The Connecticut Office of Health Strategy

Cost and Market Impact Review of

Yale New Haven Health Services Corp.'s Proposed Acquisition

of Prospect CT, Inc.

22-32594-CMIR

Pursuant to C.G.S. §19a-639f

October 10, 2023

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Abbreviations and Acronyms

Acronym	Abbreviation
AHRQ	Agency for Healthcare Research and Quality
APCD	All-Payer Claims Database
CAGR	Composite Annual Growth Rate
CY	Calendar Year
CMIR	Cost and Market Impact Review
CON	Certificate of Need
CPT	Current Procedural Terminology
DOJ	Department of Justice
DRG	Diagnosis-Related Group
DSA	Dispersed Service Area
ECHN	Eastern Connecticut Health Network
ED	Emergency Department
FTE	Full-time Equivalent
FY	Fiscal Year
GH	Greenwich Hospital
HHC	Hartford HealthCare Corporation
HHI	Herfindahl–Hirschman Index
IQI	Inpatient Quality Indicator
LMH	Lawrence + Memorial Hospital
MMH	Manchester Memorial Hospital
NPPES	National Plan and Provider Enumeration System
NPI	National Provider Identifier
NPSR	Net Patient Service Revenue
OHS	Office of Health Strategy
PSA	Primary Service Area
PSI	Patient Safety Indicator
PMH	Prospect Medical Holdings
RGH	Rockville General Hospital
RPO	Registration of Provider Organizations
SNAP	Supplemental Nutrition Assistance Program
TME	Total Medical Expense
WH	Waterbury Hospital
YNHHS	Yale-New Haven Health System

Executive Summary

This Cost and Market Impact Review (CMIR) concludes that Yale New Haven Health System (YNHHS) is currently a dominant market player for hospital inpatient care, according to a review of the available evidence pertaining to the factors outlined by law.

The CMIR also evaluates other factors, which include quality of services, availability and access to services, methods used to attract patient volume or acquire healthcare professionals or facilities, serving at-risk, underserved population, impact on low or negative margin services and consumer concerns. While each of these factors is vital to Connecticut health and examined within this report, the analysis did not find that the proposed acquisition would have discernable impact on these areas of concern.

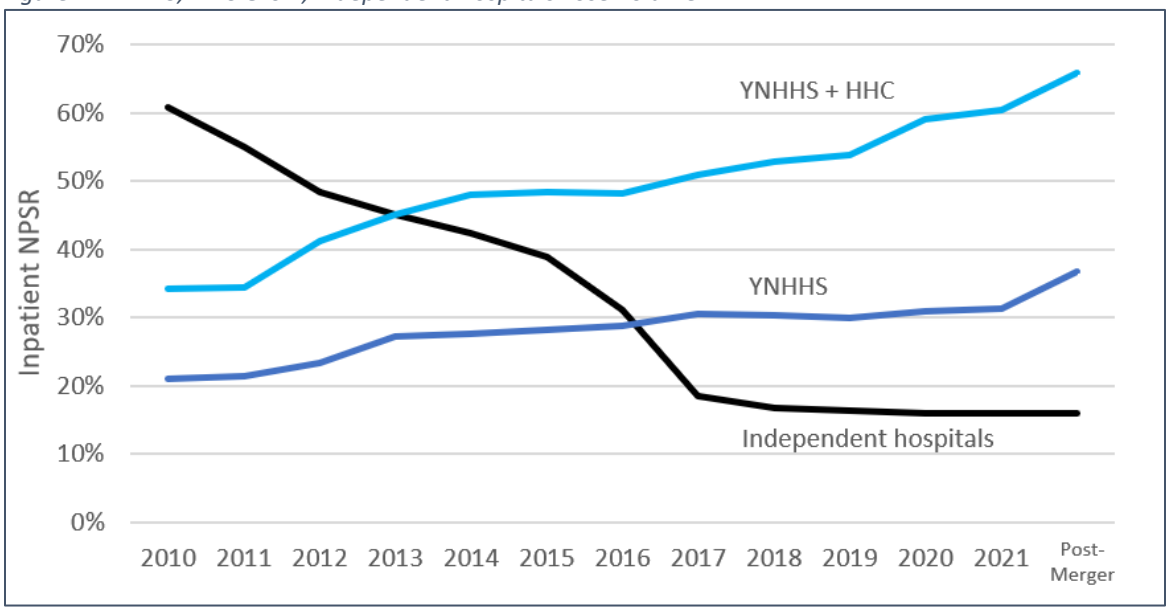
It is possible that YNHHS is also dominant in the physician services market, as it owns NEMG and is affiliated with Yale Medicine, with which it jointly negotiates payer contracts. Combined post-merger, they will control over 20% of Connecticut physicians. These estimates do not suggest statewide market dominance for physician services, although dominance in their service areas cannot be ruled out.

YNHHS's market position meets four components that determine market dominance[1] : market prominence; largest player; barriers to entry; and strongest brand. Also, YNHHS charges above the state average reference price for inpatient services. Further, the projected losses by YNHHS for the proposed acquisition stand to exert pressure on the health system to further increase prices and reduce costs associated with employee salaries and benefits.

Statewide Market Concentration

YNHHS is the largest hospital system in Connecticut, while Hartford HealthCare (HHC) is the fastest growing. Over the last decade, both systems have expanded their market reach in large part through a number of acquisitions to become the two largest systems in the state in Figure 1.

Figure 1: YNHHS, HHC Grow; Independent Hospitals Lose Volume



[1] Market dominance is defined in the Introduction, beginning on page 14, and is assessed in the Discussion, beginning on page 80.

YNHHS's statewide inpatient market share grew by almost 49% from 21.0% in 2010 to 31.3% in 2021. HHC's inpatient market share more than doubled during that period to 29.1% in 2021. Together, YNHHS and HHC hold over 60% of the inpatient market. By gaining Prospect CT's share, YNHHS and HHC would hold over 65% of the inpatient market. This roughly 60-65% combined YNHHS/HHC market share holds true across other measures of size, which include inpatient net patient service revenue (NPSR), outpatient NPSR, patient days, discharges, staffed beds and full-time equivalent employees.[2] As YNHHS and HHC market share ascended, that of independent hospitals declined. Independent hospitals' share of inpatient discharges fell from 65.8% in 2010 to 16.0% in 2021–a more than 75% decline.

Statewide Market Share Underestimates the Extent of Consolidation

YNHHS and HHC operate mostly in separate areas of the state.[3] YNHHS's market shares and market power are considerably greater in its service areas than statewide. The Herfindahl–Hirschman Index (HHI), a measure market concentration and competitiveness. The US Department of Justice defines these categories of HHI:

- Competitive Market: A market with an HHI less than 1,500
- Moderately Concentrated Market: A market with an HHI between 1,500 and 2,499
- Highly Concentrated Market: A market with an HHI equal to or above 2,500

Figure 2: Hospital Concentration Statewide and in YNHHS Service Areas

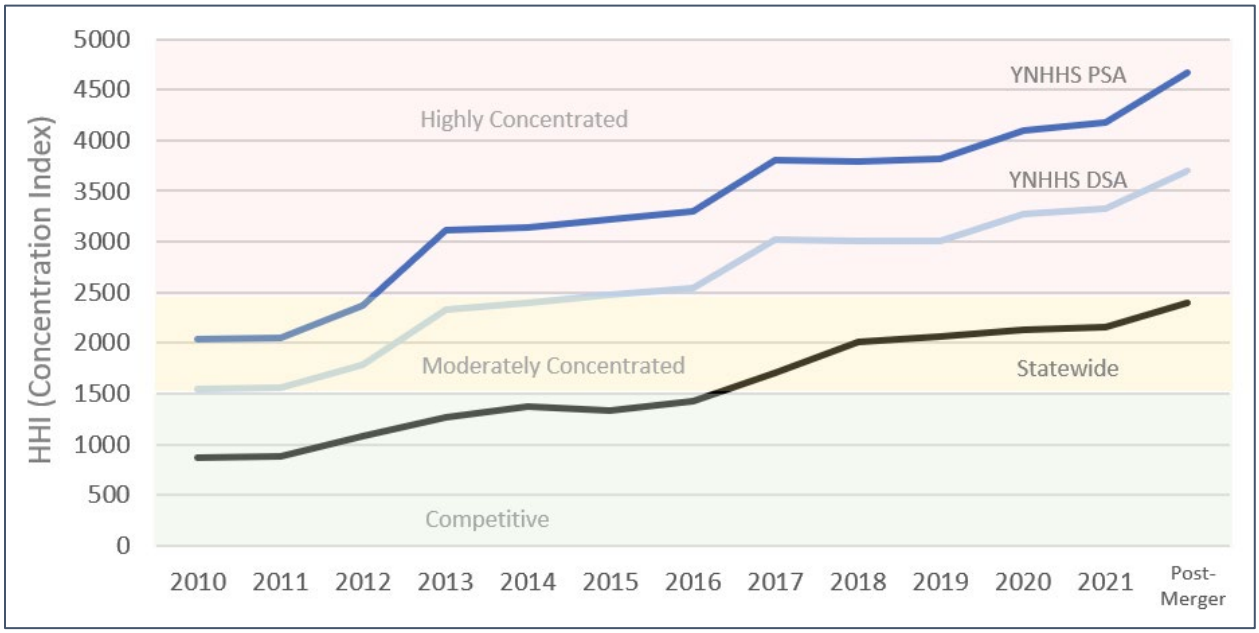


Figure 2 illustrates how hospital consolidation has affected YNHHS service areas and CT. The statewide HHI fails to account for the fact that the two largest systems have mostly separate territories and so have

[2] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

[3] YNHHS' inpatient dispersed service area, the source of 90% of its patients, reaches across southern CT, along the I-95 corridor. HHC's hospitals are mostly located across central and northern CT. With some exceptions, such as the city of Bridgeport, where both YNHHS and HHC operate hospitals in direct competition (Bridgeport Hospital and St. Vincent's Medical Center, respectively) the two systems serve populations that are geographically separate.

even greater dominance in their service areas and even at the edges of them (See: Waterbury Area Inpatient Discharge Market Analysis).

In 2011, the dispersed service area (DSA) of YNHHS was a competitive market (Figure 2). By 2016, it had grown into a highly concentrated (HHI>2,500) and was further concentrated to over 3,300 by 2021. If completed, the merger would increase HHI a further 380 points to 3,700. The DOJ guidelines indicate this is "likely to enhance market power."

"The Agencies employ the following general standards for the relevant markets they have defined: [4]

- Small Change in Concentration: Mergers involving an increase in the HHI of less than 100 points are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- Unconcentrated Markets: Mergers resulting in unconcentrated markets are unlikely to have adverse competitive effects and ordinarily require no further analysis.
- Moderately Concentrated Markets: Mergers resulting in moderately concentrated markets that involve an increase in the HHI of more than 100 points potentially raise significant competitive concerns and often warrant scrutiny.
- Highly Concentrated Markets: Mergers resulting in highly concentrated markets that involve an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny. Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.

The purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration. The higher the post-merger HHI and the increase in the HHI, the greater are the Agencies' potential competitive concerns and the greater is the likelihood that the Agencies will request additional information to conduct their analysis."

Over the ten-year period, YNHHS' service areas have grown from moderately to highly concentrated markets, with YNHHS as the dominant system within them.

YNHHS Incentive to Raise Prices

YNHHS has motivation to raise service prices once the proposed acquisition is completed. Indeed, it has a record of doing just that. Consider:

- This CMIR analysis found that YNHHS's relative price for inpatient services was higher than the average for all three of the state's largest commercial insurers. Prospect CT's service prices were among the lowest in the state.
- In the certificate of need (CON) filing, Docket No. 22-32595, YNHHS projects a net loss of $104.6 million from operations for 2023-2025 resulting from the proposed acquisition.[5] These losses are projected despite anticipated cost reductions and volume expansions, as well as the added

[4] Horizontal Merger Guidelines. https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf
[5] OHS analysis of filed documents

revenue from additional referrals to other YNHHS facilities. YNHHS projections do not show a time when this investment would become profitable. Ongoing financial losses are an obvious motivation to seek price increases.

- Although YNHHS officials have stated that they "do not anticipate any *immediate* impact on cost to patients as a result of the proposal (emphasis added)," they have not ruled out rate increases. Rather, they suggest that price increases at Prospect CT hospitals may be necessary to ensure the continued delivery of high-quality care. [6] [7]
- Given the increased market dominance resulting from the merger and Prospect CT's existing low commercial rates, YNHHS will be positioned to raise commercial prices when the existing Prospect and YNHHS contracts expire. Or possibly sooner, as discussed in the section, Factor 2: Price of Services, below.
- YNHHS has raised prices soon after its two most recent hospital acquisitions (Lawrence + Memorial Hospital, 2016; Milford Hospital, 2019).
- Finally, the healthcare literature is replete with studies that demonstrate the adverse implications of hospital and physician practice mergers (particularly among larger systems and academic medical centers), which include market concentration, significantly higher prices without improvement in quality. [8, 9, 10, 11, 12, 13, 14, 15, 16]

Summary

YNHHS, already the largest hospital system in CT and dominant in its service areas, would increase its sizable market power as a result of the acquisition. Projected ongoing operating losses at the acquired

[6] Exhibit O, CON Response to issues and Pre-filed Testimony
[7] Letter from parties' attorney Kim Rinehart, September 19, 2023, appendix, page 9.
[8] Fulton B, Arnold D, Scheffler R, Commonwealth Fund, Market Concentration Variation of Health Care Providers and Health Insurers in the United States (30 July 2018), available at: https://www.commonwealthfund.org/blog/2018/variation-healthcare-provider-and-health-insurer-market-concentration
[9] Vita, Michael G. and Seth Sacher. 2001. "The Competitive Effects of Not-for-Profit Hospital Mergers: A Case Study." Journal of Industrial Economics 49(1):63-84
[10] Dafny L, Ho K, Lee R, The price effects of cross-market mergers: theory and evidence from the hospital industry. The RAND Journal of Economics (2019)
[11] Koch T, ULrick S, Price Effects of a Merger: Evidence from a Physician's Market. Economic Inquiry (2021)
[12] Melnick GA, Fonkych K, Zwanziger J. The California Competitive Model: How Has It Fared, And What's Next? Health Aff (Millwood). 2018 Sep;37(9):1417-1424
[13] Beaulieu ND, Chernew ME, McWilliams JM, et al. Organization and Performance of US Health Systems. JAMA. 2023;329(4):325–335. doi:10.1001/jama.2022.24032
[14] Gale A. H. (2015). Bigger but not better: hospital mergers increase costs and do not improve quality. Missouri medicine, 112(1), 4–5.
[15] Cooper Z, Craig SV, Gaynor M, Van Reenen J. The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured. Q J Econ. 2019 Feb;134(1):51-107.
[16] Austin, D. and Baker, L. 2015. Less Physician Practice Competition is Associated with Higher Prices Paid for Common Procedures. Health Affairs, Vol. 24. No. 10.

facilities will increase the pressure to raise its rates and reduce labor costs. The proposed acquisition will give YNHHS even greater leverage to negotiate higher rates from commercial payers.

This CMIR finds that YNHHS has a dominant market share for the services it provides, that some of its facilities charge prices materially higher than the average, and that the outcome of the proposed transaction will likely exacerbate its market dominance and increase the price of its services.

Part 1: Introduction and Analytic Methods

Introduction

Section 29 of Public Act 15-146, codified as C.G.S. §19a-639f ("Section 639f"), requires the Office of Health Strategy (OHS) to conduct a comprehensive review of certain Certificate of Need (CON) applications involving a hospital ownership affiliation that have the potential to affect healthcare costs or the performance of the healthcare market. Specifically, OHS is obligated to conduct a Cost and Market Impact Review (CMIR) when a CON application proposes a transfer of hospital ownership, and the purchaser is:

- a hospital or hospital system with Net Patient Service Revenue (NPSR) exceeding $1.5 billion in 2013, or
- organized or operated as a for-profit entity.

This Final Report examines the proposed acquisition of the assets of Prospect CT by Yale New Haven Health Services Corporation (YNHHS). The proposed transaction, outlined in the transacting parties' submitted CON Main Form, states that YNHHS will acquire substantially all the assets and related operations of Prospect CT for a sum of $435 million dollars. [17]

Informed by the parties' CON application, CMIR-related submissions, testimony and available data, this report describes the circumstances regarding the affiliation and the likely impact on the Connecticut healthcare market. Section 639f subsection (d) enumerates 12 specific factors that a CMIR may examine.

They include:

1. *The transacting parties' size and market share within its primary service area, by major service category and within its dispersed service areas;*
2. *the transacting parties' prices for services, including the transacting parties' relative prices compared to other health care providers for the same services in the same market;*
3. *the transacting parties' health status adjusted total medical expense, including the transacting parties' health status adjusted total medical expense compared to that of similar health care providers;*
4. *the quality of the services provided by the transacting parties, including patient experience;*
5. *the transacting parties' cost and cost trends in comparison to total health care expenditures statewide;*
6. *the availability and accessibility of services similar to those provided by each transacting party, or proposed to be provided as a result of the transfer of ownership of a hospital within each transacting party's primary service areas and dispersed service areas;*
7. *the impact of the proposed transfer of ownership of the hospital on competing options for the delivery of health care services within each transacting party's primary service area and dispersed service area including the impact on existing service providers;*
8. *the methods used by the transacting parties to attract patient volume and to recruit or acquire health care professionals or facilities;*
9. *the role of each transacting party in serving at-risk, underserved and government payer patient populations, including those with behavioral, substance use disorder and mental health conditions, within each transacting party's primary service area and dispersed service area;*

[17] CON DN 22-32594, filed in the CON Web Portal, https://portal.ct.gov/OHS/Pages/Certificate-of-Need/CON-Portal

10. *the role of each transacting party in providing low margin or negative margin services within each transacting party's primary service area and dispersed service area;*
11. *consumer concerns, including, but not limited to, complaints or other allegations that a transacting party has engaged in any unfair method of competition or any unfair or deceptive act or practice; and*
12. *any other factors that the unit determines to be in the public interest.*

Section 639f provides timelines for the series of events associated with the CMIR process, which require OHS to provide notice of initiation of a CMIR, with requests for information from the parties within 21 days of the CON filing. Transacting parties have 30 days to respond to the requests for information, and after OHS determines compliance with its data requests, it has 90 days to issue a Preliminary Report. The transacting parties may respond to the Preliminary Report within 30 days. Sixty days after the Preliminary Report is issued, OHS must issue a Final Report.

OHS may refer any Final Report to the Attorney General if it indicates that either party currently has or is likely to have a dominant market share for the services the transacting party provides; and currently charges or, following the proposed transfer of operations of the hospital, is likely to charge prices for services that are materially higher than the median prices charged by all other healthcare providers for the same services in the same market, or currently has or, following the proposed transfer of operations of a hospital, is likely to have a health status adjusted total medical expense that is materially higher than the median total medical expense for all other healthcare providers for the same service in the same market.

In such a case, the Attorney General may utilize the Final Report as evidence in any action undertaken pursuant to existing legal authority.

Section 639f states that OHS will engage an independent consultant with expertise in performing economic analyses of healthcare market functioning and healthcare costs and prices. For this CMIR, OHS retained Freedman HealthCare LLC (FHC), a healthcare consulting firm, to perform the analysis outlined in Section 639f.

Section 639f does not provide an explicit definition for market dominance. Because market dominance is complex and contextual, it often cannot be defined by a single indicator.[18] To perform this evaluation, the following criteria were developed to assess market dominance: [19]

- *Prominent market share:* Does the entity hold a leading share of critical market functions over an extended period of time?
- *Largest market player:* Does the entity hold the largest amount of capital, assets, employees, or patient volume?

[18] Arie Melnik, Oz Shy, Rune Stenbacka, Assessing market dominance, Volume 68, Issue 1, 2008, Pages 63-72,

[19] FHC developed these criteria based on standards found in economic literature and associated healthcare policy, including definitions used by the Massachusetts Health Policy Commission (HPC) and the Department of Justice (DOJ). The HPC defines dominant market share for inpatient general acute care services as 40 percent or more of commercial discharges within a hospital's service area. The DOJ developed antitrust guidance for hospitals or hospital systems participating in accountable care organizations (ACOs). Under these guidelines, the definition of market share dominance is "a greater than 50 percent share in its primary service area (PSA) of any service that no other ACO participant provides to patients in that PSA."

- *Significant barrier to market entry:* Is market entry contingent upon the attainment of a challenging combination of capital regulatory oversight?
- *Brand and consumer market awareness:* Does the entity hold a brand that is well-known, respected, and prestigious enough to give it market advantage in resource and customer attainment?

Analytic Approach and Data Sources

A. Analytic Approach and Framework

The analytic approach is anchored in C.G.S. §19a-639f ("Section 639f"), which directs OHS to conduct the CMIR and to examine 12 factors relating to market share, healthcare costs and quality of the transacting parties. In compliance with this directive, a reporting structure was developed to address each of the 12 factors.

