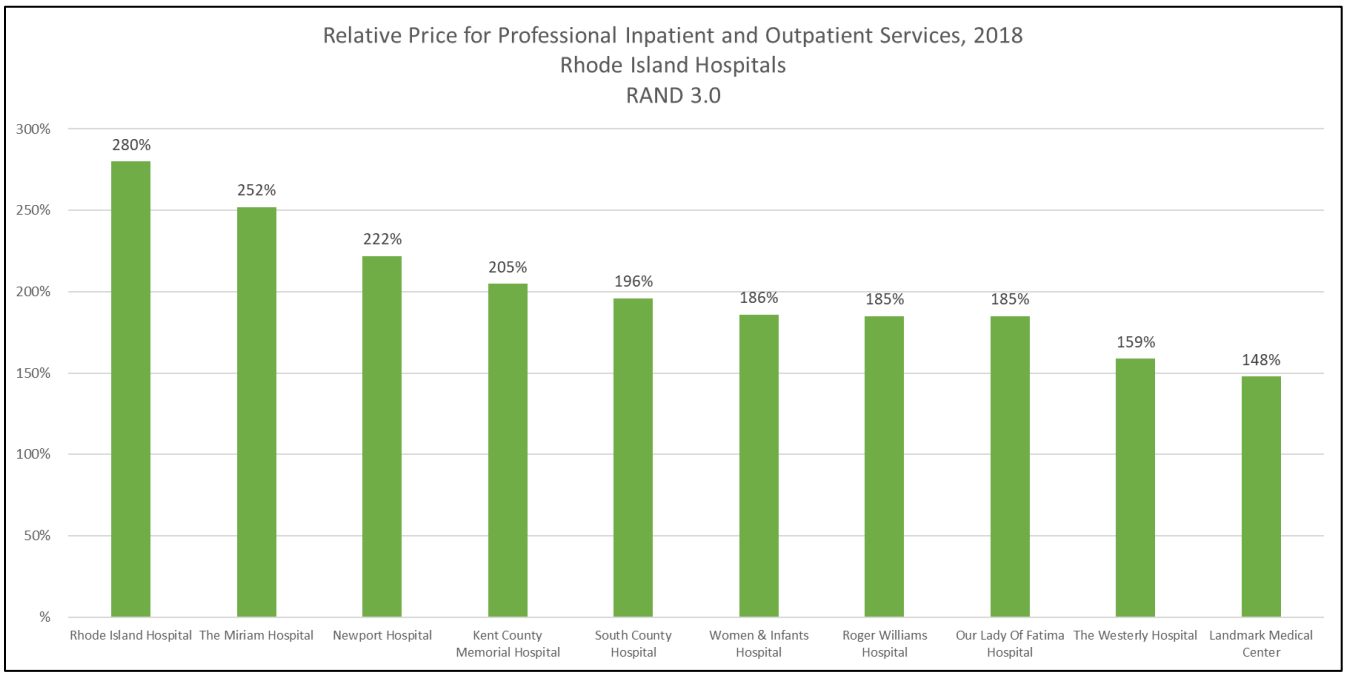


CNE, South County Health, and Lifespan all have relative prices above the state average. The findings with respect to relative prices for CNE and Lifespan are corroborated by the earlier 2012 study, *Variation in Payment for Hospital Care in Rhode Island*. The 2012 study examined case-mix and service-mix adjusted reimbursement rates across Rhode Island's hospitals for inpatient and outpatient care and found that "the five highest-paid hospitals all belonged to the two largest hospital systems, Lifespan and Care New England."[15] It is beyond the scope of this paper to assess the reasons for this variation and to draw inferences about the relative proportions of warranted and unwarranted price variation observed in the data.

Specific to professional inpatient and outpatient services, the RAND 3.0 study found that Rhode Island commercial prices were 256.1% of the Medicare rate, sixth highest in the nation. This finding deserves further scrutiny from a policy perspective. Figure 9 shows the relative price for professional inpatient and outpatient hospital services from the RAND 3.0 study for each of Rhode Island's hospitals. The three Lifespan hospitals have the highest professional inpatient and outpatient service prices relative to Medicare in the state.

15. State of Rhode Island Office of the Health Insurance Commissioner and the State of Rhode Island Executive Office of Health and Human Resources, *Variation in Payment for Hospital Care in Rhode Island* (Cranston, RI: December 2012), 20, http://www.ohic.ri.gov/documents/Hospital-Payment-Study-Final-General-Dec-2012.pdf.

Figure 9: Rhode Island Hospitals Relative Price for Professional Inpatient and Outpatient Services, 2018



The proposed merger between CNE and Lifespan will combine hospitals with some of the highest prices in the state. This may be concerning for at least two reasons. First, any increase in market power that may accrue to the merged entity could be exercised in an attempt to increase prices, whether that be prices for hospital, professional, or ancillary services. Antitrust regulators will need to assess the risk that the merger will create market power for the merged entity and weigh the likelihood that such market power could be exercised to increase prices, given existing constraints within the Rhode Island market. Second, the diversion of patients from lower price competitors to higher price system hospitals could increase health care costs, all else being equal. Antitrust regulators should assess the risk of patient diversion or steering to higher price facilities as a consequence of the proposed merger.

CNE and Lifespan Quality Performance. OHIC also reviewed the 2021 Overall Hospital Quality Star Ratings produced by the Centers for Medicare and Medicaid Services (CMS) for Rhode Island's hospitals. These ratings assess the clinical quality performance of hospitals across five measurement domains: mortality, safety of care, readmission, patient experience, and timely and effective care. Hospitals with the best quality receive five stars and hospitals with the worst quality receive one star. All of the hospitals within the Lifespan and CNE systems received a 3 or a 4 rating in 2021. Of hospitals ranked by CMS, 73.35% of them received at least a 3-star rating.[16]

16. CMS tabulation of hospitals by star rating are available here.

Table 5: Rhode Island Hospitals 2021 Overall Quality Star Ratings

Hospital	Star Rating
South County Hospital	5
Newport Hospital	4
Landmark Medical Center	4
The Miriam Hospital	4
The Westerly Hospital	4
Rhode Island Hospital	3
Kent County Memorial Hospital	3
Women & Infants Hospital	3
Roger Williams Hospital	2
Our Lady of Fatima Hospital	2

Regulators should conduct of deeper dive into hospital quality performance within each of the five domains listed above. Such analysis could identify opportunities for improved quality performance.

Discussion. The facts and data reviewed above show that combining Rhode Island's two largest hospital systems will lead to a substantial increase in inpatient market share among the hospitals with the highest relative prices. Furthermore, given existing business relationships between hospital systems and physician practices through ownership, IPA affiliation, or ACO governance, the merged entity will command a significant footprint in the market for physician services. Additionally, the CMS quality data outlined above show varying quality performance by hospital but also that no hospital in Rhode Island's two largest systems have a rating of one star or two stars.

Relevant OHIC Regulatory Requirements

Rhode Island has a unique administrative structure for the oversight of commercial health insurers in the form of OHIC. OHIC has several regulatory requirements in place that are relevant to a discussion of the potential merger between CNE and Lifespan. OHIC possesses a broad statutory mandate to "view the health care system as a comprehensive entity and encourage and direct insurers towards policies that advance the welfare of the public through overall efficiency, improved health care quality, and appropriate access," as outlined in RIGL § 42-14.5-2(5). In discharging the powers and duties of the office, the health insurance commissioner is also required to take necessary and proper actions to protect consumers with the objective of improving affordability, quality, and access.

As part of the annual rate review process for commercial health insurance premiums, insurers are required to prove that the rates filed for approval by OHIC are consistent with the proper conduct of the health insurer's business and the public interest. Given the public's interest in affordable health insurance, OHIC developed the Affordability Standards over a decade ago to systematize expectations and regulatory requirements that commercial health insurers must follow to demonstrate their efforts to improve affordability. Currently, the Affordability Standards emphasize insurer investment in primary care, behavioral health integration, utilization of alternative payment models, structural provider contracting requirements that limit cost growth and encourage quality improvement, and alignment of quality measures.