B. Methods and Measures Used to Conduct the Analysis

The analysis of the 12 CMIR factors was conducted using a set of methods and measures to establish a baseline and when possible, explain what the likely impact would be following the proposed transaction. Multiple data sources and information were utilized to conduct the CMIR analysis. These sources included data and information collected from the State of Connecticut, the federal government, independent agencies, and the transacting parties. Only data that can be made publicly available is presented in this report.

Table 1: Methods and Measures of CMIR Factors

#	CMIR Factor	Data or Information Source	Method Summary
1	Transacting parties' size and market share	The 2021 Report on the Financial Status of Connecticut's Short-term Acute Care Hospitals; OHS Hospital Discharge Data and the 2021 Report on the Financial Status of Connecticut's Short-term Acute Care Hospitals	Examined six key financial performance measures for each transacting party; Analyzed inpatient market share and market concentration by various measures for all hospitals and hospital health systems across Connecticut and for each transacting party within their primary and dispersed service areas
2	Prices for Services	All-Payer Claims Database	Analyzed relative prices across all DRG codes for hospital inpatient discharges and CPT codes for hospital outpatient services
3	Total Medical Expense (TME)	Not Applicable	Analysis not conducted (See page 58 for explanation)
4	Quality of Healthcare Services and Patient Experience	Centers for Medicare and Medicaid Services Hospital Compare	Analyzed various measures of hospital quality, including patient experience, reporting on observed performance and trends

#	CMIR Factor	Data or Information Source	Method Summary
5	Costs/Price Trends	All-Payer Claims Database	Compared relative prices, from 2017 to 2021, for hospital inpatient discharges and for hospital outpatient services
6	Availability and Access	OHS Hospital Discharge Data and CON	Analyzed inpatient discharges by service line from 2017 -2021 within each transacting party's primary and dispersed service areas and anticipated availability of services following the proposed transaction based on the submitted CON
7	Impact on Competing Healthcare Services	OHS Hospital Discharge Data	Analyzed inpatient market share for Prospect's top four inpatient service lines within each transacting party's primary and dispersed service areas
8	Methods to Attract Patient Volume or Recruit Physicians	CON DN 22-32594, Main form	Examined the transacting parties' intents based on the submitted CON
9	Role in Serving At-risk, Underserved and Public Payer Populations	OHS Hospital Discharge Data, 2017 Census and the 2021 Report on the Financial Status of Connecticut's Short-term Acute Care Hospitals	Developed a profile for each transacting party's primary and dispersed service areas and conducted analysis based on payer mix and behavioral health-related Diagnosis Related Groups (DRG)
10	Role in Providing Low and Negative Margin Services	OHS Hospital Discharge Data	Analyzed Medicaid inpatient market share within each transacting party's primary and dispersed service areas
11	Consumer Concerns	OHS Survey	Analyzed consumer sentiment regarding proposed transaction and current healthcare services
12	Other factors of public interest: how Prospect CT workers will be impacted by the proposed acquisition.	OHS Survey	Qualitative analysis of respondent comments.

Part 2: Summary of the Transacting Parties and Proposed Acquisition

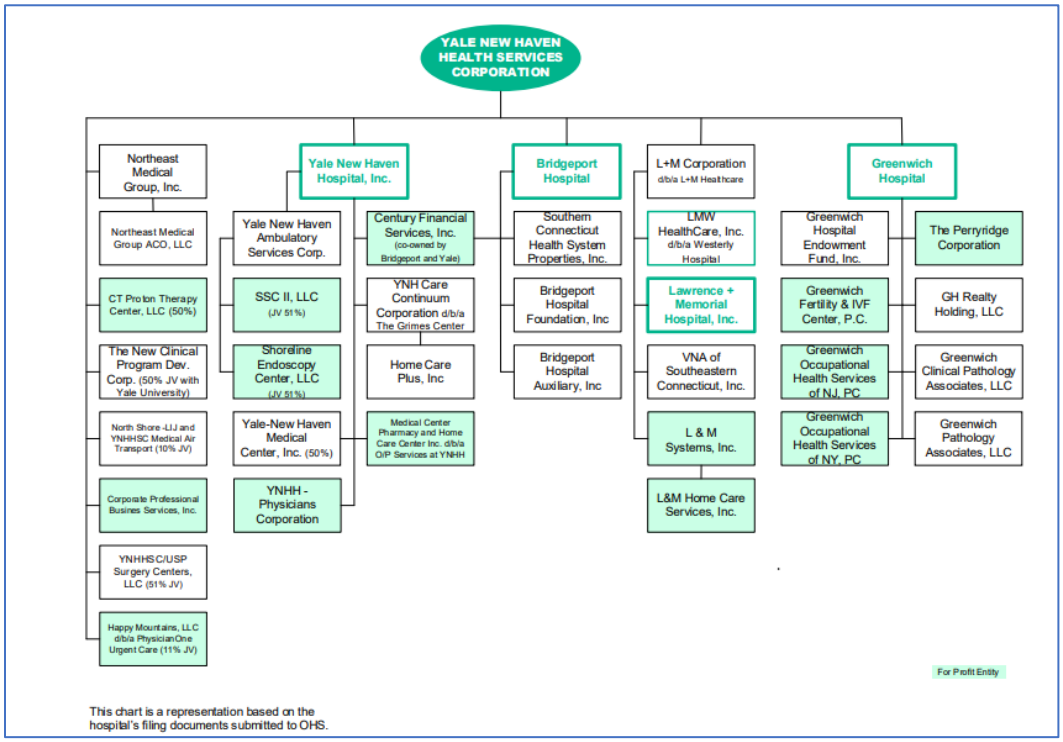
Description of the Transacting Parties' Hospitals and Service Areas

This Final Report examines the proposed acquisition of Prospect CT, Inc. (Prospect) by Yale New Haven Health Services Corporation (YNHHS). Before enumerating the terms of the proposed acquisition, this report describes the parties and their existing affiliations; details are drawn from the CON application and the Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year (FY) 2021.[20, 21, 22]

A. Yale New Haven Health Services (YNHHS)

Yale New Haven Health Services is a Connecticut non-profit corporation serving as the parent to a system of integrated healthcare entities. YNHHS includes five hospitals - Yale New Haven Hospital, Bridgeport Hospital, Greenwich Hospital, Lawrence and Memorial Hospital and Westerly Hospital (RI); NEMG, a physician foundation of primary care and medical specialists; as well as other operating entities, clinical affiliations, and relationships (See Figure 3). In June 2023 Fitch Ratings downgraded YNHHS's obligated group's Issuer Default Rating (IDR) and debt rating on bonds issued by the Connecticut Health and Educational Facilities Authority on behalf of YNHHS hospitals to A+ from AA-.[23]

Figure 3:YNHHS Organizational Chart



[20] https://www.ynhhs.org/about

[21] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

[22] CON DN 22-32594, Main form

[23] https://www.fitchratings.com/research/us-public-finance/fitch-downgrades-yale-new-haven-health-system-ynhhs-ratings-to-a-outlook-stable-28-06-2023

Source: Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year (FY) 2021, Appendix Z

As stated in the CON, YNHHS's mission is to engage in clinical care, education, and research through the operation of a comprehensive health system. Chartered in 1826, Yale New Haven has developed a reputation for high-quality care, including several impressive medical milestones that include the first successful clinical use of penicillin and the first use of chemotherapy in the U.S. YNHHS is the second largest employer in Connecticut, with more than 29,000 employees. Key components of the YNHHS System are:

Yale New Haven Hospital
Located in New Haven, CT, Yale New Haven Hospital is a 1,541-bed tertiary medical center that includes Smilow Cancer Hospital, Yale New Haven Children's Hospital and Yale New Haven Psychiatric Hospital. It is the primary teaching hospital for Yale University School of Medicine.

It has 17,061 employees, of which, 4,136 are medical staff. It had 66,781 discharges in 2021. In FY 2021, the hospital experienced a $14.5 million loss from operations and had $498.8 million in non-operating revenue, resulting in an excess of revenues over expenses of $484.3 million. The hospital is also affiliated with the Grimes Center, a skilled nursing facility located in New Haven.

Bridgeport Hospital
Bridgeport Hospital has 501 licensed beds located across two campuses in Bridgeport and Milford (formerly Milford Hospital), CT. Founded in 1844, the hospital serves patients in Fairfield and New Haven counties. Bridgeport Hospital had 22,044 discharges in 2021. The main campus (Bridgeport) has 383 licensed beds, while the Milford Campus (the result of the 2019 acquisition of Milford Hospital) has 118 beds. Bridgeport Hospital has 3,306 employees, of which 1,522 are medical staff. In FY 2021, the hospital generated $15.5 million in income from operations and had $31 million in non-operating revenue, resulting in an excess of revenues over expenses of $46.5 million.

Greenwich Hospital
Greenwich Hospital, located in Greenwich, CT, serves lower Fairfield County, CT and eastern Westchester County, NY. Founded in 1903, the hospital has 206 licensed beds (including 32 bassinets). Greenwich Hospital has 1,725 employees, of which 843 are medical staff. In FY 2021, the hospital generated $26.4 million in income from operations and had $39.4 million in non-operating income, resulting in an excess of revenues over expenses of $65.8 million. It had 13,798 discharges in 2021.

Lawrence and Memorial Hospital
Lawrence and Memorial Hospital is located in New London, CT and has 308 licensed beds (including 28 bassinets). Founded in 1912, the hospital has 2,343 employees, of which, 699 are medical staff. In FY 2021, the hospital generated $16.7 million in income from operations and had $10 million in non-operating revenue, resulting in an excess of revenues over expenses of $26.7 million. It had 12,749 discharges in 2021.

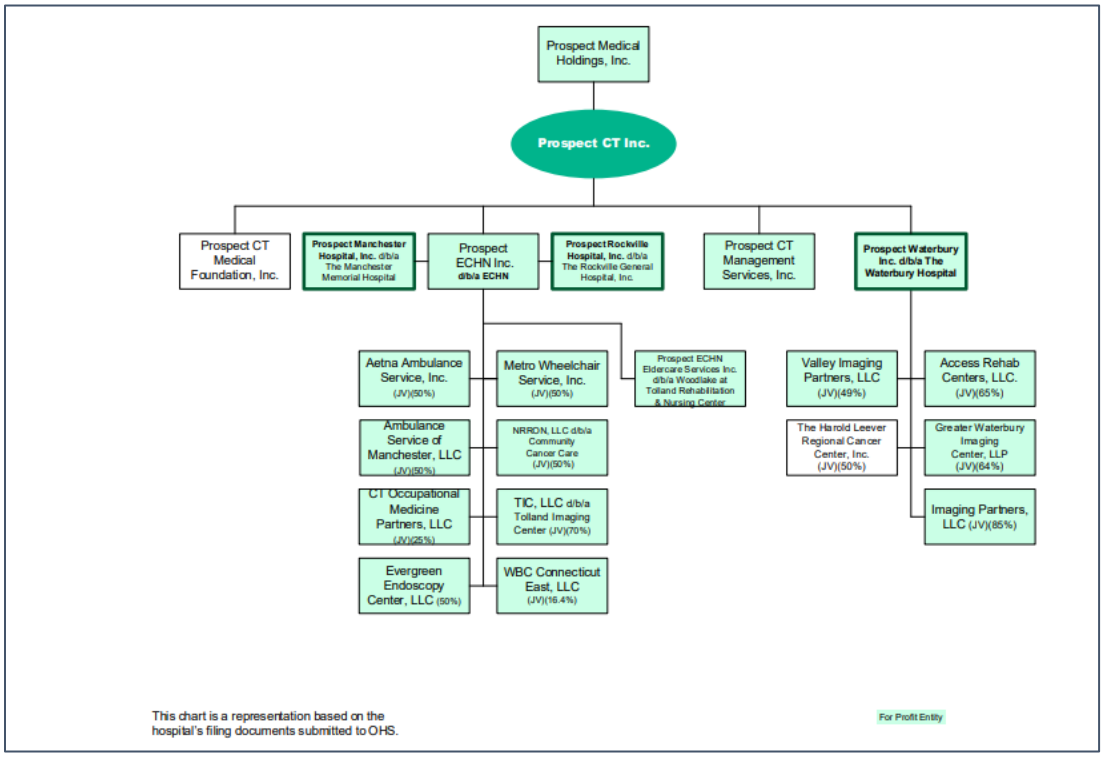
LMW Healthcare, Inc. (Westerly Hospital, RI)
LMW Healthcare was created in 2013 after Lawrence + Memorial acquired Westerly Hospital. Westerly Hospital is a 60-bed hospital that serves southern Rhode Island and southeastern Connecticut. It has 693 employees, of which 263 are medical staff.

B. Prospect CT

Prospect CT is a subsidiary of Prospect Medical Holdings, Inc., (PMH) a for-profit healthcare services company. With 16 hospitals in four states, PMH's model emphasizes coordination of care and population health management, with a focus on preventive care. PMH uses a regional care delivery model, where its hospitals work with its medical groups in each region to provide patient care.

Subject to this proposed transaction, Prospect CT includes two hospital systems, which include Prospect Eastern Connecticut Health Network (ECHN), which comprises Manchester Memorial Hospital and Rockville General Hospital, and Prospect Waterbury, which includes Waterbury Hospital and affiliates (See Figure 4).

Figure 4: Organizational chart for Prospect CT



Source: Annual Report on the Financial Status of Connecticut's Short Term Acute Care Hospitals for Fiscal Year (FY) 2021, Appendix Z

Waterbury Hospital

Waterbury Hospital (WH) is in Waterbury, CT. It has 393 licensed acute care beds (168 staffed). Founded in 1890, the hospital serves Waterbury and 11 surrounding communities in Western Connecticut, and has 1,382 full-time employees, that includes 166 physicians. Waterbury Hospital had 12,227 discharges in 2021. In 2021, the hospital generated $20.1 million in income from operations and experienced a non-operating loss of $3.3 million, resulting in an excess of revenues over expenses of $16.8 million.

ECHN

ECHN is an incorporated single healthcare delivery system that operates two separately licensed hospitals: Manchester Memorial Hospital (MMH) and The Rockville General Hospital (RGH). ECHN serves 19 towns in eastern Connecticut. The two hospitals share a leadership team, medical staff, and a number of facilities. In 2020, RGH and MMH submitted a CON application to merge the hospitals under a single

general hospital license. YNHHS also proposes to operate the two hospitals under one hospital license, pending the completion of the proposed transaction.

Manchester Memorial Hospital is an acute-care community hospital located in Manchester, CT. Founded in 1920, the hospital has 283 beds and had 9,594 discharges in 2021. In FY 2021, the hospital generated $11.8 million in income from operations and experienced a non-operating loss of $12.8 million, resulting in a deficiency of revenues over expenses of $1 million.

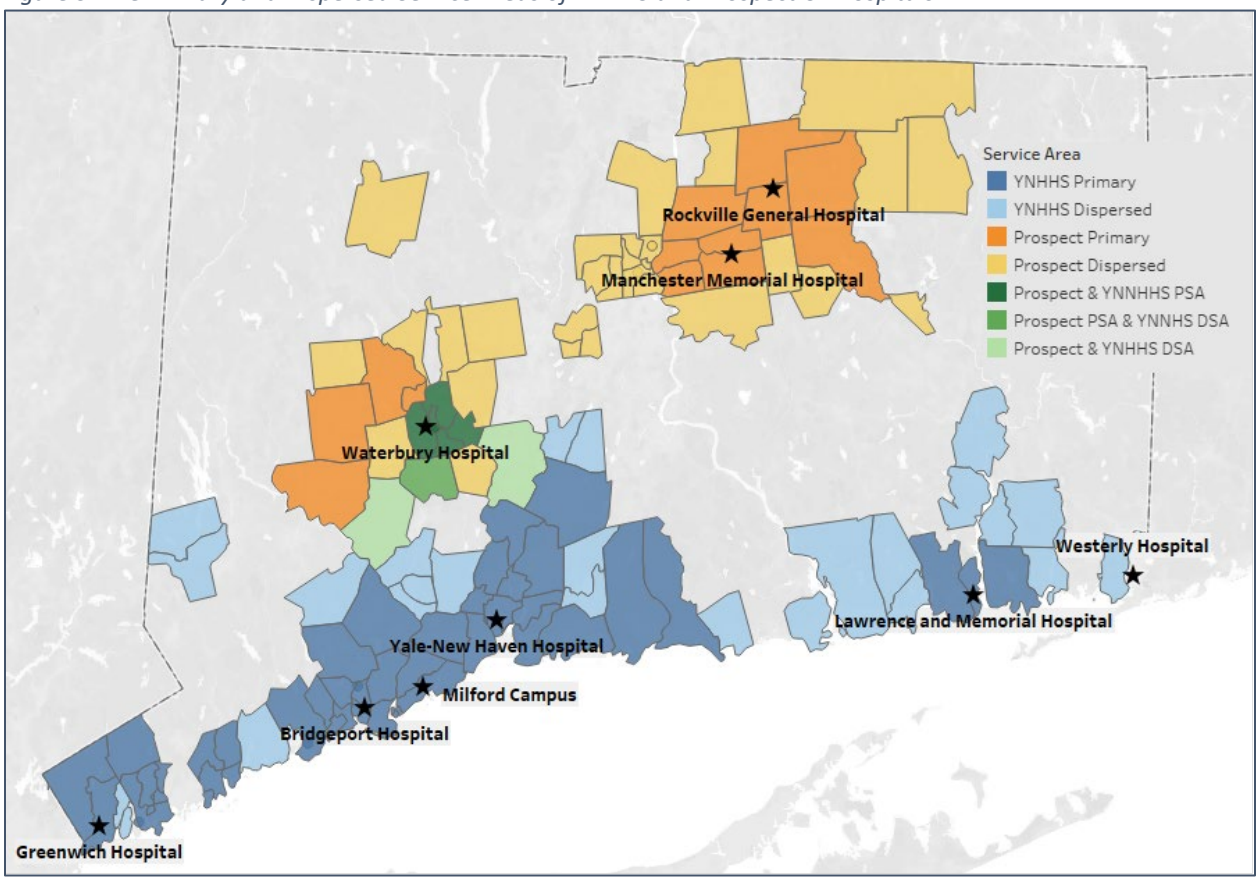
Rockville General Hospital is in Vernon, CT and has 102 acute care beds. RGH had zero discharges in 2021 (1,005 in 2020). In FY 2021, the hospital experienced a $13.4 million loss from operations and a non-operating loss of $3.2 million, resulting in a deficiency of revenues over expenses of $16.6 million.

Ancillary Hospital Assets

The CON application includes the acquisition of the hospitals' owned capital equipment, as well as the hospitals' interests in three joint ventures that are subject to CON approval. (CON DN 22-32594 CON Supplemental Forms for the hospital-owned imaging equipment and joint venture interests included with this CON application.) The three joint venture interests are:

- Northeast Regional Radiation Oncology Network (NRRON). MMH and RGH each own a 25% interest in NRRON. NRRON provides radiation oncology services for cancer patients. The remaining interests in NRRON are owned by Hartford Hospital (25%) and Johnson Memorial Hospital (25%).
- Evergreen Endoscopy Center: ECHN holds a 50% ownership interest in Evergreen Endoscopy, an outpatient surgical facility, which diagnoses colon cancer and other gastrointestinal conditions. The remaining interests in Evergreen Endoscopy are held by physicians.
- The Harold Leever Regional Cancer Center, Inc.: WH holds a 50% membership interest in Harold Leever, which provides comprehensive radiation oncology services for cancer patients. St. Mary's Hospital holds the remaining 50% membership interest.

Figure 5: The Primary and Dispersed Service Areas of YNHHS and Prospect CT Hospitals [24,25]



[24] Primary service areas were calculated by ordering the towns from greatest to least, which represented up to 75% of inpatient discharges for each transacting party.

[25] Dispersed service areas were calculated by ordering the towns from greatest to least, which represented up to 90% of inpatient discharges for each transacting party.

The Proposed Acquisition

The proposed acquisition will result in the transfer of all substantial assets and related operations of Prospect CT, Inc. to Yale New Haven Health Services Corporation through one or more to-be-formed subsidiaries. Per the documents provided by YNHHS, it plans no reductions in service at the Prospect hospitals. The merger was proposed after a strategic evaluation that resulted in Prospect issuing a Request for Proposal (RFP) on behalf of its parent organization, Prospect Medical Holdings, Inc. to potential suitors. This section summarizes the process and the terms of the proposed acquisition; details are drawn from the CON application and financial statements and public filings by the transacting parties.

In 2021, the parent company, Prospect Medical Holdings, Inc. (PMH) determined it would sell hospital assets in Connecticut and other states. Several factors drove the decision including:

- Prospect CT's financial position is increasingly strained:[26,27]
    - Manchester Memorial had negative margins in three of five recent FYs (2017, 2019, and 2021).
    - Rockville General Hospital had negative margins in all five of the reported FYs, ranging as low as -74.85%.
    - All three Prospect CT hospitals had negative days of cash on hand in the most recently reported year (compared with the CT average of 115 days).[28]

This operational posture culminated with net losses of $15.0 million in FY 2021 to $32.6 million in FY 2022.[29] In August 2021, Prospect's owners began exploring the option to liquidate its Connecticut assets and engaged Morgan Stanley to assist in the process. In November 2021, a PMH circulated an RFP and solicited bids from seven potential buyers, inviting each to submit a preliminary, non-binding, written proposal.[30]

In January 2022, PMH received three proposals, all from health systems in Connecticut, to acquire its assets. Prospect selected YNHHS because it could bring financial stability to the hospitals; improve the quality and coordination of care; and make necessary investments in hospital assets.[31]

PMH and YNHHS executed a non-binding Letter of Intent.[32] The agreement calls for YNHHS to purchase the affiliates and assets of the two hospital systems (ECHN and Waterbury) for $435 million (subject to adjustments and a potential earn-out) in addition to equity interests held by the hospitals or Prospect's affiliates from certain joint ventures. In addition, the transaction calls for converting the hospitals (or affiliated entities) back to nonprofit.[33]

In the CON application, YNHHS projects operating losses resulting from the acquisition through 2025. YNHHS assumes it will narrow the operating cost gap through a projected increase in inpatient and

[26] CON DN 22-32594, Main form, p 10
[27] Exhibit Y – O'Connor CON Presentation - REVISED
[28] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022
[29] Prospect CT, Inc. Consolidated Financial Statement for Years Ended September 30, 2022 and 2021
[30] CON DN 22-32594, Main form, p 13
[31] CON DN 22-32594, Main form, p 10
[32] CON DN 22-32594, Main form, p 14
[33] CON DN 22-32594, Main form, p 12

outpatient service volume and operational efficiencies achieved through IT investment, improved coordination of services and economies of scale.

Part 3: Analysis of the Proposed Transaction's Impact on Markets and Performance

Narrative Structure for CMIR Factors

Section 639f subsection (d) enumerates 12 specific factors that a CMIR may examine. The narrative structure aligns with these factors outlined as follows:

- Factor 1 examines the inpatient market share and net patient services revenue (NPSR) for inpatient and outpatient services now held by the transacting parties and other hospitals in statewide markets and within their service areas, and the associated market concentration.
- Factor 2 examines the transacting parties' relative prices for services and price trends.
- Factor 3 regards transacting parties' health status (which is not included).
- Factor 4 examines the quality of services of the transacting parties.
- Factor 5 examines healthcare cost trends in Connecticut
- Factor 6 examines access to service in the Prospect CT service area.
- Factor 7 regards transacting parties' service areas.
- Factor 8 examines how the new entity may attract physicians, services, and plans for facilities.
- Factor 9 examines the underserved populations in the transacting parties' service areas.
- Factor 10 examines the Medicaid population in the Prospect CT service areas.
- Factor 11 examines community sentiment toward the proposed acquisition.
- Factor 12 examines how Prospect CT workers will be impacted by the proposed acquisition.

Factor 1: Analysis of Transacting Parties' Size and Market Share

Summary: Every financial measure examined (Total Operating Revenue, Operating Margins, Revenue (NPSR), Days Cash on Hand, Ratio, Total Margin) for this CMIR demonstrates that Prospect CT is a financially struggling hospital system, while YNHHS continues as a thriving, expanding system.
This analysis largely focused on the inpatient service markets and found that since 2010:

- YNHHS held the largest and increasing share of every market (discharges, NPSR) The acquisition of Prospect CT will result in YNHHS further increasing its existing market shares.
- YNHHS has particularly strengthened its position within its service areas. The acquisition of Prospect CT would place YNHHS in control of 66.2% of the inpatient market in its PSA, and 57.2% of the DSA.[34]
- As YNHHS (and the second leading system in the state, HHC) expand market share, the number of independent hospitals and their share of the market has declined. For example, independent hospitals' share of the inpatient market dropped from 65.8% in 2010 to 16% in 2021 – a 75.7% decline.

These dynamics have resulted in increasing concentration of and reducing competition in the Connecticut hospital market. The impact has been greater in YNHHS's service areas, which are already "highly concentrated" prior to the transaction.

A. Financial Conditions of the Transacting Parties

An analysis was conducted of the parties' baseline performance on healthcare size and market share prior to the proposed transaction. The financial conditions of YNHHS and Prospect CT were examined using data from OHS's Annual Report on the Financial Status of Connecticut's Short-term Acute Care Hospitals for FY 2021. Both entities were assessed across six key financial performance measures from FY 2017 through 2021. These measures are outlined below.

Table 2: Key Financial Measures

#	Financial Performance Measure	Description of Measure
1	Total Operating Revenue	This measures the hospital's total operating income; it is inclusive of NPSR and all other revenue generated through normal hospital activities (e.g., it could include cafeteria and parking revenues, as well as clinical revenue).
2	Operating Margins	This measures the hospital's profitability from patient care services and other operations, dividing gain/(loss) from operations by the sum of operations and nonoperating revenue. Operating margins reflect the overall financial solvency of the hospital.
3	Net Patient Service Revenue (NPSR)	This measures the hospital's total inpatient and outpatient revenue from all payers including the government and other third-party payers as well as patients for services provided to patients.

[34] Primary service areas were calculated by ordering the towns from greatest to least, which represented up to 75 percent of inpatient discharges for each transacting party. Dispersed service areas were calculated by ordering the towns from greatest to least, which represented up to 90 percent of inpatient discharges for each transacting party.

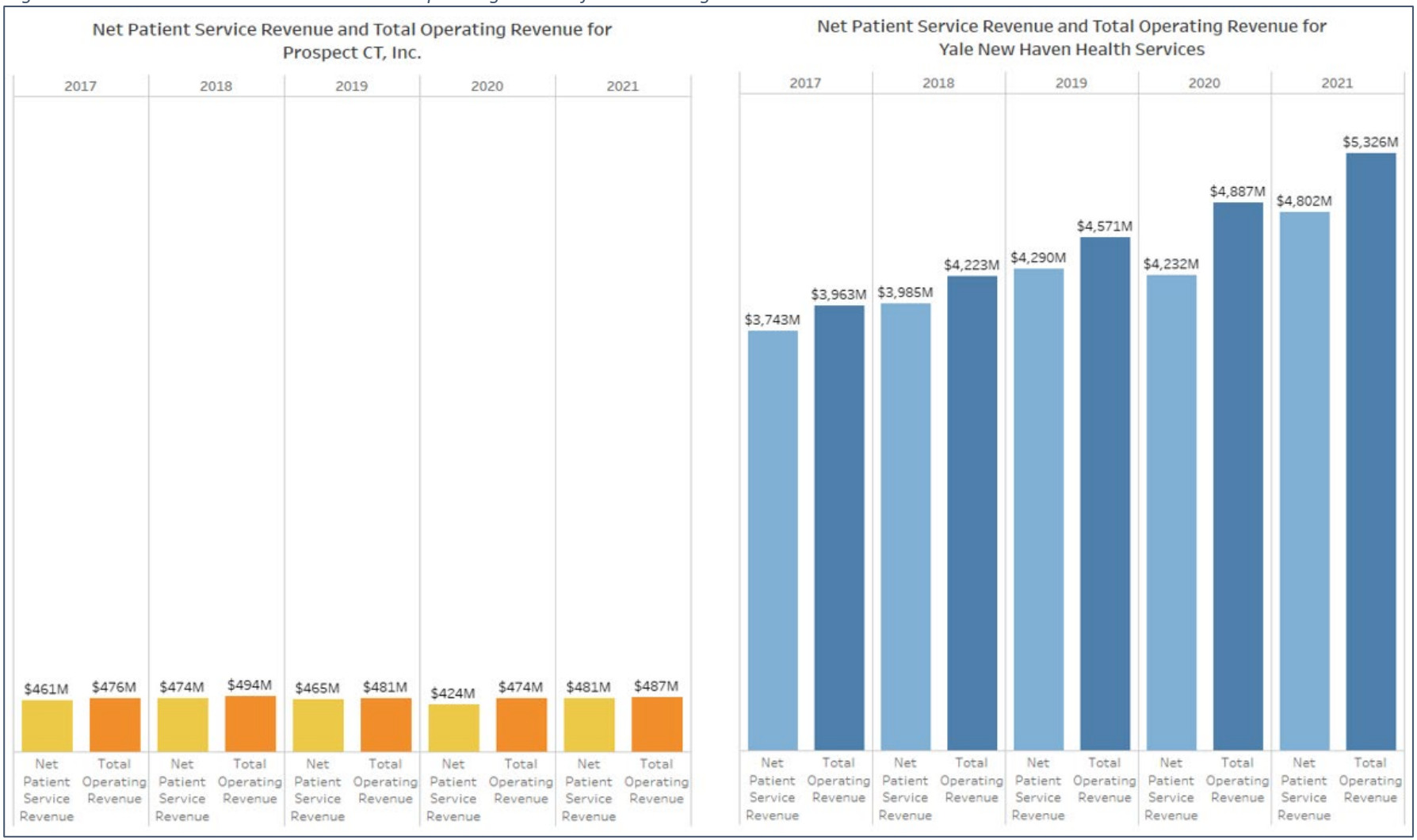
#	Financial Performance Measure	Description of Measure
4	Current Ratio	This measures the hospital's ability to meet its current liabilities with its current assets. A ratio of 1.0 or higher indicates that all current liabilities could be covered by the existing current assets. This is calculated as follows: total current assets divided by total current liabilities (current refers to assets that can be converted into cash within 12 months and liabilities that will need to be paid within 12 months).
5	Days Cash on Hand	This measures the number of days of operating expenses that the hospital could pay with its short-term available cash and cash equivalents.

Over the past five years, Prospect CT operating revenue increased by only 2%, from $476 million in 2017 to $487 million in 2021. At the same time, the hospitals' NPSR increased from $461 million in 2017 to $481 million in 2021. The statewide NPSR for health systems in Connecticut grew 26.4% from $12.40 billion to $15.68 billion. While a higher growth rate for NPSR could be indicative of high utilization, Prospect CT experienced lower patient and service volume during the peak of the COVID-19 crisis (and was buoyed by federal relief funding).

In contrast, operating revenue at YNHHS increased 34.6% from $3.96 billion to $5.33 billion, from 2017 to 2021. During the throes of the COVID-19 crisis in 2020, US hospitals lost, on average, $50.7 billion/month.[35] That same year, YNHHS increased its operating income by 7.0% from $4.57 billion to $4.89 billion. From 2017 to 2021, YNHHS's NPSR grew 28.3% from $3.74 billion to $4.80 billion.

[35] *Hospitals and Health Systems Face Unprecedented Financial Pressures Due to COVID-19*, American Hospital Association, May 2020.

Figure 6: Net Patient Service Revenue and Total Operating Revenue for Transacting Parties



Prospect CT largely balanced out its operating expenses and revenues from 2017 through 2021. It posted positive operating margins in 2018 and 2020, while posting losses in 2017, 2019 and 2021. This averaged out to a loss of .08% over the five-year period.

YNHHS maintained positive operating margins during the first three years, 3.2% in 2017, 5.0% in 2018, and 4.6% in 2019. Its operating margin declined by 1.9% in the peak year of the pandemic, and then recovered in 2021.

Figure 7: Operating Margin for Prospect CT and YNHHS

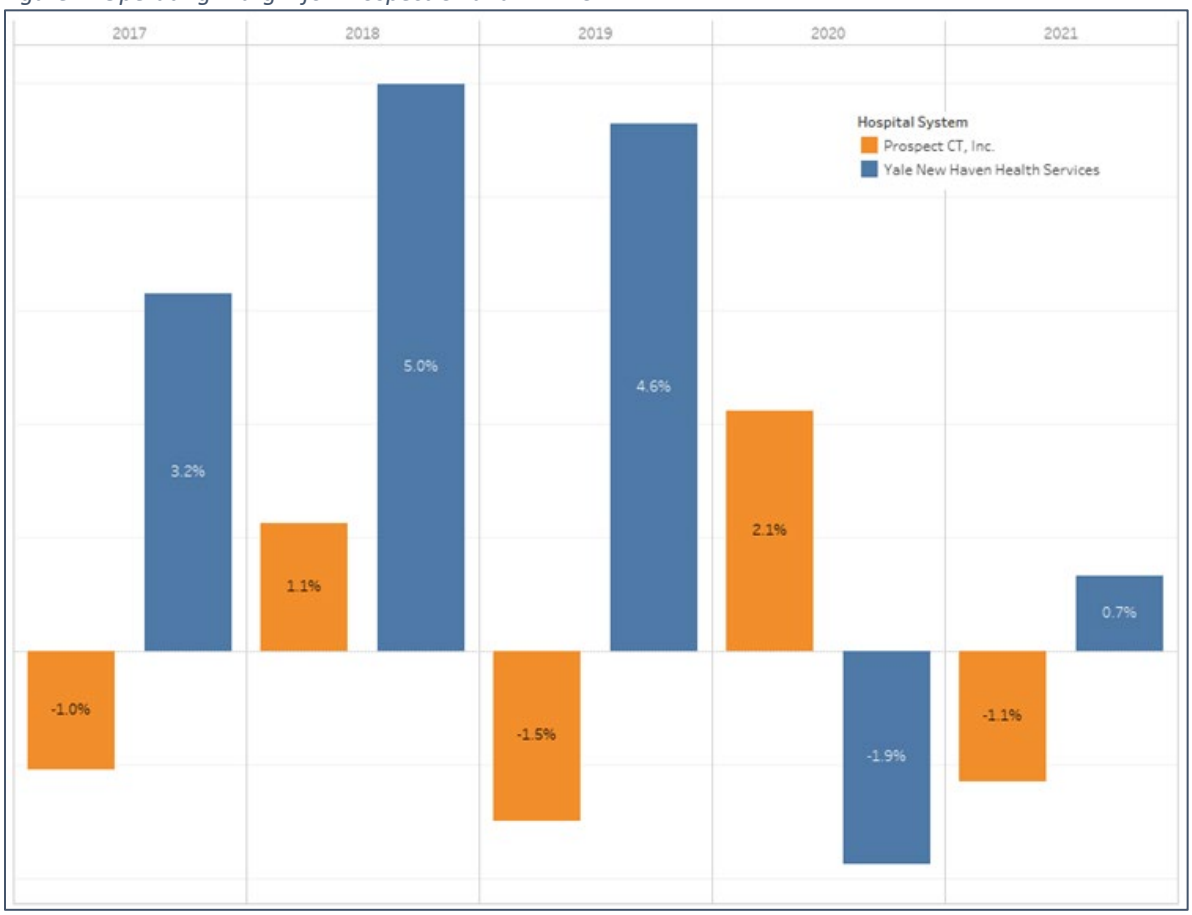
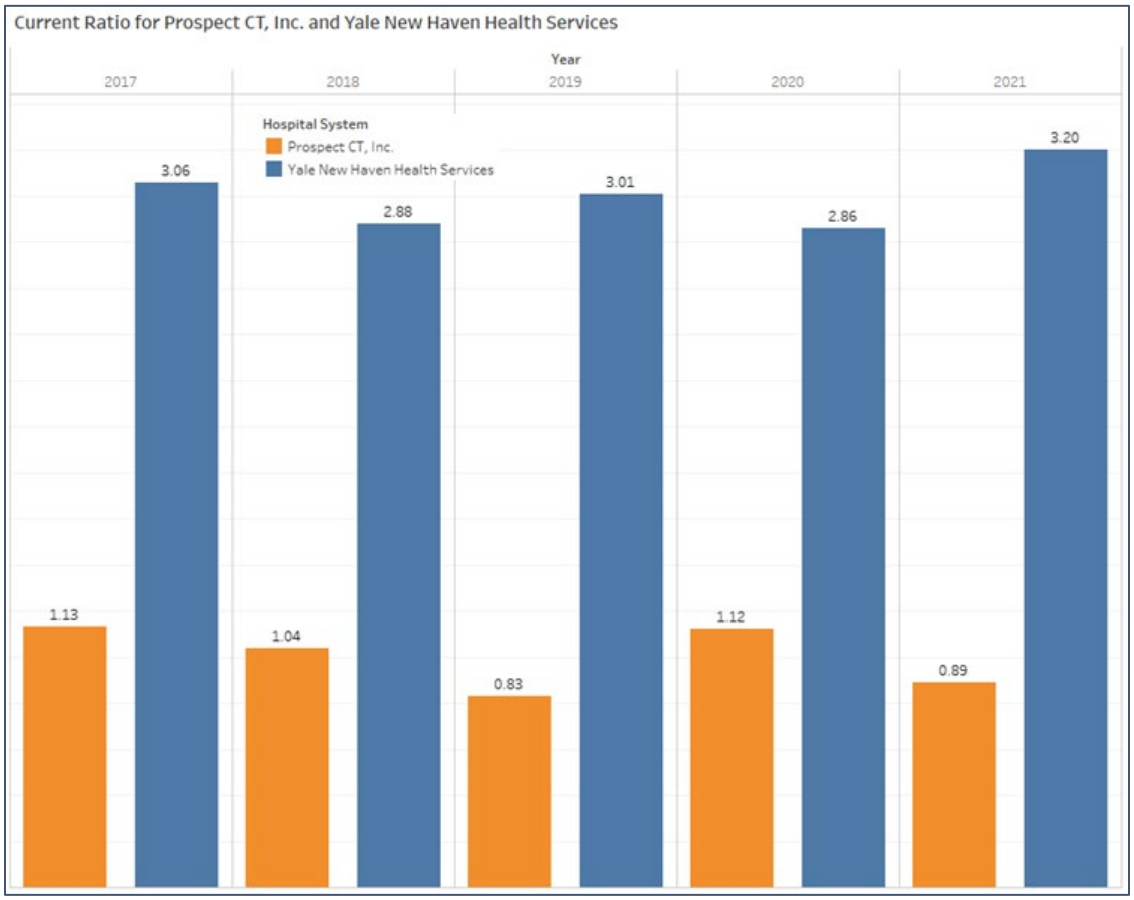
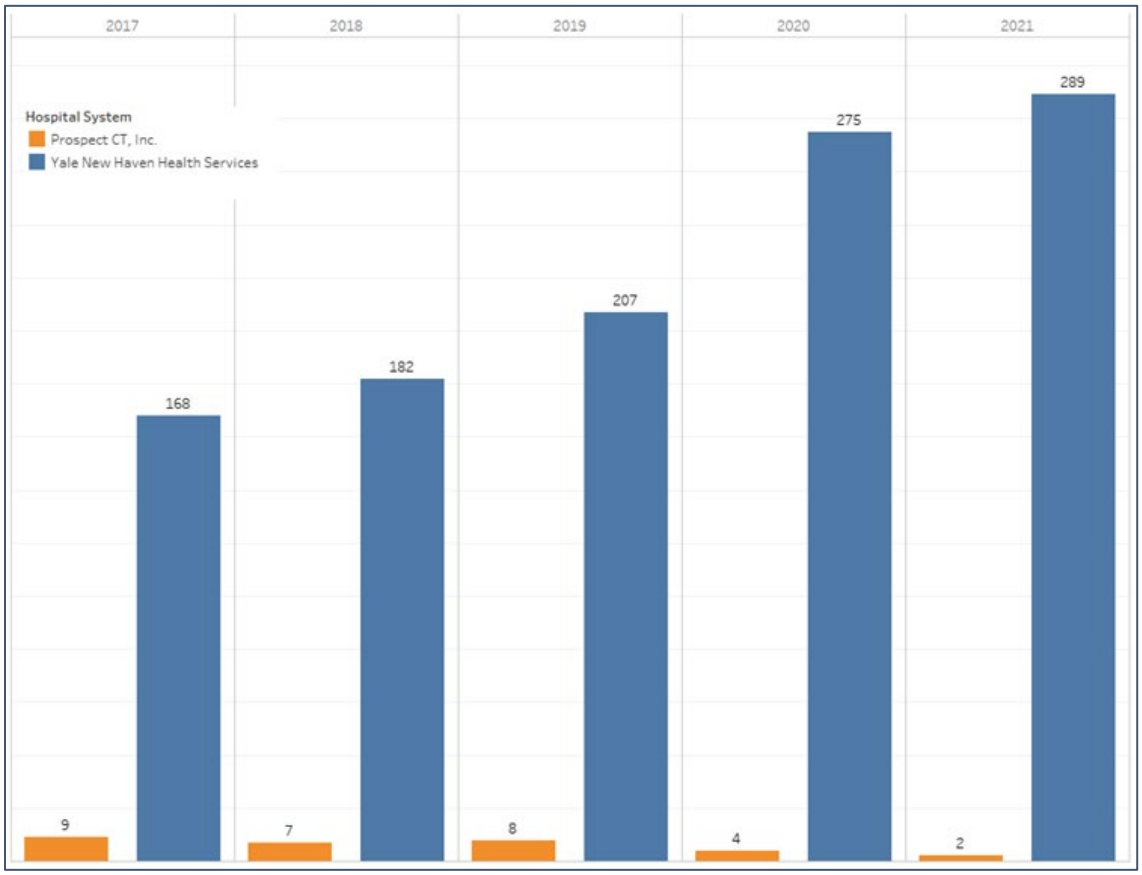


Figure 8: Ratio of Hospital Current Liabilities vs. Assets for Prospect CT and YNHHS



On average, Prospect's assets were roughly even to their liabilities from 2017 – 2021. However, the ratio dropped from 1.13 to .89 from 2020 to 2021.