In the February 2019 issue of *Health Affairs*, researchers examined the impact of Rhode Island's Affordability Standards and found that "relative to quarterly fee-for-service (FFS) spending among the control group, quarterly FFS spending among the Rhode Island group decreased by $76 per enrollee after

implementation of the policy, or a decline of 8.1 percent from 2009 spending."[17] The authors credit the hospital inpatient and outpatient price cap and the mandated use of unit of service payment methodologies (such as diagnosis-related groups for most medical and surgical services) as the key policies implemented as part of the Affordability Standards driving the observed relative reduction in commercial health care spending. The authors concluded: "State regulators in Rhode Island achieved among the largest total health care spending changes observed from payment reforms to date."[18]

The Affordability Standards leverage of the mechanism of insurance oversight to mitigate provider cost growth in order to make health insurance more affordable. Over time, the Standards have been modified and can be revised to address the effects of changing market structure on cost, quality, and access. The current Affordability Standards that are most relevant to the issues likely to arise from the from the proposed merger of CNE and Lifespan are as follows:

- **Hospital Rate Increase Cap:** As outlined in 230-RICR-20-30-4.10(D)(6)(e), OHIC limits the inpatient and outpatient hospital average rate increases that commercial insurers can grant hospitals to no more than the United States All Urban Consumer All Items Less Food and Energy Consumer Price Index (CPI-Urban) percentage increase plus 1%. In short, this can be understood as a regulatory guardrail. Insurers and hospitals can negotiate an average rate increase up to, but not exceeding, the rate increase cap. The health insurance commissioner must approve any proposed increase above the rate cap.
- **Hospital Quality Incentive Requirement:** As outlined in 230-RICR-20-30-4.10(D)(6)(d) and 230-RICR-20-30-4.10(D)(6)(e), OHIC mandates commercial insurers include in their contracts with hospitals a quality incentive program. The quality incentive must include payment for attaining or exceeding, mutually agreed-to, sufficiently challenging performance levels for all Core Measures within the Aligned Measure Set for hospitals. Moreover, at least 50% of the average annual hospital price increase must be contingent on quality performance. This requirement introduces financial risk for quality performance within the fee schedule and works within the construct of the rate increase cap.
- **Aligned Measure Sets for Value-Based Contracting**: As outlined in 230-RICR-20-30-4.10(D)(5), OHIC selects the clinical quality measures to be used in value-based contracts between commercial insurers and the following provider types: ACOs, hospitals, outpatient behavioral health providers, and PCPs. Relevant to hospitals, OHIC defines core quality measures for hospital incentive programs. For 2021, there are eight acute care hospital core measures and two behavioral health specialty hospital core measures. The health insurance commissioner convenes a Quality Measure Alignment and Review Committee to reassess the aligned measure sets annually and bases measure selection on the recommendations of this committee.
- **Population-Based Contract Trend Cap**: As outlined in 230-RICR-20-30-4.10(D)(2)(f), OHIC caps the annual allowable rate of budget growth, after risk adjustment, within population-based contracts to no more than the CPI-Urban percentage increase plus 1.5%. This requirement applies to population-based contracts that hold providers accountable for the total of care.

While the regulations and policies described above ultimately affect providers, the risk for compliance with these regulations is borne by insurers. It is OHIC's view that imposing such regulatory requirements on insurers is both necessary and proper and a vital component of ensuring that the office holds these organizations accountable for furthering affordability in the market.

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17. Aaron Baum et al, "Health Care Spending Slowed After Rhode Island Applied Affordability Standards to Commercial Insurers," *Health Affairs*, 38, no. 2 (February 2019): 237. https://doi.org/10.1377/hlthaff.2018.05164.

18. Aaron Baum et al, "Health Care Spending Slowed," 244.

However, it is also true that this creates a system of asymmetric regulatory accountability for health system performance improvement and cost containment. If the proposed merger between CNE and Lifespan is approved, given the size of the merged entity, accountability measures that directly bind the conduct of providers and align with OHIC's regulatory requirements to create a more balanced regulatory environment are worthy of the most serious consideration. Such a regulatory scheme would ensure that the health care finance and health care delivery sides of the system operate within a consistent set of public expectations and face equitable compliance burdens. The point is not that insurers should not bear this responsibility but rather that providers should also share in this responsibility, from a regulatory standpoint.

Literature on the Effects of Hospital Mergers on Prices and Quality

In this section, OHIC reviews the literature on the effects of hospital mergers on health care prices and quality. In addition to the effects of horizontal mergers between hospitals, vertical mergers between hospitals and physician practices are examined. Both types of transactions are relevant to the CNE and Lifespan proposed merger specifically, and in the case of vertical integration, more recent market developments involving the acquisition of Coastal Medical by Lifespan.