Figure 9: Days Cash on Hand for Prospect and YNHHS



From 2017 to 2021, Prospect CT maintained a near-zero amount of available cash and cash equivalents. The hospital had 9 days cash on hand in 2017 which declined annually to 2 days by 2021. By comparison, hospitals statewide had an average of 115 days cash on hand in 2021.[36] In contrast, YNHHS's cash on hand increased from 168 days in 2017 to 289 days in 2021, a 72% increase (See Figure 9).

[36] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

B. Statewide Inpatient Market Share, Market Concentration, and NPSR

This section will provide an analysis of statewide measures for:

- Inpatient discharge market share for Connecticut hospitals and health systems
- Outpatient physician practice market share
- Market concentration, as measured by HHI.
- Inpatient NPSR
- Outpatient NPSR

Inpatient discharge market share for Connecticut hospitals and health systems

Since 2010, YNHHS has steadily increased its market share in every measured market in Connecticut. Over the past five years as a for-profit company, Prospect CT has lost market share by most measures. Prior to the proposed transaction, YNHHS is the largest hospital system in the state. After several acquisitions, its closest competitor, HHC, has pulled close to YNHHS in terms of inpatient discharges and NPSR. With the Prospect CT acquisition, YNHHS would increase its lead over HHC. When the market shares of YNHHS and HHC are combined, the two systems hold an almost two-thirds share across nearly every CT hospital market measure. This market dominance is even more pronounced in their respective primary service areas (PSAs).

The market shares of YNHHS and Prospect CT were analyzed by examining their share of inpatient discharges statewide and within their defined primary and dispersed service areas.[37] Market share was calculated using OHS inpatient discharge data from 2010 through 2021. Data from years 2011, 2012, 2014, 2015 are omitted to demonstrate the longer trend over time. Complete outpatient data was not available; therefore, the market share and market concentration analysis' do not capture the complete universe of care delivery. For that reason, references to market share are strictly regarding inpatient services and referred to as inpatient market share throughout this report, unless otherwise noted. Statewide market share by inpatient and outpatient NPSR was also examined. Herfindahl-Hirschman Index (HHI)[38], a measure of market concentration, was calculated statewide and within YNHHS'S and Prospect CT's primary and dispersed service areas. Finally, market shares and HHI were examined for the Waterbury area market.

Table 3 provides the Connecticut statewide inpatient discharges market share for all Connecticut hospitals and hospital health systems, from 2010 to 2021.[39,40]

Prior to the Prospect CT acquisition, YNHHS currently holds the largest inpatient market share in Connecticut. YNHHS's market share grew from 21.0% in 2010 to 31.3% in 2021, a 48.6% increase. The second largest healthcare system in Connecticut, Hartford Healthcare Corporation (HHC), grew faster than YNHHS. HHC held 13.1% in 2010, which increased to 29.1% in 2021 – a 121.7% increase. This means that

[37] Primary service areas were calculated by ordering the towns from greatest to least, which represented up to 75 percent of inpatient discharges for each transacting party. Dispersed service areas were calculated by ordering the towns from greatest to least, which represented up to 90 percent of inpatient discharges for each transacting party.
[38] The HHI was calculated by squaring the market share (percent of inpatient discharges) of each short-term acute care hospital in each primary and dispersed service area, then summing the resulting numbers. For example, a service area consisting of four hospitals with inpatient market shares of 50, 30, 15, and 5%, the HHI is 3,650 (2500 + 900 + 225 + 25 = 3,650). HHIs range from near 0 (perfect competition) to 10,000 (monopoly).
[39] A hospital health system is 2 or more hospitals owned, sponsored, or contract managed by a central organization.
[40] For each year following a hospital's acquisition, its inpatient market share is represented under the acquiring entities' reported share and discontinued on its own separate line.

prior to the Prospect acquisition, these two healthcare systems already controlled over 60% of the inpatient discharges in Connecticut.

As recently as 2010, independent hospitals provided 65.8% of CT's inpatient discharges. By 2021, independent hospitals represented only 16.0% of the market. This is more than a 75% decline over an 11-year period, and a vivid demonstration of the impact of hospital and hospital system consolidation on market concentration in CT.

In contrast, Prospect held 6.1% of inpatient discharges in 2017. This decreased to 5.4% in 2021, a 13% decline in market share.

Table 3: Statewide Market Share for Inpatient Discharges[41]

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Hartford Healthcare Corporation	13.1%	17.9%	19.4%	20.4%	22.6%	23.8%	28.2%	29.1%	**121.7%**
Nuvance Health, Inc.	-	4.9%	8.4%	8.3%	8.7%	8.8%	8.6%	8.4%	-
Prospect Health CT, Inc.	-	-	-	6.1%	6.3%	6.2%	6.0%	5.4%	-
Trinity Health – New England, Inc.	-	-	8.2%	12.3%	11.6%	11.5%	10.5%	9.9%	-
Yale New Haven Health Services Corporation	21.0%	27.1%	28.7%	30.4%	30.3%	29.9%	30.9%	31.3%	**48.6%**
Hospital Health Systems, Total	**34.2%**	**50.0%**	**64.7%**	**77.5%**	**79.5%**	**80.3%**	**84.1%**	**84.0%**	**145.9%**
Charlotte Hungerford Hospital	1.5%	1.6%	1.4%	1.4%	-	-	-	-	-
The Hospital of Central Connecticut	4.7%	-	-	-	-	-	-	-	-
William W. Backus Hospital	2.8%	2.7%	-	-	-	-	-	-	-
Sharon Hospital	0.6%	0.7%	0.6%	0.3%	-	-	-	-	-
Bristol Hospital	1.7%	1.8%	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	-5.7%
Connecticut Children's Medical Center	1.5%	1.5%	1.6%	1.6%	1.6%	1.5%	1.6%	1.6%	4.1%
Day Kimball Hospital	1.2%	1.1%	1.0%	1.0%	1.0%	1.1%	1.0%	1.0%	-16.6%
Griffin Hospital	1.8%	1.7%	1.9%	1.9%	1.9%	1.8%	1.8%	1.9%	7.6%
Middlesex Memorial Hospital	3.1%	3.5%	3.3%	3.5%	3.4%	3.4%	3.3%	3.5%	10.9%
Milford Hospital	1.0%	0.8%	0.7%	0.7%	0.6%	0.4%	-	-	-
Stamford Hospital	3.5%	3.6%	3.7%	3.8%	3.9%	3.9%	3.9%	3.9%	9.3%
Univ of CT Health Center John Dempsey Hospital	2.2%	2.1%	2.3%	2.5%	2.6%	2.6%	2.5%	2.5%	14.2%
Manchester Memorial Hospital	2.1%	2.3%	2.4%	-	-	-	-	-	-
Rockville General Hospital	0.7%	0.6%	0.5%	-	-	-	-	-	-
Waterbury Hospital	3.0%	2.9%	2.9%	-	-	-	-	-	-
Johnson Memorial Hospital	0.8%	0.8%	0.8%	-	-	-	-	-	-
Saint Francis Hospital	7.4%	7.8%	-	-	-	-	-	-	-
Saint Mary's Hospital	2.9%	2.9%	3.0%	-	-	-	-	-	-
Saint Vincent's Medical Center	5.1%	4.9%	4.2%	4.0%	3.8%	3.5%	-	-	-
Danbury Hospital	4.8%	-	-	-	-	-	-	-	-

[41] Data for years 2010, 2013 and 2016 were added to the five-year (2017 – 2021) analysis to demonstrate long-term market trends.

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Danbury Hospital New Milford Campus	0.6%	0.0%	-	-	-	-	-	-	-
Norwalk Hospital	3.4%	3.1%	-	-	-	-	-	-	-
Lawrence + Memorial Hospital	3.6%	3.5%	3.4%	-	-	-	-	-	-
Yale New Haven Hospital St Raphael Campus	5.6%	-	-	-	-	-	-	-	-
Independent Hospitals, Total	**65.8%**	**50.0%**	**35.3%**	**22.5%**	**20.5%**	**19.7%**	**15.9%**	**16.0%**	**-75.7%**

Outpatient physician practice market share

An attempt was made to examine what portion of Connecticut physicians belong to YNHHS' physician practices, including the practices indicated on YNHHS' organizational chart.[42] As of 2023, Connecticut has 14,187 actively licensed physicians with a Connecticut practice address. (The number of *practicing* physicians is lower than this, as non-practicing physicians may retain active licensure status, e.g., physicians who are retired, work in industry, or are full time researchers, educators or administrators. Since the actual number of actively practicing physicians is unknown, the numbers that follow should be considered approximations and will likely understate the portion of active physicians belonging to any entity).

YNHHS' 867 physicians (in 2020) amount to at least 6.1% of Connecticut's actively practicing total. Assuming a merger with Prospect CT's 150 physicians (in 2020), the combined entity would have 7.2% of Connecticut's physicians in their medical practices. Notably, a separate but affiliated entity, Yale Medicine, had 1,907 physicians in 2020, or 13.4% of Connecticut's total. Importantly, although Yale Medicine is a separate legal entity from YNHHS, the two have "certain shared management and coordination between the two entities, and contracting for physician services [for both entities] is overseen by shared personnel…" [43] Given that YNHHS and Yale Medicine coordinate their payer contracting, the two entities may be considered as a single organization for the purposed of understanding their impact on the physician market in Connecticut. Combined, they represent 19.6%; after the proposed merger with Prospect CT, they would represent 20.6% of Connecticut's licensed physicians.

These estimates do not suggest statewide market dominance for physician services. However, it is likely that these are modestly underestimated proportions, possible that YNHHS-owned or -coordinated practices may employ an outsize portion of mid-level practitioners (nurse practitioners and physician assistants), and a likelihood that there will be high concentrations of clinicians in YNHHS' PSA and DSA, which could contribute to market dominance within those areas.[44]

Market concentration, as measured by HHI

Connecticut's inpatient healthcare market has grown increasingly concentrated over the last 11 years. In 2010, Connecticut's statewide inpatient HHI was 869 and a competitive market by Department of Justice

[42] 2022 organizational chart submitted by YNHHS: YNHHS_2022.pdf.
[43] Letter from parties' attorney Kim Rinehart, September 19, 2023, appendix, page 9.
[44] About 5-10% of licensed physicians in CT may not be actively practicing, calculated from https://www.cdc.gov/nchs/data/hus/2020-2021/docst.pdf. If so, the post-merger total for YNNHS and affiliates would be 22-23%

(DOJ) standards.[45] HHI is a measure of market concentration and was calculated by squaring the market share (percent of inpatient discharges) of each short-term acute care hospital in each primary and dispersed service area, then summing the resulting numbers. For example, a service area consisting of four hospitals with inpatient market shares of 50, 30, 15, and 5%, the HHI is 3,650 (2500 + 900 + 225 + 25 = 3,650). HHIs range from near 0 (perfect competition) to 10,000 (monopoly).

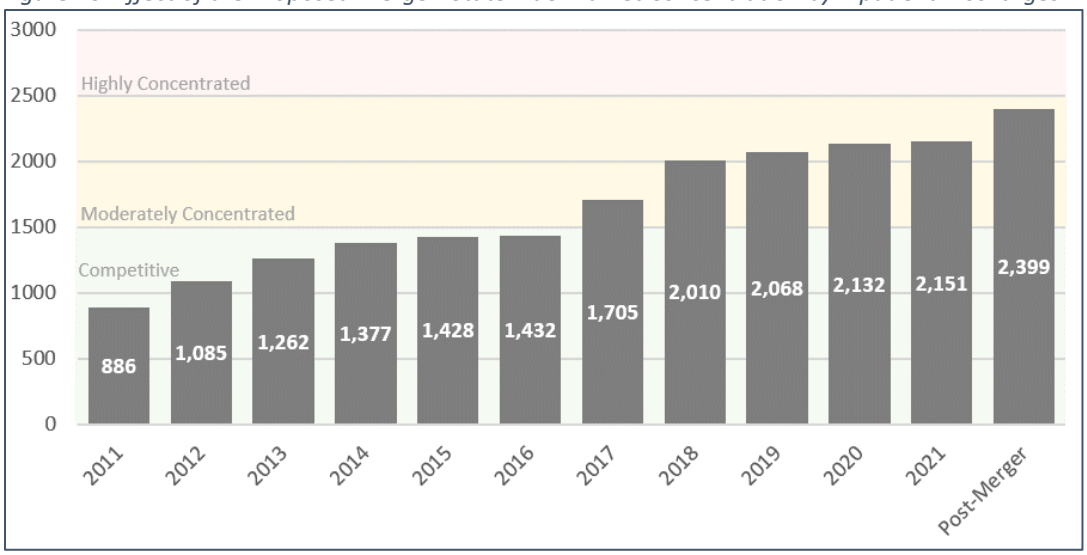
Categories of HHI:[46]

- Competitive Market: A defined market with an HHI less than 1,500
- Moderately Concentrated Market: A defined market with an HHI between 1,500 to 2,499
- Highly Concentrated Market: A defined market with an HHI between 2,500 to 9,999
- Monopoly: A defined market with an HHI of 10,000

Market share was calculated using OHS inpatient discharge data from 2010 through 2021. Data from years 2011, 2012, 2014, 2015 are omitted to demonstrate the longer trend over time. Complete outpatient data was not available; therefore, the market share and market concentration analysis' do not capture the complete universe of care delivery. For that reason, references to market share are strictly regarding inpatient services and referred to as inpatient market share throughout this report, unless otherwise noted.

In 2017, the state surpassed the benchmark of a moderately concentrated market with an HHI of 1705 and rose to 2,151 in 2021. This is an increase of 1282 since 2010, meaning market concentration more than doubled (247%) over the 11-year period. Based on 2021 discharges, the proposed merger would raise Connecticut's inpatient HHI to 2,399, just below DOJ's threshold for a highly concentrated market.

Figure 10: Effect of the Proposed Merger: Statewide Market Concentration by Inpatient Discharges



[45] The Department of Justice (DOJ) and Federal Trade Commission (FTC) uses HHI for determining whether a given transaction raises competitive concerns and warrants further scrutiny.

[46] https://www.justice.gov/atr/herfindahl-hirschman-index#:~:text=The%20HHI%20takes%20into%20account,controlled%20by%20a%20single%20firm.

Inpatient NPSR

Table 4 provides the statewide market share by NPSR from 2017 to 2021.[47] NPSR figures represent revenue for all hospital care delivery services and are not limited to revenue from inpatient care. For each year following a hospital's acquisition, its share of NPSR is represented under the acquiring entities' reported share and discontinued on its own line.

With 34.6% NPSR of inpatient discharges in 2017, YNHHS had the largest share in Connecticut in 2017. By 2021, it held 35.4% of Connecticut's NPSR, a 2.4% increase over the five-year period. HHC represents the second largest share of NPSR in Connecticut. In 2017, HHC represented 18.8% of all NPSR across the State, which increased to 26.0% by 2021 – a 38.2% increase. The remaining hospital health systems, which include Nuvance Health, Prospect CT, and Trinity represent an additional 20.9% of the statewide NPSR.

Mirroring the trend observed in statewide inpatient market share, Connecticut hospital health systems account for a growing proportion of statewide NPSR. In 2014, hospital health systems together represented 59.8% of statewide NPSR.[48] This figure increased to 82.3% across seven hospital health systems in 2021.

The overall NPSR share of inpatient service discharges among hospitals increased by 7.5% between 2017 - 2021. Prospect CT's share declined from 4.3% in 2017 to 3.5% in 2021 – a 16.7% decrease.

Table 4: Statewide NPSR Market Share Inpatient Discharges

Hospitals, Health Systems	2017	2018	2019	2020	2021	Percent Change (2017-2021)
Hartford Healthcare Corporation	18.8%	20.2%	21.6%	25.4%	26.0%	38.2%
Nuvance Health, Inc.	8.8%	8.8%	8.5%	8.1%	8.1%	-8.2%
Prospect Health CT, Inc.	4.3%	4.1%	3.8%	3.6%	3.5%	-16.7%
Trinity Health – New England, Inc.	10.1%	10.7%	10.5%	9.9%	9.3%	-7.9%
Yale New Haven Health Services Corporation	34.6%	34.2%	34.6%	35.4%	35.4%	2.4%
Hospital Health Systems, Total	**76.6%**	**78.0%**	**79.0%**	**82.3%**	**82.3%**	**7.5%**
Bristol Hospital	1.2%	1.2%	1.2%	1.1%	1.0%	-15.2%
Charlotte Hungerford Hospital	1.0%	1.0%	-	-	-	-
Connecticut Children's Medical Center	2.9%	2.9%	2.8%	2.8%	2.8%	-2.3%
Day Kimball Hospital	0.9%	0.9%	0.9%	0.8%	0.8%	-13.0%
Griffin Hospital	1.6%	1.5%	1.5%	1.4%	1.5%	-4.0%
Middlesex Memorial Hospital	3.6%	3.7%	3.5%	3.3%	3.2%	-11.6%
Saint Vincent's Medical Center	3.6%	3.6%	3.2%	-	-	-
Sharon Hospital	0.5%	-	-	-	-	-
Stamford Hospital	4.7%	4.8%	4.7%	4.9%	5.0%	5.2%
John Dempsey Hospital	3.4%	3.4%	3.3%	3.4%	3.4%	-0.9%
Independent Hospitals, Total	**23.4%**	**23.0%**	**21.0%**	**17.7%**	**17.7%**	**-24.6%**

[47] NPSR provided by the Annual Report on the Final Status of Connecticut's Short Term Acute Care Hospitals. https://portal.ct.gov/-/media/OHS/ohca/FSReport_2017_rev20181015.pdf

[48] The Connecticut Office of Health Strategy: Cost and Market Impact Review of Yale-New Haven Health System's Proposed Affiliation with Milford Hospital 18-32270-CMIR, Final Report, May 10th, 2019.

Outpatient NPSR

Outpatient services now represent the fastest growing source of revenue for providers. Statewide, outpatient NPSR grew 6.1% annually on average from 2017-2021. Mirroring the trend observed in statewide inpatient market share, Connecticut hospital health systems account for a large and growing proportion of statewide NPSR (Table 5). In 2017, hospital health systems represented 73.9% outpatient NPSR. By 2021, that figure grew to 79.4% -- a 7.5% increase.

At the same time, independent hospitals' share of outpatient NPSR has declined. In 2017, independent hospitals accounted for 26.1% NPSR, by 2021, that figure was 20.6%—a 21.3% decrease.

This market concentration is largely driven by two hospital health systems: YNHHS and HHC. Similar to inpatient NPSR, from 2017-2021 YNHHS also had the largest share of NPSR for hospital outpatient services in Connecticut. In 2017, YNHHS's share was 32.8%, rising to 34.8% by 2021. During the same period, HHC's outpatient NPSR share rose from 18.1% to 24.6% – a 35.9% increase.

In contrast, Prospect CT's share of outpatient NPSR declined during that period, from 4.2% in 2017 to 3.3% in 2021. If the proposed acquisition is approved, YNHHS will hold 38.1% of the statewide outpatient NPSR after gaining Prospect CT's share. Among private payers, YNHHS would have 39.5% outpatient NPSR. (As noted previously, statewide numbers understate market power, as HHC and YNHHS have mostly separate service areas.)

Table 5: Statewide NPSR for Outpatient Services

Hospitals, Health Systems	2017	2018	2019	2020	2021	Percent Change (2017-2021)
Hartford Healthcare Corporation	18.1%	19.5%	20.9%	24.1%	24.6%	35.9%
Nuvance Health, Inc	10.3%	9.7%	9.1%	8.3%	8.1%	-21.2%
Prospect Health CT, Inc	4.2%	4.2%	3.8%	3.4%	3.3%	-20.9%
Trinity Health – New England, Inc.	8.4%	9.1%	9.3%	9.6%	8.6%	2.6%
Yale New Haven Health Corporation	32.8%	32.8%	33.8%	34.2%	34.8%	5.8%
Hospital Health Systems, Total	**73.9%**	**75.3%**	**77.0%**	**79.6%**	**79.4%**	**7.5%**
Bristol Hospital	1.4%	1.5%	1.3%	1.2%	1.1%	-16.3%
Charlotte Hungerford Hospital	1.3%	1.3%	-	-	-	-
Connecticut Children's Medical Center	2.4%	2.5%	2.5%	2.5%	2.5%	1.9%
Day Kimball Hospital	1.3%	1.3%	1.2%	1.1%	1.1%	-16.7%
Griffin Hospital	1.7%	1.7%	1.6%	1.5%	1.7%	1.6%
Middlesex Memorial Hospital	3.9%	4.0%	3.7%	3.5%	3.5%	-10.9%
Milford Hospital	0.5%	0.4%	0.3%	-	-	-
St. Vincent's Medical Center	2.7%	2.6%	2.3%	-	-	-
Sharon Hospital	0.5%	-	-	-	-	-
Stamford Hospital	6.6%	6.7%	6.4%	6.4%	6.4%	-2.0%
John Dempsey Hospital	4.0%	4.1%	3.8%	4.2%	4.3%	8.1%
Independent Hospitals, Total	**26.1%**	**24.7%**	**23.0%**	**20.4%**	**20.6%**	**-21.3%**

In 2021, the State of Connecticut outpatient NPSR was a moderately concentrated market by DOJ HHI standards. The proposed transaction is expected to increase statewide HHI from 2047 to 2278 (a 231-point increase). Applying this standard, the outpatient NPSR is expected to remain moderately concentrated post-transaction. (Within YNHHS's service areas, both the baseline and increased HHI would be higher; the data is not available to perform that calculation).