The literature on mergers comprises a mix of data sources and econometric methods. Two simple ways to describe the types of analyses that comprise the literature are as follows:

- Cross-sectional studies that examine the relationship between competition and prices or quality.
- Event-based pre-post analysis of mergers; these studies retrospectively examine the effects of specific mergers using longitudinal data

Effects of Horizontal Mergers on Prices. An extensive review of the economics literature on the relationship between hospital market structure and price was conducted by the Medicare Payment Advisory Commission (MedPAC) at the request of Congress and published in 2020. MedPAC concluded: "The preponderance of evidence suggests that hospital consolidation leads to higher prices. These findings imply that hospitals seek higher prices from insurers and will get them when they have greater bargaining power."[19] Findings from some specific, prominent studies, are cited below:

- Gaynor and Town (2012) conducted a meta-analysis of studies published since 2006 and concluded that "increases in hospital market concentration lead to increases in the price of hospital care."[20] Studies of specific mergers tended to find that mergers occurring in concentrated markets were associated with significant post-merger price increases, relative to control hospitals, in some cases exceeding 20%.
- Cooper et al (2019) found that inpatient prices were 12.5% higher in places where there was only one hospital with no competitors (monopoly hospitals) within a 15-mile radius compared to places where there were four or more competitors. Places where there were only two hospitals (duopoly hospitals) within a 15-mile radius had prices that were 7.6% higher than areas where there were four or more competitors. These findings were robust to alternative specifications of market structure and held when disaggregating the analysis to focus on specific procedures. The

19. Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, DC: Medicare Payment Advisory Commission, March 2020), 498, http://medpac.gov/docs/default-source/reports/mar20_entirereport_sec.pdf.

20. Martin Gaynor and Robert Town, *The Impact of Hospital Consolidation: Update*, 1.

analysis also revealed that insurer market concentration had a mitigating effect on hospital prices.[21]

- Cooper et al (2019) also examined 366 merger transactions that occurred between 2007 and 2011. The researchers found that merging hospitals located within 5 miles of each other was associated with a price increase of 6%.[22] As the authors note, 6% is a meaningful level of price increase from an antitrust regulatory perspective.[23] Estimated price increases associated with mergers decline as the distance between merging hospitals increases.
- Haas-Wilson and Garmon (2011) retrospectively reviewed two Chicago-area hospital mergers that occurred in 2000. They found that the merger between Evanston Northwestern and Highland Park hospitals resulted in a statistically significant price increase compared to the control group. The relative price increase was at least 10% more than price increases at other hospitals that comprised the control group.[24]

Effects of Vertical Mergers on Prices. The effects of hospital acquisition of physician practices, otherwise known as vertical integration, on prices is relevant to recent market developments and the proposed merger of CNE and Lifespan, specifically.

- Capps, Dranove, and Ody (2018) examined the price effects of hospital acquisition of physician practices. The authors found that the prices for services offered by acquired physicians increased by 14.1%, on average, after the acquisition. The authors attribute 45% of the average price increase to the application of facility fees. Estimated price increases varied by physician specialty, with primary care prices estimated to increase by 15.1% and cardiology prices increasing by over 30%.[25]

Beyond the theoretical ability of vertically integrated systems with market power to negotiate higher prices, the force of physician referrals and treatment decisions motivated by keeping care within a given health system, may have further implications for health care costs. The effects of hospital-physician consolidation on prices, quality, and access deserve additional attention by researchers.

Operating Costs. There is some mixed evidence that hospital mergers may reduce operating costs but the savings are small. In a review of the evidence, MedPAC concluded: "On balance, the studies found some evidence of slight short-term reductions in costs after a hospital is acquired. However, short-term savings may be eliminated over the long term if hospitals obtain higher payment rates from insurers and those higher revenues cause hospital costs to increase."[26]

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21. Zach Cooper, Stuart V. Craig, Martin Gaynor, and John Van Reenen, "The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured," *The Quarterly Journal of Economics*, 134, no.1 (February 2019): 55, 76, 90 https://doi.org/10.1093/qje/qjy020.

22. Zach Cooper, Stuart V. Craig, Martin Gaynor, and John Van Reenen, "The Price Ain't Right?," 100, 101.

23. The authors cogently argue that 6% is a meaningful level of price increase from an antitrust perspective for two reasons. First, the authors cite DOJ guidelines that treat a 5% price increase as an indicator of enhanced market power through horizontal mergers. Second, the authors note that their data, by definition, is limited to mergers that occur. They note that mergers most likely to raise antitrust concerns are not pursued or are blocked by regulatory bodies.

24. Deborah Haas-Wilson and Christopher Garmon. "Hospital Mergers and Competitive Effects: Two Retrospective Analyses," *International Journal of the Economics of Business*, 18, no. 1 (February 2011): 28, https://doi.org/10.1080/13571516.2011.542952.

25. Cory Capps, David Dranove, and Christopher Ody, "The Effect of Hospital Acquisitions of Physician Practices on Prices and Spending." *Journal of Health Economics*, 59 (April 2018): 139-153, https://doi.org/10.1016/j.jhealeco.2018.04.001.

26. Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, DC: Medicare Payment Advisory Commission, March 2020), 472, http://medpac.gov/docs/default-source/reports/mar20_entirereport_sec.pdf.

Quality. The evidence on the impact of hospital concentration on the quality of care is mixed. Quality is an important construct to measure because reductions in mortality, potentially avoidable complications, and improved patient experience command value in the market.

- Gaynor and Town (2012) found that competition tends to improve quality in systems where prices are determined by the market, though the evidence was mixed across the studies reviewed. Specifically, eight of the eleven studies reviewed found a positive association between competition and measured quality.
- Beaulieu et al (2020) found that hospital acquisition did not meaningfully improve the 30-day rate of readmissions after discharge or 30-day mortality. The authors measured a decline in composite patient experience after acquisition.[27]

Unlike measuring changes in price, quality measurement is multi-dimensional, referring to different domains of care delivery, different procedures, and difference outcomes variables. Quality signals value, and to the extent that mergers increase prices without concomitant increases in quality, then the value of the merger to consumers must be substantiated in other ways.

Discussion. The findings from the literature on market concentration and price imply that small area analysis of hospital competition provides a precise measure of the market dynamics influencing price, and ultimately, the costs borne by consumers. In an earlier section, OHIC described the state of hospital competition in the local market, defined as the Providence-Warwick MSA. The literature suggests that regulators should focus on smaller areas, such as Providence and contiguous municipalities, to measure the degree of concentration and the risk for accretion of market power in a local setting. The finding from Cooper et al (2019) that mergers of hospitals within a five-mile radius is associated with a 6% price increase has special relevance to Rhode Island, given the proximity of Providence-based hospitals involved in the proposed merger.

Furthermore, the literature suggests that transactions that pass or escape formal antitrust review may create or enhance market power. This means that regulators should take the potential for price increases seriously, even if the merger passes antitrust scrutiny. However, it should be noted that general findings may not be entirely relevant to a specific transaction, such as the proposed CNE and Lifespan merger in Rhode Island. This begs the question of whether there are mitigating factors that attenuate the risk for market power to be created and to materialize in higher prices and higher costs for consumers.

Such factors include the existing OHIC hospital rate increase cap (explained earlier) limiting hospital inpatient and outpatient price growth and the structure of the local insurance market. However, despite these factors, it is OHIC's view that they are insufficient by themselves to adequately mitigate the risks to affordability resulting from higher prices that could materialize following the proposed merger of CNE and Lifespan. This is because:

1. Professional prices are not included in the OHIC hospital rate increase cap. This leaves open the possibility that the exercise of market power, even if constrained for inpatient and outpatient prices, could be exercised to raise prices associated with physician fees.
2. As a regulatory requirement, the OHIC hospital rate increase cap could be overridden statutorily at a future date. This means that there can be no assurance that it will exist as a permanent feature of the regulatory landscape.
3. Within a local context, CNE and Lifespan possess unique acute care resources that are essential to the creation of health insurance networks that are of value to consumers. This fact, prior to

27. Nancy Beaulieu et al, "Changes in Quality of Care after Hospital Mergers and Acquisitions," *The New England Journal of Medicine*, 382 (January 2020): 51, https://doi.org/10.1056/NEJMsa1901383.

consideration of the proposed merger, confers bargaining power on each health system. The distribution and critical importance of such unique acute care resources is not immediately discernable from market concentration measures that use encompassing categories, such as all cause discharges, as inputs.

Given this, it is also OHIC's view that regulators strongly consider treating as dispositive modeling of the likely price effects of the proposed merger of CNE and Lifespan assuming an unregulated environment.

Toward a Regulatory Oversight Model

As this paper has made clear, CNE and Lifespan are pursuing a merger that, if approved, will have significant effects on Rhode Island's health care system. The merged entity would have a market share representing nearly 80% of the Rhode Island hospital discharges and the literature shows that hospital mergers do not generally produce savings or quality improvements for consumers. This does not mean that positive benefits, however, are unattainable.