Table 6: Statewide Outpatient NPSR HHI

Measure	2021	Following the Transaction	HHI Increase Following the Transaction
Statewide Outpatient NPSR HHI	2047	2278	+231

C. Market Share and Market Concentration by Inpatient Discharges Within Each Transacting Party's Service Areas

This section provides analysis of inpatient market shares for the transaction parties, within their PSA and DSA. It will also measure the market concentration (using HHI) within their respective service areas.

Table 7 through Table 10 provide the inpatient market share for all other hospitals or hospital health systems that delivered inpatient services to patients between 2010 and 2021 in YNHHS's and Prospect CT's primary and dispersed service areas.

Table 7: Inpatient Market Share in YNHHS's Primary Service Area [49]

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Hartford Healthcare Corporation	2.2%	2.5%	2.6%	2.8%	3.3%	3.7%	11.6%	12.2%	457.3%
Nuvance Health, Inc	-	0.2%	6.1%	6.3%	6.2%	6.3%	6.1%	5.6%	-
Prospect Health CT, Inc	-	-	-	4.1%	4.6%	4.9%	4.8%	3.9%	-
Trinity Health – New England, Inc.	-	-	0.3%	5.4%	4.9%	4.9%	4.6%	4.6%	-
Yale New Haven Health Services	39.7%	52.9%	55.0%	59.6%	59.5%	59.8%	61.7%	62.4%	57.2%
Bristol Hospital	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	102.6%
Charlotte Hungerford Hospital	0.0%	0.0%	0.0%	0.0%	-	-	-	-	-
Danbury Hospital	0.2%	-	-	-	-	-	-	-	-
Griffin Hospital	1.5%	1.4%	1.7%	1.7%	1.7%	1.7%	1.8%	1.8%	21.8%
Johnson Memorial Hospital	0.0%	0.0%	0.1%	-	-	-	-	-	-
Middlesex Memorial Hospital	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	41.2%
Saint Francis Hospital	0.2%	0.3%	-	-	-	-	-	-	-
Saint Mary's Hospital	4.3%	4.6%	4.6%	-	-	-	-	-	-
The Hospital of Central Connecticut	0.2%	-	-	-	-	-	-	-	-
John Dempsey Hospital	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	4.9%
All other hospitals	51.2%	37.5%	29.1%	19.6%	19.1%	18.1%	9.0%	8.9%	-82.6%

Table 7 shows that YNHHS's inpatient market share within its PSA steadily increased from 2010 to 2021. In 2010, YNHHS's inpatient market share represented 39.7% of all inpatient discharges. As YNHHS's acquired hospitals, that share jumped to 52.9% in 2013, and then steadily increased to 62.4% by 2021 -- a 57.2% increase over the 11-year period. Prospect CT's inpatient market share within YNHHS's PSA declined from 4.1% in 2017 to 3.9% in 2021.

[49] Data for years 2010, 2013 and 2016 were added to the five-year (2017 – 2021) analysis to demonstrate long-term market trends.

Table 8: Inpatient Market Share in YNHHS's Dispersed Service Area [50]

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Hartford Healthcare Corporation	5.2%	5.9%	7.6%	8.0%	8.6%	9.3%	15.7%	16.6%	216.7%
Nuvance Health, Inc	-	3.8%	8.9%	8.9%	8.9%	9.0%	8.7%	8.2%	-
Prospect Health CT, Inc	-	-	-	3.7%	4.1%	4.3%	4.3%	3.5%	-
Trinity Health – New England, Inc.	-	-	0.6%	5.0%	4.6%	4.6%	4.2%	4.2%	-
Yale New Haven Health Services	33.9%	45.2%	47.2%	52.2%	52.1%	51.9%	53.4%	53.7%	58.3%
Bristol Hospital	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	130.8%
Charlotte Hungerford Hospital	0.0%	0.0%	0.0%	0.0%	-	-	-	-	-
Danbury Hospital	4.0%	-	-	-	-	-	-	-	-
Griffin Hospital	3.2%	3.1%	3.3%	3.3%	3.3%	3.2%	3.2%	3.4%	4.0%
Johnson Memorial Hospital	0.0%	0.0%	0.0%	-	-	-	-	-	-
Middlesex Memorial Hospital	2.8%	3.1%	2.9%	3.1%	3.0%	3.0%	3.0%	3.1%	11.3%
Saint Francis Hospital	0.5%	0.6%	-	-	-	-	-	-	-
Saint Mary's Hospital	3.9%	4.1%	4.2%	-	-	-	-	-	-
The Hospital of Central Connecticut	0.4%	-	-	-	-	-	-	-	-
John Dempsey Hospital	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	-7.1%
All other hospitals	45.6%	33.8%	24.8%	15.4%	15.0%	14.2%	7.1%	6.9%	-84.8%

YNHHS's inpatient market share within its DSA (Table 8) was 33.9% in 2010 and grew to 53.7% in 2021 – a 58.3% increase over that 11-year period. Prospect CT's share within YNHHS's DSA declined from 3.7% in 2017 to 3.5% in 2021.

Table 9 shows while Prospect CT's inpatient market share within its PSA declined from 2017 to 2021, YNHHS's share increased over the 2010 – 2021 timeframe. In 2017, Prospect CT held a 36.0% market share of inpatient discharges, which then grew to 36.8% by 2018. From there it declined to 33.1% in 2021. Meanwhile, YNHHS's inpatient market share within Prospect CT's PSA increased from 4.0% in 2010 to 6.1% in 2021, a 52.8% increase over the 11-year period.

Table 9: Inpatient Market Share in Prospect CT's Primary Service Area[51] [41]

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Hartford Healthcare Corporation	13.1%	15.3%	15.1%	15.6%	17.2%	17.7%	19.5%	20.9%	60.0%
Nuvance Health, Inc	-	3.8%	3.6%	3.3%	3.6%	3.7%	3.5%	3.7%	-
Prospect Health CT, Inc	-	-	-	36.0%	36.8%	36.3%	36.4%	33.1%	-
Trinity Health – New England, Inc.	-	-	12.3%	32.5%	30.1%	30.1%	28.4%	29.2%	-

[50] Data for years 2010, 2013 and 2016 were added to the five-year (2017 – 2021) analysis to demonstrate long-term market trends.
[51] Data for years 2010, 2013 and 2016 were added to the five-year (2017 – 2021) analysis to demonstrate long-term market trends.

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Yale New Haven Health Services	4.0%	5.2%	5.8%	5.6%	5.7%	5.6%	5.5%	6.1%	52.8%
Bristol Hospital	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%	0.5%	68.8%
Charlotte Hungerford Hospital	0.2%	0.2%	0.2%	0.2%	-	-	-	-	-
Danbury Hospital	3.8%	-	-	-	-	-	-	-	-
Griffin Hospital	1.1%	1.2%	1.3%	1.3%	1.3%	1.1%	1.4%	1.5%	31.1%
Johnson Memorial Hospital	0.3%	0.3%	0.5%	-	-	-	-	-	-
Middlesex Memorial Hospital	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.30%	11.3%
Saint Francis Hospital	11.4%	12.1%	-	-	-	-	-	-	-
Saint Mary's Hospital	20.2%	20.2%	20.4%	-	-	-	-	-	-
The Hospital of Central Connecticut	0.8%	-	-	-	-	-	-	-	-
John Dempsey Hospital	1.7%	1.5%	1.6%	1.7%	1.6%	1.8%	1.9%	1.9%	8.2%
All other hospitals	42.8%	39.6%	38.6%	3.1%	3.2%	3.2%	2.9%	3.0%	-93.0%

Within Prospect CT's DSA, its inpatient market share was 17.8% in 2017, and was 16.0% in 2021 – a 10.1% decline (Table 10). Also, within Prospect CT's DSA, YNHHS's share was 3.2% in 2010 and increased to 5.1% in 2021, a 57.0% increase.

Table 10: Inpatient Market Share in Prospect CT's Dispersed Service Area [52]

Hospitals, Health Systems	2010	2013	2016	2017	2018	2019	2020	2021	Percent Change (2010-2021)
Hartford Healthcare Corporation	22.1%	31.1%	29.8%	30.0%	33.7%	34.9%	37.1%	38.8%	75.5%
Nuvance Health, Inc.	-	1.7%	1.8%	1.6%	1.8%	1.8%	1.7%	1.8%	-
Prospect Health CT, Inc	-	-	-	17.8%	18.2%	17.9%	17.7%	16.0%	-
Trinity Health – New England, Inc.	-	-	18.4%	29.4%	27.5%	27.4%	25.6%	25.0%	-
Yale New Haven Health Services	3.2%	4.5%	5.0%	4.9%	5.0%	4.9%	4.8%	5.1%	57.0%
Bristol Hospital	4.6%	4.8%	4.4%	4.5%	4.4%	4.2%	4.2%	4.2%	-8.9%
Charlotte Hungerford Hospital	3.3%	3.4%	3.0%	2.8%	-	-	-	-	-
Danbury Hospital	1.7%	-	-	-	-	-	-	-	-
Griffin Hospital	0.9%	0.9%	1.0%	1.0%	1.0%	0.9%	1.0%	1.1%	24.0%
Johnson Memorial Hospital	1.4%	1.4%	1.4%	-	-	-	-	-	-
Middlesex Memorial Hospital	0.7%	0.8%	0.9%	0.8%	0.8%	0.8%	0.8%	0.9%	16.6%
Saint Francis Hospital	16.7%	17.5%	-	-	-	-	-	-	-
Saint Mary's Hospital	9.7%	9.7%	9.9%	-	-	-	-	-	-
The Hospital of Central Connecticut	9.2%	-	-	-	-	-	-	-	-
John Dempsey Hospital	3.4%	3.4%	3.6%	3.6%	3.8%	3.8%	3.8%	3.9%	15.3%
All other hospitals	23.0%	20.0%	20.0%	3.6%	3.7%	3.4%	3.2%	3.3%	-85.9%

[52] Data for years 2010, 2013 and 2016 were added to the five-year (2017 – 2021) analysis to demonstrate long-term market trends.

Table 11: Service Area Market Concentration by Inpatient Discharges

Transacting Party	Service Area	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	HHI Change (2010-2021)
Prospect CT	Primary	1421	1448	1457	1445	1460	1450	1429	2651	2612	2590	2565	2448	+1027
	Dispersed	1163	1163	1570	1577	1597	1586	1544	2160	2301	2353	2419	2458	+1295
YNHHS	Primary	2043	2055	2368	3108	3147	3215	3296	3801	3793	3819	4099	4181	+2138
	Dispersed	1546	1565	1790	2329	2401	2481	2544	3015	3010	3009	3268	3320	+1774

In 2010, YNHHS's current[53] primary and dispersed service areas were already considered moderately concentrated markets by DOJ standards (Table 11). YNHHS's primary and dispersed areas have experienced marked increases in market concentration since 2010. By 2013, YNHHS's PSA was already highly concentrated (3108); by 2016, YNHHS's DSA was highly concentrated (2544), as well. Prospect CT's inpatient market within its PSA also became highly concentrated from 2017 – 2020.

[53] Primary and dispersed service areas were calculated by 2021 inpatient discharge data

D. Impact of Proposed Transaction on Inpatient Market Share, Concentration

This section analyses how the transaction will impact:

- Statewide Inpatient Market Share/ Concentration
- Market Share and Concentration in Transacting Parties' Service Areas

Statewide Inpatient Market Share/Concentration Impact

The analysis examines the impact of the proposed transaction on inpatient market share and market concentration both statewide and within the transacting parties' primary and dispersed service areas. The analysis assumes that Prospect CT's 2021 inpatient market share will transfer in full to YNHHS immediately following the transaction.

If the transaction is approved, YNHHS's inpatient market share is expected to increase by approximately 17%, resulting in a statewide inpatient market share of 36.6%.

Table 12: Statewide Market Share for Inpatient Discharges

Transacting Party	2021	Inpatient Market Share Following the Transaction	Percent Change Following the Transaction
Yale New Haven Health Services	31.3%	36.7%	16.9%
Prospect CT, Inc.	5.4%	-	-

The proposed transaction is expected to increase statewide HHI by 335, which according to DOJ standards, does "potentially raise[s] significant competitive concerns and often warrant[s] scrutiny."[54]

Table 13: Impact of Statewide Market Concentration by Inpatient Discharges

Measure	2021	Following the Transaction	HHI Increase Following the Transaction
Statewide HHI	2065	2400	+335

Additionally, YNHHS's statewide market share of NPSR is expected to increase by 16.3% to 39.0%. Per this measure, YNHHS would remain the largest hospital health system in Connecticut.

Table 14: Impact on Statewide NPSR for Inpatient Discharges

Transacting Party	2021	Inpatient Market Share	Percent Change Following the Transaction
Yale New Haven Health Services	35.4%	39.0%	10.0%
Prospect CT, Inc.	3.5%	-	-

Impact on Market Share, Concentration in Transacting Parties' Service Areas

As a result of the transaction, YNHHS's inpatient market share is expected to increase in both its primary and dispersed service areas (Table 15). By absorbing Prospect CT's 3.9% inpatient market share, YNHHS's share in its PSA will grow from 62.4% to 66.2%. The same holds true for YNHHS's DSA, where its inpatient market share will grow from 53.7% to 57.2%.

[54] Horizontal Merger Guidelines. https://www.justice.gov/sites/default/files/atr/legacy/2010/08/19/hmg-2010.pdf

Table 15: Impact on Inpatient Market Share within YNHHS's Service Areas for Each Transacting Party

Service Area	Transacting Party	2021	Inpatient Market Share Following the Transaction	Percent Change Following the Transaction
Primary	Yale New Haven Health Services	62.4%	66.2%	6.2%
	Prospect CT, Inc.	3.9%	-	-
Dispersed	Yale New Haven Health Services	53.7%	57.2%	6.5%
	Prospect CT, Inc.	3.5%	-	-

YNHHS's market share in Prospect CT's PSA and DSA will grow significantly because of the transaction (Table 16). By gaining Prospect CT's inpatient market share, YNHHS's in the PSA will grow from 6.1% to 39.1%-- a more than five-fold increase. YNHHS will also more than triple its inpatient market share in Prospect CT's DSA from 5.1% to 21.1%. These gains in Prospect CT's PSA and DSA demonstrate how extensively YNHHS is expanding its inpatient service opportunities as it reaches into this new geography.

Table 16: Impact on Inpatient Market Share Within Prospect CT's Service Areas for Each Transacting Party

Service Area	Transacting Party	2021	Inpatient Market Share Following the Transaction	Percent Change Following the Transaction
Primary	Yale New Haven Health Services	6.1%	39.1%	545.9%
	Prospect CT, Inc.	33.1%	-	-
Dispersed	Yale New Haven Health Services	5.1%	21.1%	314.5%
	Prospect CT, Inc.	16.0%	-	-

In 2021, Prospect CT's PSA and DSA were considered moderately concentrated markets (Table 17). Meanwhile, YNHHS's PSA and DSA had already become highly concentrated markets. Due to the overlap in these service areas, the proposed transaction will likely increase market concentration in both parties' PSA and DSA, placing the new service areas near the highly concentrated market range.

Table 17: Impact on Service Area Market Concentration by Inpatient Discharges

Transacting Party	Service Area	2021	HHI Following the Transaction	HHI Change
Yale New Haven Health Services	Primary	4181	4672	+ 491
	Dispersed	3320	3700	+ 380
Prospect CT, Inc.	Primary	2448	2866	+ 418
	Dispersed	2458	2639	+ 181

E. Waterbury Area Inpatient Discharge Market Analysis

The Waterbury inpatient discharge market was analyzed to determine the impact that the proposed acquisition would have on the market shares of the transacting parties and the subsequent market concentration. From 2017 through 2021, St. Mary's Hospital (Trinity Health) and Waterbury Hospital (Prospect CT) vied for leadership in the Waterbury area inpatient market (see Table 18).

In 2021, both Waterbury Hospital and St. Mary's Hospital had similar proportions of non-governmental payers (24.6% and 26.9%, respectively).[55] Both had below-average prices (0.85 and 0.80, respectively). The nearest YNHHS hospital is YNHH, which had a relative price of 1.13 in 2021 (based on FHC analysis of APCD data).

Except for 2020, St. Mary's had edged out Waterbury Hospital. During that time, both YNHHS's and Prospect CT's share of the Waterbury area inpatient market remained roughly the same. At the same time, HHC's share of that market grew quickly – by over 50%.

YNHHS's acquisition of Waterbury Hospital would reshape the competition in the Waterbury area market. YNHHS's share of the market would more than triple, from 13.9% to 45.4% making YNHHS the clear leader of that market.

Table 18: Inpatient Market Share for Patients within Waterbury-Area Zip Codes

Hospitals, Health Systems	2017	2018	2019	2020	2021	Inpatient Market Share Post-Transaction	Percent Change from Transaction (compared with 2021)
Hartford Healthcare Corporation	5.9%	6.5%	7.1%	7.5%	9.1%	9.1%	-
Nuvance Health, Inc	1.1%	1.3%	1.2%	1.4%	1.5%	1.5%	-
Prospect Health CT, Inc	32.4%	35.0%	36.3%	36.4%	31.5%	0.0%	-
Trinity Health – New England, Inc.	40.3%	37.2%	36.7%	34.9%	36.2%	36.2%	-
Yale New Haven Health Services	13.2%	12.9%	12.5%	12.8%	13.9%	45.4%	226.6%
Other	7.1%	7.1%	6.2%	7.0%	7.8%	7.8%	

The Waterbury area inpatient care market is already highly concentrated. As of 2021, its HHI was 2593 (Table 19). It is anticipated that YNHHS's gain of Prospect CT's inpatient volume will result in a large 874-point (33.7%) increase in HHI, from 2593 to 3467 reflecting a substantial increase in market concentration. Under DOJ guidelines, "Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power. The presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.[56]

[55] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

[56] The actual result will likely be greater. In its filing, YNHHS projects a post-merger 18.6% growth in inpatient volume at Waterbury Hospital. Depending on whether these are net new discharges or are taken from competing hospitals, the Waterbury-area HHI would rise further to 3,599-3,640.

Table 19: Impact on Waterbury-Area HHI for Inpatient Discharges for Yale, Prospect, and all Other Hospitals

Hospital or Health System	2017	2018	2019	2020	2021	Following the Transaction	HHI Increase Following the Transaction
Waterbury-area HHI[57]	2891	2834	2884	2777	2593	3467	+874

Key Takeaway: YNHHS is already the largest hospital system in Connecticut and holds the highest share of markets measured for this report. The proposed transaction will increase its market shares, while further concentrating markets statewide and in its service areas.

[57] This includes all hospitals in CT for any inpatient services provided for patients that live within the Waterbury-area zip code boundaries.

Factor 2: Price of Services

Summary: The analysis of commercial claims for inpatient discharges and outpatient services for all Connecticut hospitals found that YNHHS's relative prices for inpatient services were materially higher than the state average reference price for the same services.

An analysis of hospital outpatient services found that YNHHS's relative prices were above the average reference price for two of the three largest CT carriers. However, the outpatient relative prices were not found to be materially higher than the state average.

Prospect CT's relative prices for both inpatient and outpatient services were consistently well below the state average reference price.

Based on YNHHS's opportunity to increase commercial rates, its existing relative price of services and its record of price changes subsequent to prior hospital acquisitions, we conclude that YNHHS is positioned to raise prices following this transaction.

Section 19a-639 stipulates that an analysis be performed to assess whether the transacting party currently charges or, following the proposed transfer of operations of the hospital, is likely to charge prices for services that are materially higher than the median prices charged by all other health care providers for the same services in the same market."

To that end, a comparative analysis was performed to examine the hospitals' inpatient and outpatient relative price of services for the years 2017 and 2021. Because Medicare and Medicaid reimbursement rates are determined by state and federal agencies, this analysis focuses on commercial reimbursement rates, which are subject to negotiated contracts between the provider and carriers, and directly affect the health care costs borne by CT employers, municipalities, and commercially insured individuals.

The analysis was centered on the following criteria:

A.) YNHHS's opportunity to increase commercial rates
B.) Relative Price of Services
C.) YNHHS's record of price changes subsequent to prior hospital acquisitions

A. YNHHS's Opportunity to Increase Commercial Rates

As described in the section, Factor 1: Analysis of transacting parties' size and market share, YNHHS is the largest hospital system in the state and holds the largest market share for inpatient services. YNHHS is particularly dominant in its existing service areas, with 62.4% of inpatient services in its PSA, and 53.7% of inpatient services in its DSA. The acquisition of Prospect CT hospitals would give YNHHS a 66.2% share in its PSA, and 57.2% share in its DSA. Further, as demonstrated in subsection E of the Factor 1 section, the transactions would immediately provide YNHHS with the largest share in the Waterbury inpatient market.[58]

While the economic literature is replete with examples of mergers and market dominance leading to higher prices, it is not a certainty that YNHHS would raise prices at the Prospect CT hospitals. However, YNHHS officials have suggested that they would, for example stating they "do not anticipate any *immediate* impact on cost to patients as a result of the proposal (emphasis added)."[59] Other statements indicate that raising prices has been under consideration.

For example, in the CON application, YNHHS acknowledges that "when existing contracts expire and/or if they cannot be assumed, YNHHS intends to negotiate contracts with commercial payers that are consistent with the market and geography in which the acquired entities are located."[60]

And the parties also state that

> "meeting certain expenses has been delayed in the past because of the low reimbursement rates that Prospect receives and the declines in the volume of care that it provides. To the extent that it is not possible to reduce costs sufficiently to stem losses at the Prospect hospitals, reimbursing the Prospect hospitals at competitive market rates similar to (yet not materially higher than) other community hospitals may be the only mechanism to ensure that Prospect's hospitals remain operational to serve the communities around Waterbury and east of Hartford and to compete with other hospitals in those areas."[61]

YNHHS filings project operational losses for the Prospect CT hospitals for the foreseeable future, which will act as another motivation for the acquirer to raise its rates.

In summary, YNHHS's dominant market position, Prospect CT's comparatively low prices, projected operational losses after the acquisition, and YNHHS's acknowledgment that those losses are not being closed by existing reimbursement rates all suggest that YNHHS intends to raise prices at Prospect CT

[58] The parties state they find that the YNHHS and Prospect CT hospitals are not viewed as substitutes. Although details were not provided, they assert that Waterbury Hospital had 20% diversion to YNHHS hospitals, compared to an "equivalent" amount to HHC and 36% to Trinity Health. (Letter from parties' attorney Kim Reinhart, September 19, 2023, appendix pages 4-6.) As noted in this report, (1) the service areas of Waterbury and YNHHS overlap, (2) as of 2021, YNNHS has a 13.9% share in Waterbury zip codes, (3) that post-merger YNHHS would have over 45% share in Waterbury, and (4) adverse price and quality consequences may follow an intra-state merger such as this, even if the hospitals are in substantially different markets (see note 62).

[59] Exhibit O, CON Response to issues and Pre-filed Testimony

[60] CON DN 22-32594, Main form, p 48

[61] Letter from parties' attorney Kim Rinehart, September 19, 2023, appendix, page 9.

hospitals. Further, the increase in CT market share will increase YNHHS' leverage to raise prices not only at the legacy Prospect CT sites, but at *all* of its facilities.[62]

[62] The parties assert that Prospect CT's facilities are too distant from YNHHS' to be considered in the same market. This analysis disagrees with that position. Nonetheless, even if there is merit to the parties' claim, evidence from cross-market hospital mergers reveal that these too are inflationary and may decrease quality of care. Such cross-market effects are especially pronounced with intra-state mergers as in the present case. See for example Melnick GA, Fonkych K, Zwanziger J: The California Competitive Model: How has it fared, and what's next? Health Aff 37(9):1417-1424 (2018) https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2018.0418; Dafny L, Lee RS, Ho K: The Price Effect of Cross-Market Hospital Mergers. National Bur Econ Res Working Paper 22106 (2018) http://www.nber.org/papers/w22106; and Lewis MS, Pflum KE: Hospital systems and bargaining power: evidence from out-of-market acquisitions. RAND J Econ 48(3):579-610 (2017) https://onlinelibrary.wiley.com/doi/10.1111/1756-2171.12186.

B. Relative Price of Services

This CMIR evaluated the price of services by calculating the average weighted prices for inpatient and outpatient services from the three largest health insurance carriers in Connecticut (identified as Carrier or Payer A, B, and C). The rates for services are compared between the years 2017 and 2021.

Inpatient Relative Price

The inpatient relative price analysis compared total allowed amounts from all DRGs in the APCD from all hospitals in Connecticut to establish a state average reference price. Then, relative prices were calculated for each hospital and health system, which were then sorted by insurance carrier.[63, 64, 65, 66, 67]

[63] *Total allowed amount* is a summation of all dollars paid by the insurer and the patient for a given outpatient procedure or inpatient episode of care. This metric includes patient copays and deductibles.

[64] The relative price is a ratio, interpreted as a measure of whether a hospital's price of services exceeded (ratio > 1), equaled (ratio = 1), or was below (ratio < 1) the State average.

[65] In some cases, relative prices for different years may overlap, making it appear a certain year is missing.

[66] Calculating a Hospital's Observed Total Price: Assume that Hospital Z had a total of 10 claims for a given year, 2 claims were associated with procedure X and 8 claims were associated with procedure Y. The hospital collects $10,000 for procedure X and $20,000 for procedure Y, thus Hospital Z's Observed Total Price is calculated as 2*$10,000 + 8*$20,000 = $180,000.

Calculating a Hospital's Expected Total Price: Assume that a state's average price is $5,000 for procedure X and $10,000 for procedure Y. The expected price for Hospital Z is then calculated as 2*$5,000 + 8*$10,000 = $100,000. Thus, Hospital Z's expected total price is $100,000.

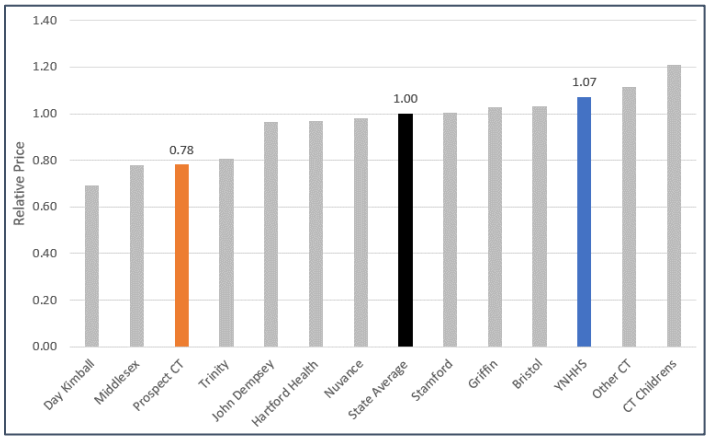
Calculating a Hospital's Relative Price: Relative Price is then calculated by dividing observed price ($180,000) by expected price ($100,000), resulting in a ratio which is weighted for the proportion of Hospital Z's procedures and can be fairly compared between hospitals. In this example, Hospital Z's relative price is 1.8, meaning the hospital's price was 80 percent higher than its expected price, for that given year.

The State's average relative price will always be 1.0 since the observed total price is equal to the expected total price. Specifically, the same mix of services and the same average price per service from across the State are applied to both the observed total price and expected total price.

Interpreting Relative Price: The relative price of hospital services is adjusted for each hospital's mix of services. If services are delivered at a different proportion, or not delivered at all, at a certain hospital, the analysis adjusts for this, ensuring relative price provides a valid comparison between hospitals and against the State's average (1.0).

[67] To adjust for differences in intensity of service, inpatient discharges were adjusted using MS-DRGs, which assign each discharge into one of over 750 different diagnosis-related groups (DRGs). The granularity of the grouping largely but not entirely accounts for the differences in resources required when treating a person with a particular type of condition. For outpatient services, no intensity adjustment is required, as payments examined were made on a fee-for-service basis; a sicker patient may require more or higher-intensity services, which would be reflected by the increased in items billed for that encounter.

Figure 11: Inpatient Relative Price, Payer A

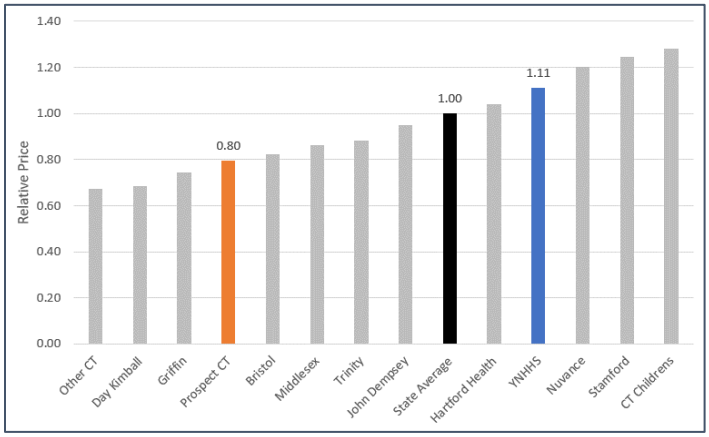


Of the inpatient services for the hospitals/health systems measured for one of CT's three largest commercial payers, seven were below the average reference price. Day Kimball Hospital had the lowest relative price at 0.69.

Five other hospitals/health systems were above the average reference price, with CT Children's Hospital the highest at 1.21.

YNHHS had the second highest relative price at 1.07. Prospect CT had the third lowest relative price at .78.

Figure 12: Inpatient Relative Price, Payer B

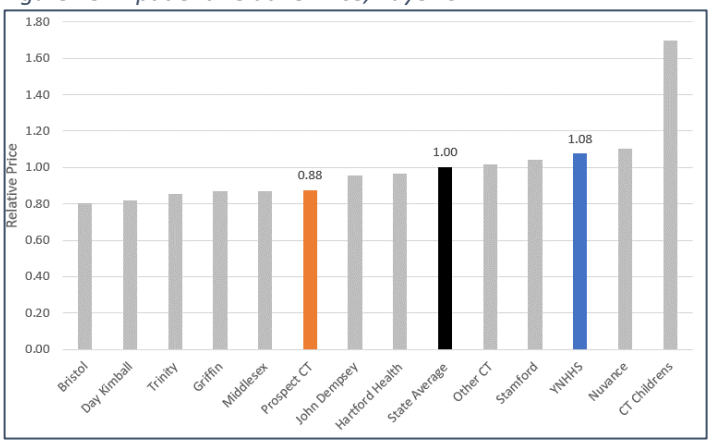


Of the inpatient services for the hospitals/health systems measured for another of the three largest payers, seven were below the average reference price. Day Kimball Hospital had the lowest relative price at .69.

Five other hospitals/health systems were above the average reference price, with CT Children's Hospital the highest at 1.28.

YNHHS had the fourth highest relative price at 1.11. Prospect CT had the third lowest relative price at .80.

Figure 13: Inpatient Relative Price, Payer C



Of the inpatient services for the twelve hospitals/health systems measured for the third of the three largest payers, eight were below the average reference price.

Bristol Hospital had the lowest relative price at .80. Four other hospitals/health systems were above the average reference price, with CT Children's Hospital the highest at 1.70.

YNHHS had the third highest relative price at 1.08. Prospect CT had the sixth lowest relative price at .88.

Inpatient Relative Price Change

Table 20 shows the change in inpatient service relative price for hospitals and hospital health systems for the years 2017 and 2021, based on their rates with the three insurance carriers. During both years, YNHHS's rates were consistently higher than that of the average reference price (represented as 1.0) for all hospitals in the state. YNHHS's rates were also consistently higher than those of Prospect CT. In contrast, Prospect CT's relative prices with the same carriers during the same period were consistently lower than the state average reference price.

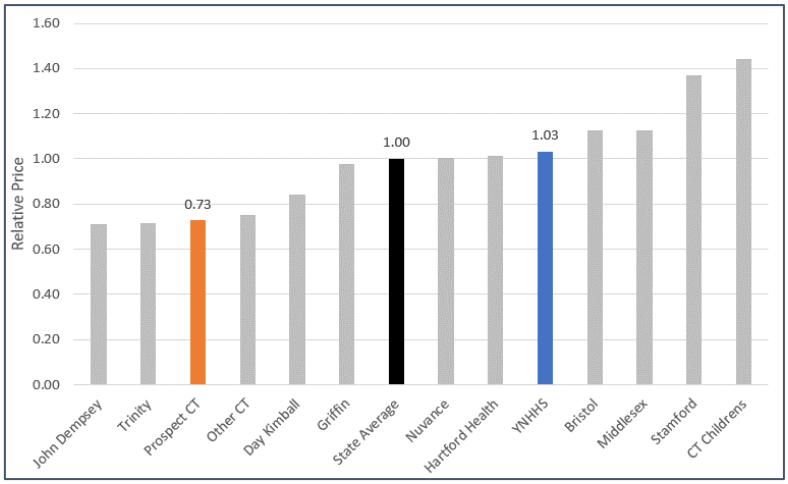
Table 20: Inpatient Relative Price Change

Hospital Networks	Carrier A		Carrier B		Carrier C	
	2017	2021	2017	2021	2017	2021
Hartford Healthcare Corporation	0.97	0.97	0.89	1.04	1.03	0.97
Nuvance Health, Inc.	1.05	0.98	1.15	1.20	1.08	1.10
Prospect CT, Inc.	0.91	0.78	0.78	0.80	0.99	0.88
Trinity Health – New England, Inc.	0.93	0.81	0.83	0.88	0.90	0.85
Yale New Haven Health Services	1.08	1.07	1.19	1.11	1.15	1.08
Independent Hospitals						
Bristol Hospital	0.86	1.03	0.74	0.82	0.67	0.80
Connecticut Children's Medical Center	1.03	1.21	1.25	1.28	1.63	1.70
Day Kimball Hospital	0.91	0.69	0.61	0.69	0.82	0.82
Griffin Hospital	0.87	1.03	0.81	0.75	0.73	0.87
Middlesex Memorial Hospital	0.92	0.78	0.90	0.86	0.85	0.87
Milford Hospital	0.90	-	0.80	-	0.69	-
Stamford Hospital	0.94	1.00	0.90	1.25	1.31	1.04
John Dempsey Hospital	0.88	0.96	0.81	0.95	0.90	0.95
Other CT	1.05	1.12	1.12	0.67	0.87	1.02
ALL CT	1.00	1.00	1.00	1.00	1.00	1.00

Outpatient Relative Price

The outpatient relative price analysis compared total allowed amounts from all CPT codes within the APCD from all hospitals in Connecticut to establish a state average reference price (represented as 1.0). Then, relative prices were calculated for each hospital and health system, which were then sorted by insurance carrier.

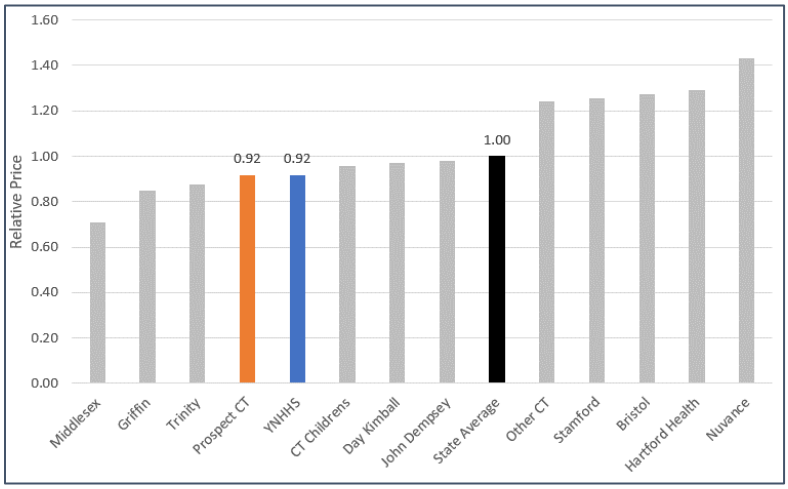
Figure 14: Outpatient Relative Price, Payer A



Of the outpatient services for the hospitals/health systems measured for one of CT's three largest commercial payers, six were below the average reference price. John Dempsey Hospital had the lowest relative price at .71.

Seven other hospitals/health systems were above the average reference price, with CT Children's Hospital the highest at 1.44. YNHHS had the fifth highest relative price at 1.03. Prospect CT had the third lowest relative price at .73.

Figure 15: Outpatient Relative Price, Payer B

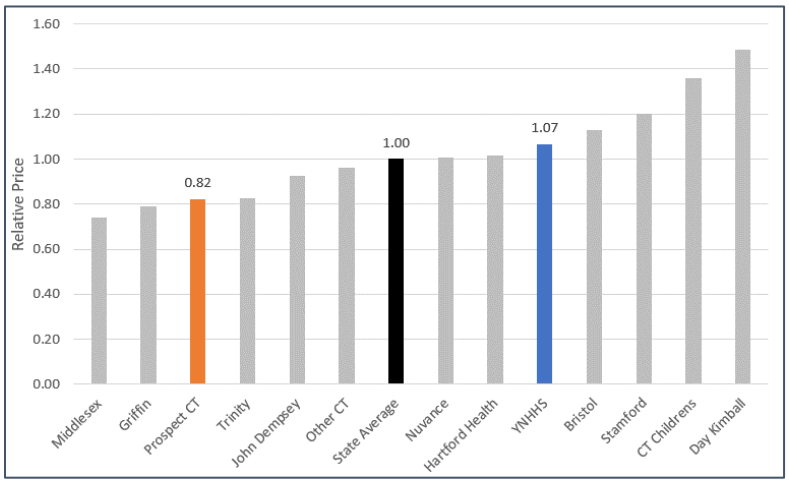


Of the outpatient services for the hospitals/health systems measured for another of the three largest payers, eight were below the average reference price. Middlesex Hospital had the lowest relative price at .71.

Four other hospitals/health systems were above the average reference price, with Nuvance the highest at 1.43. YNHHS had the fifth lowest relative price at .92. Prospect CT had the fourth lowest relative price at .92.[68]

[68] NHHS has a slightly higher score than Prospect (0.917 vs. 0.915)

Figure 16: Outpatient Relative Price, Payer C



Of the outpatient services for the hospitals/health systems measured for the third of the three largest payers, five were below the average reference price. Middlesex Hospital had the lowest relative price at .74.

Seven other hospitals/health systems were above the average reference price, with Day Kimball Hospital the highest at 1.49.

YNHHS had the fifth highest relative price at 1.07. Prospect CT had the third lowest relative price at .82.

Outpatient Relative Price Change

Table 21 shows the change in inpatient service relative price for hospitals and hospital health systems for the years 2017 and 2021, based on rates with the three insurance carriers. YNHHS's rates were higher than that of the average reference price for all hospitals in the state in only two instances during those two years. However, YNHHS's rates were higher than those of Prospect CT.

By comparison, Prospect CT's relative prices with the same carriers during the same period were consistently lower than the state average reference price.

Table 21: Outpatient Relative Price Change

Hospital Health systems	Carrier A		Carrier B		Carrier C	
	2017	2021	2017	2021	2017	2021
Hartford Healthcare Corporation	1.06	1.01	1.08	1.29	1.12	1.01
Nuvance Health, Inc.	1.11	1.00	1.21	1.43	1.19	1.01
Prospect CT, Inc.	0.75	0.73	0.83	0.92	0.97	0.82
Trinity - New England, Inc.	0.79	0.72	1.11	0.88	0.82	0.83
Yale New Haven Health Services	0.97	1.03	0.95	0.92	0.93	1.07
Independent Hospitals						
Bristol Hospital	0.91	1.12	1.00	1.27	0.89	1.13
Connecticut Children's Medical Center	1.16	1.44	1.03	0.96	1.00	1.36
Day Kimball Hospital	1.29	0.84	0.92	0.97	1.00	1.49
Griffin Hospital	1.05	0.98	1.25	0.85	0.79	0.79
Middlesex Memorial Hospital	1.40	1.12	0.97	0.71	0.98	0.74
Milford Hospital	0.95	-	0.78	-	0.74	-
Stamford Hospital	1.33	1.37	1.67	1.26	1.55	1.20
John Dempsey Hospital	0.65	0.71	1.15	0.98	0.93	0.92
Other CT	0.73	0.75	0.95	1.24	0.87	0.96
ALL CT	1.00	1.00	1.00	1.00	1.00	1.00

C. YNHHS's Record of Price Changes Subsequent to Prior Hospital Acquisitions

An analysis was performed of YNHHS's most recent hospital acquisitions (Lawrence and Memorial in 2016, Milford Hospital in 2019) to inform how the proposed acquisition might impact service prices at the Prospect CT hospitals. As indicated earlier, Prospect CT hospital prices are below the state average, while YNHHS prices are above it. Similarly, the price of services at both Lawrence and Memorial Hospital and Milford Hospital had been below the state average prior to the acquisition by YNHHS. Subsequent to each acquisition, the price of services at both hospitals increased more rapidly than the state average.