It does mean that if the merger is approved, strong regulatory oversight of the merged entity will be critical. A succinct articulation of the critical components of a regulatory oversight model aimed at holding the merged entity accountable for improving affordability and improving population health and health equity on a statewide scale follows.

OHIC views a successful regulatory oversight model for the CNE and Lifespan merger as having five critical components aimed at maximizing the probability that the merged entity will be accountable for furthering affordability and population health and health equity:

1. **Comprehensive Price Caps:** In addition to applying the current OHIC price caps that limit inpatient and outpatient hospital average price increases to no more than the CPI-Urban percentage increase plus 1%, price caps for the merged entity should be expanded to include professional services, making professional services average price increases subject to the same or a similar percentage increase. These price caps should be directly binding on the providers comprising the merged entity.
2. **Quality Incentive Requirements:** In addition to applying the current OHIC quality incentive requirements that mandate that at least 50% of the inpatient and outpatient hospital average price increase be for expected quality incentive payments, quality incentive requirements for the merged entity should be expanded to include professional services, making the same or a similar proportion of professional services average price increases contingent upon quality performance.
3. **Advanced VBP Adoption:** The merged entity should be required to structure its contractual arrangements with payers so that it is reimbursed through advanced VBPs that consist of alternative payment models which employ a budget-based methodology for a defined population and/or set of services and incorporate meaningful downside risk and prospective payment. This would most likely be optimally structured as an all-payer global budget where total annual revenue for the merged entity across the commercial market, Medicaid, and Medicare would be determined at the beginning of the fiscal year and updated annually to adjust for demographic shifts, changes in payer mix, quality performance, and other factors. And while an all-payer approach is the most comprehensive, if it should be determined that this is inadvisable due to considerations related to federal authority or state policy, such an approach could be implemented for the commercial market alone with other advanced VBPs employed for other markets (e.g., comprehensive payments with upside and downside risk).
4. **Population Health and Health Equity Improvement Requirements:** The merged entity should be required to make evidence-based investments aimed at improving specified outcomes for both

population health and health equity on a statewide scale informed by the input of the community with additional investments required if statewide outcomes do not improve as outlined.

5. **Regulatory Oversight Model Sustainable Funding:** The merged entity should be required to fund in perpetuity the cost of all aspects of the state regulatory infrastructure necessary to oversee compliance with regulatory oversight. In the absence of such a financing mechanism, even the most robust regulatory requirements may not be efficacious because of a lack of necessary resources within state government to ensure that this is the case.

The above five critical components represent the minimum necessary in OHIC's view, in light of its statutory charge to promote affordability and improve quality and access. Other components may be advisable as well. OHIC will continue to iterate on and refine these components as discussions on this matter continue.

Conclusion

The proposed merger between CNE and Lifespan will reshape the local health care landscape and significantly alter the market conditions faced by consumers, health insurers, and competing health care providers. This change in market conditions will significantly influence the public interest objectives most closely connected to OHIC's statutory purpose: affordability, quality, and access. Over the past decade Rhode Island has made significant progress advancing these public interest objectives. Initiatives undertaken by insurers, providers, and policymakers have reoriented the health care system toward greater efficiency and value creation for consumers. Still, significant work remains to be done to drive the improvements in health system performance that Rhode Islanders deserve. In light of this goal, the proposed merger between CNE and Lifespan presents a host of risks and opportunities.

The literature on hospital mergers reviewed above demonstrates that market structure and provider merger activity can influence health care costs through the mechanism of higher prices. Furthermore, the literature is far from conclusive that mergers improve quality. If the consequence of a successful merger merely shifts competitive bargaining dynamics within the market, increasing prices without concomitant improvements in quality, then consumers should question the value that they are deriving from the merger.

Theoretically, the proposed merger presents a compelling set of opportunities as well. A large clinically integrated health system could leverage best practices in care transformation and advanced VBP to better care for patients and promote disease prevention and health equity. However, it is OHIC's position that the risks described above are significant and should command careful attention by regulators and the public. OHIC has outlined five critical components of a regulatory oversight model aimed at holding the merged entity accountable for improving affordability and improving population health and health equity on a statewide scale should the proposed merger be approved in light of the aforementioned risk assessment. The office will continue to track developments around the proposed merger and may update this paper in light of additional information. OHIC will continually seek to educate the public about the risks and opportunities connected to the proposed merger and will continue to advocate for policy measures that improve affordability, quality, and access.