A 2019 CMIR report notes that prior to its acquisition by YNHHS, in 2017 to 2018 Lawrence and Memorial Hospital had a relative cost of care ranging from 16 to 27 percent below the state's expected cost. At the time, it was the only YNHHS affiliate with prices below the state's average. However, "Lawrence and Memorial Hospital's average cost of care has increased significantly since being acquired by YNHHS. From 2013 to 2017, its average cost of care rose by 12 percent but in 2018, it increased by 24 percent." [69] [70]

Likewise in 2017, prior to the YNHHS acquisition, the price of care at Milford Hospital was 25 percent below the state average (see Table 22).[71] In 2019, Milford became a campus of Bridgeport Hospital, after which it received commercial payments at Bridgeport rates. In 2017, Bridgeport Hospital's prices were 31% higher than Milford's. Between 2017 -2021, the state's average price increased by 38%. Meanwhile, Milford Hospital's price increased by 54% -- outpacing the state average by 16%, due primarily to the large price increase immediately after acquisition.

Table 22: Milford Hospital service prices increased faster than the state average

Weighted Average Inpatient Price	2017	2021	% change
Bridgeport Hospital	$14,400	$16,869	17%
Milford Hospital	$10,965	$16,869	54%
State Average	$13,679	$18,858	38%

It remains unclear as to how YNHHS would integrate the Prospect CT assets into its organization, which could impact prices. YNHHS has stated it has not yet determined what the structure will be.[72]

[69] The Connecticut Office of Health Strategy, Cost and Market Impact Review of Yale-New Haven Health System's Proposed Affiliation with Milford Hospital, 18-32270-CMIR, Final Report, May 10th, 2019

[70] The parties reference the YNHHSC Independent Monitor Review Report for Six Month and Annual Reporting Period Ending November 30, 2021, which indicates that L+M's inpatient fees declined between FY16 and CY20. This contradictory result deserves consideration, including of the differences in data and specific methodology used. Importantly, there is mixed evidence of the impact of the L+M merger on its prices. The parties did not comment on the pricing impact of the Milford acquisition.

[71] Average price of inpatient services for Bridgeport Hospital in 2017 and 2021 and for Milford Hospital in 2017 were determined by calculating the price, weighted by DRG case mix for ALL CT hospitals for 138 high-volume DRGs that were performed at both hospitals and account for 60% of inpatient discharges in all.

[72] CON DN 22-32594, Main form, p 8

How the hospitals are absorbed into YNHHS may impact prices. For example, if YNHHS were to license any of the hospitals as a "campus" of an existing, higher-priced hospital (as it did with Milford and Bridgeport), the new "campus" would likely assume hospital's rate higher structure. Alternatively, even if operated as independent entities (as did Lawrence & Memorial, post-acquisition), prices could rise as of the next renegotiation of the existing Prospect contracts.

Key Takeaway: Based on this analysis, YNHHS's relative prices for inpatient service are materially higher than the average reference price for the same services in the state. Prospect CT's relative price for inpatient services is consistently below the state average reference price. YNHHS has raised prices at one if not both of its most recently acquired hospitals. It has not ruled out raising commercial rates for the Prospect CT hospitals and has signaled its intention to do so.

Factor 3: Transacting Parties' Health Status Adjusted Total Medical Expense (TME)

Summary: Due to data deficiencies, TME and health status could not be calculated and are not included in this report.

Challenges to calculating TME

The data sources listed allow us to calculate total cost per patient and to attribute the costs to specific providers affiliated with the parties. However, the data sources do not allow us to accurately attribute patient costs to all CT hospitals. Significant challenges are posed by the absence of a comprehensive and up-to-date provider-to-hospital attribution file. A sufficient crosswalk cannot be built from the available datasets for the following reasons:

- NPPES and Physician Compare contain conflicting hospital affiliations for some providers. We are unable to discern which records are accurate and which are inaccurate.
- NPPES and Physician Compare only list one hospital affiliation per provider. In practice, many providers 'float' between multiple facilities. This impacts our ability to correctly roll-up patient costs to the appropriate hospital.
- The Connecticut APCD, NPPES, and Physician Compare files are updated at various frequencies. This makes it difficult to discern, with certainty, the hospital a provider was affiliated with at the time they provided a specific instance of care.

Challenges to calculating *health status* adjusted TME

The CT APCD database does not contain population risk score data. This information is required for the calculation of health status adjusted TME.

Potential solutions

Future CMIRs would benefit from access to provider roster files for all hospitals, TME reports from CT insurers, and risk score data from CT insurers. To enable access to this information, Massachusetts:

- Passed legislation in 2012 authorizing the development of a Registration of Provider Organizations (RPO) Program.[73] This initiative enabled the State to collect information about the corporate, contracting, and clinical relationships of Massachusetts' largest health systems. As such, the State has been able to build and maintain a central, comprehensive, and up-to-date database of all providers and organizational affiliations.
- Established regulation 957 CMR 2.00[74] which requires all payers to report on Health Status Adjusted Total Medical Expenses on an annual basis. As such, Massachusetts can assess and compare this metric across all hospitals in Massachusetts.

[73] Massachusetts' Registration of Provider Organizations (RPO) Program https://www.mass.gov/doc/ma-rpo-program-overview
[74] Payer Data Reporting Regulation 957 CMR 2.00 http://www.chiamass.gov/payer-data-reporting-tme-apm/

Factor 4: Quality of Services

Summary: Twenty-five different quality measures were analyzed to determine the quality performance of the hospitals in the transacting parties' respective systems. Overall, there was modest variation in a sizable majority of the measures reported. Based on these measures, the proposed transaction does not raise expectations for significant improvement in the Prospect CT hospitals' quality performance. Studies of hospital mergers suggest quality does not improve and some measures tend to decline.[75]

Quality, Safety and Patient Experience Performance

An analysis was conducted of the transacting parties' performance on various measures of healthcare quality, safety, and patient experience for the years leading up to the proposed transaction. The hospital data for this report was analyzed using 25 key measures based on quality data provided by Centers for Medicare & Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ).[76] Of the measures, 22 are from CMS, while the other three are from AHRQ. Taken together, these measures provide a multi-dimensional perspective of each hospital's quality of clinical performance. The types of measures analyzed for this report include:

- 30-Day Unplanned Readmissions (seven measures)

[75] See for example Beaulieu ND, Dafny LS, Landon BE et al., Changes in Quality of Care after Hospital Mergers and Acquisitions, New Engl J Med 2020; 382:51-59.

[76] List of measures:

1. 30-Day Hospital-Wide All-Cause Unplanned Readmission Rate
2. Pneumonia 30-Day Readmission Rate
3. 30-Day Readmission Rate Following Elective Primary Total Hip Arthroplasty
4. Chronic Obstructive Pulmonary Disease (COPD) 30-Day Readmission Rate
5. Heart Failure (HF) 30-Day Readmission Rate
6. 30-Day All-Cause Unplanned Readmission Following Coronary Artery Bypass Graft Surgery (CABG)
7. Acute Myocardial Infarction 30D Readmission
8. Breast Cancer Screening Recall Rates
9. Abdomen CT, use of Contrast Material, double scans
10. Cardiac imaging for preoperative risk assessment for non-cardiac low-risk surgery
11. Median Time from ED Arrival to ED Departure for Discharged ED Patients
12. ED Left without being seen
13. Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients
14. HCAHPS Percentage of who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest).
15. HCAHPS Percentage of patients who reported YES, they would definitely recommend the hospital.
16. Complication Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)
17. Central Line Associated Bloodstream Infection (ICU + select Wards)
18. Catheter Associated Urinary Tract Infections (ICU + select Wards)
19. SSI - Colon Surgery
20. SSI - Abdominal Hysterectomy
21. MRSA Bacteremia
22. Clostridium Difficile (C.Diff)
23. AHRQ Inpatient Quality Indicators, Mortality for Selected Procedures (IQI-90)
24. AHRQ Inpatient Quality Indicators, Mortality for Selected Conditions (IQI-91)
25. AHRQ Patient Safety and Adverse Events Composite (PSI-90)

- Outpatient Imaging Efficiency (OIE) through the Hospital Outpatient Quality Reporting (OQR) Program (four measures)
- The Hospital Outpatient Quality Reporting (OQR) Program (two measures)
- Patient Experience drawn from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (two measures)
- Complication Measures[77] (one measure)
- Healthcare Associated Infections (HAI) (six measures)
- Composite Mortality, provided by AHRQ (two measures)[78]
- Composite Patient Safety and Adverse Events, provided by AHRQ (one measure)

The analysis of all 22 of the CMS measures was based on 2022 data. The AHRQ composite measures were based on data spanning from 2016 through 2021 (except for Rockville General Hospital, which did not provide data for the year 2021). Of interest are not only the scores generated by YNHHS and Prospect CT, but those that make up the state average. The state average represents a weighted average of performance across all hospitals in the study, which is weighted by the sample size attributed to each hospital. The state provides a mean score against which the individual hospitals within the YNHHS and Prospect CT health systems can be compared.

Hospital Compare Measures

A staple in hospital quality measures, the 30-day Unplanned Readmission Rate was implemented by CMS to measure, and if necessary, penalize acute care hospitals for excessive unplanned readmissions. The measures are intended to hold hospitals responsible for post-discharge care coordination and reduce breakdowns in care as patients transition from in-patient to outpatient facilities. The readmission measures (1-7 in Figure 17) are organized into three groups:

- Condition-specific, which focus on Acute Myocardial Infarction (AMI), Chronic Obstructive Pulmonary Disease (COPD), Heart Failure (HF) and Pneumonia.
- Procedure-Specific, which include the Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA), and Coronary Artery Bypass Graft (CABG), a procedure that is performed at a limited number of facilities.
- Hospital-Wide, with the Hospital-Wide All-Cause Readmission (HWR)

Patient experience is a key measure of a healthcare provider's ability to deliver patient-centered care. It aims to encompass the range of interactions that patients have with the hospital, including with clinicians, hospital staff, procedures, and facilities. It spans various domains of healthcare delivery, such as access to care, timely and clear communication, and treatment. In short, it measures how the patient experiences the overall hospital performance. We examined data on two summary HCAHPS measures:

AHRQ Composite Measures for Mortality and Patient Safety

The AHRQ's Inpatient Quality Indicators (IQIs) used in this analysis are measures that calculate inpatient mortality rates for certain common procedures and conditions. Quality Composite Scores are calculated by applying AHRQ's software package to inpatient discharge data. The procedure-related IQI measures are

[77] CMS contracted with Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (YNHHSC/CORE) to develop, reevaluate, and support the implementation of this measure.
[78] AHRQ provided software and method for measure analysis; analysis performed by OHS

grouped together to calculate weighted composite averages of the observed-to-expected ratios of selected measures.

Figure 17: YNHHS and Prospect CT Hospital Quality Measures vs Average of all CT Hospitals

			YNHHS				Prospect CT		
	Direction (better)	State Avg	Bridgeport Hospital	Greenwich Hospital	Lawrence and Memorial Hospital	Yale-New Haven Hospital	Manchester Memorial Hospital	Rockville General Hospital	Waterbury Hospital
1	Lower	15.2	15.7	15.2	14.7	15.3	14.7	-	15.6
2	Lower	17.3	17.9	18.3	17.1	17.8	17.7	18.2	18.5
3	Lower	4.0	4.7	2.8	4.3	4.8	5.2	-	3.7
4	Lower	20.2	22.0	22.1	18.9	17.5	20.6	19.6	20.4
5	Lower	21.9	21.0	21.7	19.9	22.1	20.8	23.2	22.8
6	Lower	12.5	13.1	-	-	12.7	-	-	13.1
7	Lower	15.0	15.4	15.5	14.9	15.0	-	-	15.0
8	Lower	24.1	27.7	44.8	14.0	25.0	18.3	15.5	-
9	Lower	4.0	3.4	6.6	6.0	5.3	2.8	2.8	2.5
10	Lower	4.7	5.6	3.6	2.6	3.4	3.8	-	4.1
11	Lower	179.0	134.0	189.0	126.0	188.0	222.0	162.0	226.0
12	Lower	2.0	2.0	1.0	1.0	2.0	4.0	2.0	-
13	Higher	93.0	92.0	63.0	33.0	92.0	88.0	-	98.0
14	Higher	66.0	64.0	75.0	61.0	63.0	55.0	-	56.0
15	Higher	68.0	67.0	77.0	63.0	69.0	55.0	-	59.0
16	Lower	2.0	2.9	1.3	2.9	3.5	2.4	-	2.3
17	Lower	0.89	1.0	1.2	0.2	0.9	1.3	-	1.5
18	Lower	0.48	0.7	0.9	1.0	0.5	0.0	-	0.6
19	Lower	1.02	1.5	1.9	2.5	0.8	0.0	-	0.3
20	Lower	0.8	1.1	-	-	0.4	-	-	-
21	Lower	0.9	2.1	0.4	2.2	1.2	0.6	-	0.3
22	Lower	0.6	0.7	0.8	0.8	0.7	0.6	-	0.2
23	Lower	0.7	0.9	1.0	1.0	0.8	1.0	-	0.9
24	Lower	0.9	1.0	1.2	1.2	0.9	0.8	-	0.9
25	Lower	0.9	1.0	0.8	1.1	1.0	0.9	-	0.9

Better than State Average
No Different than State Average
Worse than State Average
Not Enough Data To Determine
- No Data Available

Analysis of Quality Scores

An analysis of the 25 measures reported by the seven hospitals (See Figure 17) found that generally, the two systems demonstrated similar levels of quality. The majority of measures (14) generated scores that were not significantly different from the state average. This suggests that the hospitals that reported scores for those 14 measures were not appreciably different in quality performance.

For three of the measures, not enough data was available to determine if the scores were meaningfully different from the state average.

The remaining eight measures had some significant differences in performance. YNHHS scored significantly above the state average on four measures, Greenwich on three and Lawrence and Memorial on one. Of the underperforming scores, seven came from each of the two systems.

Analysis of Impact Post-Transaction on Quality, Safety and Patient Experience Performance

The quality measure analysis examined the transacting parties' performance on many widely used and validated measures of healthcare quality, delivery, and patient experience, using historical data. YNHHS is one of the largest and most prestigious academic health systems in the United States. Studies have found that academic hospitals tend to perform worse on quality measures than non-academic systems.[79]

Based upon this review of a wide range of quality measures, YNHHS is not demonstrably different from the CT average or Prospect CT, although it does excel in limited areas.

Given the similar performance of the two systems, we cannot project improvement on most measures. It is possible that Prospect's patient experience performance may improve after acquisition. This is tempered against research demonstrating that quality usually remains stable or declines after mergers.[80, 81, 82]

As YNHHS has stated through various formats, it is their intention to bring their operational processes to the Prospect CT system. This includes not only personnel and work methods but also the migration to the Epic Electronic Health Record (EHR) system. This, YNHHS contends, will result in a larger, updated, and more effective YNHHS system that will include the Prospect CT hospitals.

Key Takeaway: Based on the relative similarity in scores reported by both systems, it is unlikely that this acquisition would result in a significant change in Prospect CT's hospitals' measured quality performance.

[79] Stanley, et al, "A Quality and Cost Comparison of Academic and Non-Academic Hospitals," Navigant Consulting, Inc., 2018.
[80] Ho V, Hamilton BH. Hospital mergers and acquisitions: does market consolidation harm patients? J Health Econ. 2000;19(5):767-791.
[81] Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I, McWilliams JM. Changes in quality of care after hospital mergers and acquisitions. N Engl J Med. 2020;382(1):51-59.
[82] Hayford TB. The impact of hospital mergers on treatment intensity and health outcomes. Health Serv Res. 2012;47(3 Pt 1):1008-1029.

Factor 5: Cost and Cost Trends

See Factor 2: Price of Services.

Factor 6: Availability and Access

Summary: Following similar trends in its PSA and DSA market share, Prospect CT lost market share in three of its top four service lines in its service areas from 2017-2021. At the same time, YNHHS made modest gains in three of Prospect CT's top four service lines.

YNHHS has stated that it has no current plans to reduce or eliminate any existing Prospect CT service lines. However, YNHHS has not yet specified what changes are in store for the amount, category or location of those services going forward.

A. Access to Inpatient Care Within Prospect CT's Service Areas

An analysis was conducted of the transacting parties' performance on access and availability of inpatient healthcare services. While this analysis provides insight into the current state of Prospect CT hospitals' top service line mix and market share, due to a dearth of details, it ultimately cannot provide a forecast for what YNHHS would ultimately do, either generally or specifically, should the acquisition go forward.

In 2021, the top four service lines of medicine, newborn care, psychiatry, and women's health accounted for over 50% of the inpatient care (as measured by utilization) provided at Prospect CT, within its PSA. In its PSA, Prospect CT's top service lines ranged from 9.7% (women's health) to 26.5% (medicine). The fastest growing category of its service mix was psychiatry, which grew from 7.6% to 10.5% – a 38.0% increase over the five-year period.

Table 23: Prospect CT's Inpatient Mix of Services Within Its Primary Service Area

Service Line	2017	2018	2019	2020	2021	Percent Change 2017-2021
Medicine	25.9%	26.5%	26.9%	27.2%	26.5%	2.3%
Psychiatry	7.6%	8.4%	9.3%	9.4%	10.5%	38.0%
Newborn	9.5%	9.6%	10.1%	10.3%	10.1%	6.1%
Women's Health	10.3%	10.1%	10.7%	10.9%	9.7%	-5.9

The same four service categories (medicine, newborn care, women's health, psychiatry) also accounted for more than half of Prospect CT's DSA service mix. In 2021, the top service lines ranged from 10.4% (women's health) to 25.4% (medicine).

Table 24: Prospect CT's Inpatient Mix of Services Within Its Dispersed Service Area

Service Line	2017	2018	2019	2020	2021	Percent Change 2017-2021
Medicine	24.8%	25.6%	25.7%	25.9%	25.4%	2.5%
Psychiatry	10.1%	10.3%	10.7%	11.6%	11.2%	11.7%
Newborn	10.9%	10.8%	11.3%	12.1%	11.0%	0.7%
Women's Health	7.8%	8.6%	9.3%	9.4%	10.4%	32.6%

B. Service Line Market Share Within Prospect CT's Service Areas

An analysis of Prospect CT's top service line mix and market share (not shown) indicates it has been slowly declining over the past five years -- except for psychiatry services. By contrast, YNHHS gained market share in three of Prospect CT's four top DSA service lines, but lost market share in medicine services during the same period. However, YNHHS' market share for any of the four service lines in Prospect CT's DSA during that time did not ever top 6%.

What the impact of the proposed transaction would be on the amount, category, or location of these, and other services has not been specified by the transacting parties.

YNHHS has said it had no specific plans to either conserve or expand existing services.[83] YNHHS contends that antitrust laws prevent it from now specifying the changes that would occur to which services, at which location at what time.[84]

In their CON applications, the parties repeatedly pledged to continue access to services currently offered by Prospect CT.[85] It asserts that service enhancements are to be made based on the community needs identified at each service area.[86]

Key Takeaway: YNHHS says there will be no reductions in services resulting from the Prospect CT acquisition. However, without visibility into the details of these assertions, it is not possible to know which services might be altered or the degree to which it may be disruptive to the community.

[83] CON DN 22-32594, Main form p 26
[84] CON DN 22-32594, Main form, p 26
[85] CON DN 22-32594, Main form, pp 7, 21, 22, 23, 28, 30, 31, 32, 40, 41, 44, 93
[86] CON DN 22-32594, Main form, p 7

Factor 7: Services by Primary and Dispersed Service Areas

Summary: An analysis of Services by Primary and Dispersed Service Areas can be found in the section, Market Share and Market Concentration by Inpatient Discharges Within Each Transacting Party's Service Areas, starting on page 38.

In summary, the findings in that section demonstrate that from 2010 - 2021, YNHHS has steadily increased its market share within its own and Prospect CT's PSA and DSA. In contrast, Prospect CT's market share for inpatient services declined from 2017 to 2021, within both its own and YNHHS's PSAs and DSAs. Assuming the proposed acquisition is completed, YNHHS's market share for statewide inpatient services will increase from 31.3% to 36.6% – an almost 17% increase.

Factor 8: Attracting Patient Volume

Summary: While most hospitals experienced staffing challenges through the onset of the COVID 19 pandemic, Prospect CT's personnel losses were particularly acute. Prospect CT's staffing challenges constrained its ability to deliver services at its ECHN hospitals and were associated with the suspension of inpatient stays at Rockville General Hospital. While Prospect CT was struggling, YNHHS increased its headcount by 11%.

YNHHS contends that the Prospect CT hospitals have been underutilized in recent years, which it can reverse by capturing patients traveling out of state for services and attracting patients to what will be upgraded Prospect CT hospitals operating under the YNHHS brand.

A. Methods to Recruit or Acquire Providers

In recent years, virtually every hospital system's full-time equivalent (FTE) employee count was reduced during the pandemic. However, most hospital staff had rebounded by summer 2022.[87] While Prospect CT encountered a similar decline during the pandemic, unlike most other systems, it has not recovered.

From 2019 to 2021, Prospect CT's FTE hospital staff declined by 11%, from 2,451 to 2,179 FTE. The decline was particularly acute at Rockville General where staffing declined 56% (from 340 to 150 -- a loss of 190 personnel), while Manchester Memorial fell 5% (from 1,008 to 956, a loss of 52 FTEs).[88] ECHN had roughly three times the normal number of provider resignations with the onset of the COVID 19 pandemic. These staffing shortages, YNHHS notes, "limited the volume of patients that can be safely accommodated." To help remedy the staffing deficit, Prospect CT hired dozens of traveling nurses and clinical support to work in various service lines.[89]

By contrast, YNHHS FTE hospital staff *increased* by 11% during the same period, (from 16,947 in 2019 to 18,734 in 2021). The staffing increase at YNHHS alone (1,460) through the midst of the pandemic is larger than that of the ECHN system, fully staffed.

Yet, should this acquisition be approved, it will be YNHHS's charge to address any staffing shortfall. When combined with its declared focus on garnering operational cost-efficiencies from its potential Prospect CT assets, it is unclear how YNHHS would reduce costs while restoring staffing. Demand for physicians and clinicians continues to outstrip the limited supply (it is estimated that 1 in 5 healthcare workers left their job during the pandemic).[90]

While asserting that it intends to "stabilize the medical staff," YNHHS states "it is not anticipated that new providers will be added as an immediate result of this proposal."[91] YNHHS points to its reduced use of "premium labor," such as traveling nurses as a method to reduce costs.[9236] YNHHS also notes that it had

[87] Impact of the COVID-19 pandemic on the hospital and outpatient clinician workforce: challenges and policy responses (Issue Brief No. HP-2022-13). Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. May 2022.
[88] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022
[89] CON DN 22-32594, Main form, p 64
[90] https://pro.morningconsult.com/articles/health-care-workers-series-part-2-workforce
[91] CON DN 22-32594, Main form, p 92
[92] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

success in recruiting 25 primary care providers to NEMG practices in the New London region over the past five years.[93] Further, YNHHS states that until it can assess the situation post-merger, it may "add providers to enhance services in identified areas to fill gaps in care or enhance care provided." However, without ramping up the hiring for clinicians and FTEs lost in recent years, it is unlikely that YNHHS will be able to achieve its stated purpose for the acquisition, which is to improve care and quality for patients in the Prospect CT service areas. This will be particularly important in the ECHN service area, which currently has a shortage of medical and mental health professionals in those high-needs communities (See: Factor 9: Underserved Populations).

B. Methods to Attract Patient Volume

Hospital underutilization has been a major contributor to Prospect CT's operational and financial duress.[94] For this reason, YNHHS emphasizes its system strength as the solution to Prospect CT's challenges. By absorbing the Prospect CT hospitals into its system, YNHHS contends that it can serve a broader, geographically dispersed patient population more effectively and cost-efficiently. YNHHS contends that it can increase service volume, pitching the Prospect CT hospitals as being part of a larger, self-referring integrated system.

To do this, YNHHS says it will:

1. increasingly attract high acuity patients, and
2. retain patients who reside in Prospect CT hospital PSAs and DSAs, but who are now seeking care elsewhere.

This can be accomplished, YNHHS says, by leveraging its physical infrastructure and through the centralized management of its distributed clinical resources. By doing so, YNHHS contends that it cannot only treat patients in their community hospitals, but in doing so, can also offload the patient burden from its flagship hospital, Yale New Haven Hospital.[95]

This strategy may be tested in taking on the ECHN system. As stated in the CON, ECHN and Rockville General, experienced sharp declines in inpatient and outpatient volume from 2019 to FY 2021. Largely due to a cessation of services at Rockville General, ECHN total volume of inpatient discharges declined 14.0% from 11,026 in 2019, to 9,477 in 2022, while its outpatient volume dropped 6.2% from 345,826 visits to 324,255. YNHHS's forecast for ECHN points to modest growth going forward.[96] YNHHS forecasts RGH will have 75,804 outpatient visits in 2022, which will grow 6.5% to 80,720 by 2025. However, YNHHS does not anticipate any inpatient discharges from Rockville after 2022. By comparison, Manchester Memorial is anticipated to grow from 248,451 outpatient visits in 2022 to 270,236 in 2025, and 9,451 inpatient discharges in 2022 to 10,567 by 2025.[97]

For its part, Waterbury Hospital maintained its inpatient volume through the worst of the pandemic. While Waterbury Hospital's inpatient discharges declined to 11,916 in 2020, its volume had recovered to 12,271 in 2022 – a 3% increase. Going forward, YNHHS anticipates that Waterbury Hospital's inpatient volume will

[93] CON DN 22-32594, Main form, p 36
[94] CON DN 22-32594, Main form, p 21
[95] CON DN 22-32594, Main form, p 21
[96] CON DN 22-32594, Main form, p 64
[97] CON DN 22-32594, Main form, pp 63-64

grow by 18.6% to 14,559 discharges by 2025. YNHHS is more bullish on Waterbury's outpatient volume, projecting that it will increase by 50.8%, from 119,359 visits in 2022 to 179,899 by 2025.

C. Facilities Investments

Another mode for driving patient volume is the use of telehealth services, which increased from 316 visits in 2019 to over 1 million video visits in 2021. Telehealth has been highly utilized in a number of areas, and particularly for behavioral health services. YNHHS now provides telehealth for high acuity patients, which has enabled physicians to use tele-stroke and tele-ICU to treat and monitor patients from remote locations.[98]

Clearly, Prospect CT properties will likely require investment to function safely and deliver care at the level associated with the YNHHS brand.

Yet, even a well-funded system like YNHHS will be pressed to do more to cover its investment in the Prospect CT hospitals. While new services like telehealth expand service delivery options, these are not usually used for high-margin services. Further, it is not clear whether telehealth is additive to service volume or is simply a substitute for in-person care.

Further, YNHHS will be tasked with recruiting new staff to replace the losses at Prospect CT. While hiring healthcare workers is a difficult task in the current environment, this requirement will be made easier by the fact that most workers would likely prefer working at YNHHS than Prospect CT. During the peak of the pandemic, YNHHS demonstrated its ability to continuously hire staff while many health systems were struggling to retain them.

YNHHS contends that the Prospect CT hospitals have been underutilized in recent years, which it can reverse by capturing patients traveling out of state for services and attracting patients to Prospect CT hospitals operating under the YNHHS brand.

Key Takeaway: While most hospitals experienced staffing challenges through the onset of the COVID 19 pandemic, Prospect CT's personnel losses were particularly acute. Prospect CT's staffing challenges constrained its ability to deliver services at its ECHN hospitals and relates to the suspension of inpatient services at Rockville General Hospital. While Prospect CT was struggling, YNHHS increased its headcount by 11%.

[98] CON Main Form, pp 30-31

Factor 9: Underserved Populations

Summary: Within their respective service areas, the communities of both Prospect CT and YNHHS are rather similar in terms of patient age, education attainment, poverty and race/ethnicity. The exception is that YNHHS's service areas, residents tend to have higher income. If the Prospect CT acquisition is approved, YNHHS will take on patient populations with a lower level of commercial healthcare insurance coverage than what is now in its hospitals, and a higher percentage of Medicaid recipients.

Several of the municipalities served by the Prospect CT hospitals have been identified as "high need" communities. Of the eight towns identified as high need in Prospect CT's service areas, all are short of mental health services.

Within their respective PSA, both Prospect CT and YNHHS are rather similar in terms of age, education, poverty, and race/ethnicity. The exceptions are that YNHHS's PSA population is more likely to graduate from high school, has higher income, and is less likely to use SNAP benefits."

Comparing DSAs (Table 25) the residents of Prospect CT's are younger (40 v 43), poorer (12.4% v 7.4% poverty; $16,000 less median income), twice as likely to be black (13.4% v 5.7%), and 25% more likely to be Hispanic (21.6% v 16.7%).

Table 25: Demographic Breakdown of YNHHS' and Prospect CT's Service Areas (2021)

Hospital	Service Area	Median Age	No HS diploma or GED	Income			Race				
				Poverty Status	Median Household Income	SNAP Participation	White	Black	Hispanic	Asian	Other
YNHHS	Primary	39	7.4%	11.7%	$82,456	5.0%	55.2%	14.6%	22.2%	4.9%	3.0%
	Dispersed	43	6.5%	7.4%	$90,794	4.1%	69.3%	5.7%	16.7%	4.5%	3.8%
Prospect	Primary	40	7.5%	11.7%	$72,803	6.3%	58.5%	12.2%	21.2%	4.6%	3.5%
	Dispersed	40	8.2%	12.4%	$74,658	6.8%	57.8%	13.4%	21.6%	3.8%	3.3%

A. Role of Each Transacting Party in Serving At-risk, Underserved, and Public Payer Populations

An examination of the role of both YNHHS and Prospect CT in serving at-risk, underserved, and government payer patient populations was conducted. This included drafting a demographic profile of each transacting party's primary and dispersed service areas, examining hospital payer mix, calculating the percent of uninsured patients, and finally, analyzing the percent of patients with mental health and substance abuse conditions.

As might be expected based on the socioeconomic information in (Table 26), Prospect CT's DSA also has greater reliance on Medicaid (32.5% v 24.2%) and less on commercial insurance (24.9% v 29.1%).

Table 26: Payer Mix by Inpatient Discharges within Each Transacting Party's Service Areas (2021)

Hospital Health system	Service Area	Commercial	Medicaid	Medicare	Other
Yale New Haven Health Services	Primary	25.2%	29.9%	40.1%	4.8%
	Dispersed	29.1%	24.2%	42.8%	3.9%
Prospect CT, Inc.	Primary	28.9%	30.4%	37.8%	2.8%
	Dispersed	24.9%	32.5%	39.1%	3.5%

If the Prospect CT acquisition is approved, YNHHS will take on patient populations with a lower level of commercial healthcare insurance coverage than what is now in its hospitals, and a higher percentage of Medicaid recipients. For example, the percentage of inpatient discharges in YNHHS's DSA covered by commercial insurance in 2021 was 29.1%. By comparison, a lower share, 24.9%, of the Prospect CT hospital discharges were covered by commercial insurance -- a seven % difference. RGH had zero inpatient discharges in 2021, but based on its small size, those figures were unlikely to significantly change the ratio.

In 2021, 2.0% of Prospect CT's patients were uninsured, a higher proportion when compared with YNHHS's 1.2 uninsured rate.[99]

Table 27: The Rate of Uninsured Discharges for Each Transacting Party (2021)

Hospital	Percent of Uninsured Discharges in 2021
Yale New Haven Health Services	1.2%
Prospect CT, Inc.	2.0%

The CMIR statute specifically identifies patients diagnosed with substance abuse disorders and/or other mental health conditions as at-risk, underserved populations. To examine this, DRGs related to substance abuse disorders and/or other mental health conditions are listed below. Prospect had about twice as many MH and SA discharges as Yale. The terms of the proposal state that "the assets of the Prospect CT entities will be transferred to NewCo, which will enroll as a Medicaid provider with the Department of Social Services."[100]

Table 28: Percent of Mental Health and Substance Use Disorder Inpatient Discharges (2021)

Health Network	Percent of Total Discharges	
	Psychiatry	Substance Abuse
Yale New Haven Health Services	1.6%	0.6%
Prospect CT, Inc.	3.6%	1.0%

Several of the municipalities (Table 29) served by the Prospect CT hospitals have been identified as high-need communities.[101] For example, Vernon, CT is the home of Rockville General Hospital. The town is served by both RGH and Manchester Memorial. Despite its proximity to these hospitals, it has been designated as a "medically underserved population." Waterbury, home to Waterbury Hospital, is designated as a medically underserved population that is also short of primary care and mental health professionals. Every other Connecticut town listed in the Prospect CT service area is short of mental health services.

[99] Uninsured rates are not refined to exclude only those patients within each party's primary and dispersed service areas. The uninsured rates also include those served in ED and outpatient settings.
[100] DN 22-32594 CON. Main Form p 41
[101] DN 22-32594 CON, Main Form, pp 24 – 25: The federal Health Resources & Services Administration (HRSA), an agency within the Department of Health & Human Services, compiles data identifying geographic locations with medically underserved populations. In cooperation with the National Health Service Corps, the agency also identifies regions with shortages of healthcare professionals, including in the areas of primary care and mental health.

Table 29: High Needs Communities within Prospect CT Hospital's Service Areas

Town Served	Service Area	Shortage of Primary Care Professionals	Shortage of Mental Health Professionals	Medically Underserved Population	Medically Underserved Area
Coventry	MMH		✓		
East Hartford	MMH	✓	✓	✓	
Vernon	MMH, RGH			✓	
Windham	MMH	✓	✓		✓
Union	RGH		✓		
Naugatuck	WTBY		✓		
Waterbury	WTBY	✓	✓		✓
Watertown	WTBY		✓		

YNHHS emphasizes that despite the variations that exist in patient populations between the two systems, it has established a strong record of making investments in the associated communities. In 2020, YNHHS provided the largest community benefit of any hospital health system in Connecticut. When using a variety of weighted averages (by licensed beds, total expense or net income), OHS found that YNHHS provided roughly $377-$388 million in each instance – more than the next three hospital systems (Hartford Healthcare, Trinity Health of New England and Nuvance Health), combined.[102] YNHHS has expressed that it would continue this level of support for underserved communities in several instances throughout the CON process.[103,104]

Key Takeaway: YNHHS and Prospect CT have relatively similar levels of underserved patient populations. YNHHS acquisition of Prospect CT would result in it taking on a number of areas within Prospect CT's hospital service areas that have been identified as high needs communities.

[102] 2021 State of Connecticut Community Benefit Report, p 26
[103] CON DN 22-32594, Main form, pp 7, 12, 21, 25, 32, 35
[104] Exhibit O, DN 22-32594 CON Hearing

Factor 10: Low Margin Services

Summary: Nearly one-third (32%) of Prospect CT's inpatient discharges are from services covered by Medicaid. Over one quarter (28%) of YNHHS's patient services are covered by Medicaid. Both Prospect CT and YNHHS account for a higher percentage of Medicaid discharges than the statewide average (26%). YNHHS has said that its proposal will maintain or increase access to services for Medicaid recipients.

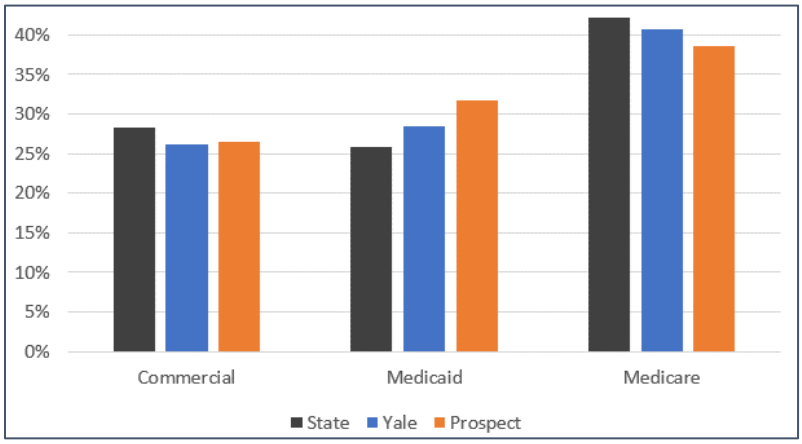
A. Low or Negative Margin Services Within the Parties' Service Areas

Low or negative margin services could conceivably apply to several services, as well as those provided to enrollees in public payers, particularly Medicaid. As over one-quarter of Connecticut residents are Medicaid participants[105], OHS has an interest in whether the state's hospital systems will provide similar care for Medicaid recipients as to beneficiaries of Medicare and commercial insurance.

YNHHS has said that its proposal will maintain or increase access to services by Medicaid recipients.[106] An examination was conducted of the role of the transacting parties in providing low or negative margin services within each of their dispersed service areas. For comparative purposes, the analysis included an examination of the percent of commercial, Medicaid and Medicare discharges within each service area.

Figure 18 represents the payer mix for all services provided in the respective DSAs for Prospect CT and YNHHS. The number of services provided (regardless of hospital or health system) in the transacting partners' DSAs is then compared to the statewide average for inpatient services (also sorted by payer). In 2021, YNHHS and Prospect CT held similar percentages of inpatient discharges for the three large payer categories. Nearly one-third (32%) of Prospect CT's inpatient discharges are from services covered by Medicaid. Over one quarter (28%) of YNHHS's patient services are covered by Medicaid. Both Prospect CT and YNHHS account for a higher percentage of Medicaid discharges than the statewide average (26%).

Figure 18: Payer Mix by Health System DSA vs. State Level (2021)



Key Takeaway: YNHHS and Prospect CT have similar payer mixes, although Prospect CT has a slightly higher share of Medicaid discharges.

[105] https://www.kff.org/other/state-indicator/health-insurance-coverage-of-the-total-population-multiple-sources-of-coverage-cps/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

[106] CON Main Form, p 44

Factor 11: Consumer Concerns

Summary: A survey conducted by OHS found that over two-thirds of respondents support the proposed merger of YNHHS and Prospect CT, while only 18% were opposed. Comments from self-identified Prospect CT employees expressed enthusiasm for the financial stability they believe YNHHS ownership will bring to their hospitals.

A. Consumer Sentiment Towards YNHHS's Acquisition of Prospect CT

The OHS conducted a survey to gauge community opinion of the proposed acquisition.[107] Survey invitations were sent to participants through the OHS list serve and to 22 community organizations which were asked to send it to their health systems; 1,206 responses were collected throughout the month of May 2023. The survey included a number of categorical questions regarding community members' sentiment regarding how the acquisition might impact their ability to access high-quality care and included an open-ended question for respondents to share their comments. Despite gathering a useful sample of community opinions, the survey was not a random sampling of affected residents. The findings may therefore be more indicative of the sorts of hopes and concerns that are present in the community.

A sizable majority (67%) expressed their support for allowing the Yale-Prospect merger, with 18% against the approval, and 18% unsure.

When asked to explain their position on the merger, supporters expressed concerns about Prospect CT being "for profit" 46 times. Supporters also mentioned the quality or reputation of YNHHS, quality/safety concerns under Prospect CT's ownership, the need to upgrade facilities, closing of services, and weak financial condition of the hospitals currently. Those opposed to the deal cited high costs 55 times and used "monopoly" or its derivatives in their comments 43 times. Other responses mention concerns with access to care, potential need to travel to New Haven for services now available in the community, worsened quality of care, and lower staff salaries.

Among 18 self-identified employees of the Prospect CT hospitals, all expressed support for the acquisition, citing issues of need, including the conditions of facilities, and the impact of hospital management on quality of care and patient safety. (Although Prospect CT's quality scores were below the state average, they were not lower than that of YNHHS. See: Factor 4: Quality of Services)

On June 27, 2023, Gov. Lamont signed Public Act 23-171 into law.[108] The law bans certain anti-competitive activities by providers and payers, and now prohibits "all or nothing" and "anti-tiering" clauses that limit options for consumers. The legislation was based on a Model Act developed by the National Academy for State Health Policy (NASHP)[109] to eliminate anti-competitive language in payer-provider contracts.[110]

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[107] The survey was conducted by Grossman Solutions, based in Hartford, CT

[108] https://portal.ct.gov/Office-of-the-Governor/News/Press-Releases/2023/06-2023/Governor-Lamont-Signs-Legislation-on-Health-Care-Affordability

[109] https://nashp.org/nashp-model-act-to-address-anticompetitive-terms-in-health-insurance-contracts/

[110] A number of states have banned similar conduct, which is a more enforceable way to prevent these anti-competitive practices than anti-trust litigation. See Gudiksen KL, et al Preventing Anticompetitive Contracting Practices in Healthcare Markets, UC Hastings College of Law, cited at https://portal.ct.gov/-/media/OHS/Healthcare-Cabinet/2021-Meetings/March-9/Gudiksen_2020_Preventing-Anticompetitive-Contracting-Practices-in-Healthcare-Markets-FINAL.pdf. Note that the CT law does not prohibit "most-favored nation" clauses. Further note that similar state laws have not prevented anticompetitive evasion:

Key Takeaway: An OHS survey finds a large level of public support for the proposed acquisition. Those who oppose the deal are concerned about YNHHS's increased market power.

"Dominant firms may be able to garner similar benefits without inclusion of specific clauses in their written contracts through oral or other agreements. For example, . . . a dominant insurer appeared to continue to impose best-rate requirements on hospitals without an explicit MFN in the contracts. In addition, antitrust enforcement measures and legislative prohibitions targeting specific contract terms fail to capture the cumulative anticompetitive effects of use of a variety of contract terms used in combination. . . . [T]he anticompetitive effects of these contract provisions can be mutually reinforcing. In consolidated healthcare provider markets, an amalgam of restraints—what some antitrust cases call a "monopoly broth"—may allow a health system to exert market power through a collection of smaller actions that, on their own might not be deemed anticompetitive."

Factor 12: Other Factors in Public Interest

Summary: Covid impact on workforce. Prospect CT working conditions. Monopsony of hiring power. This report examined two other factors related to the proposed transaction, both related to the workforce. First are the views of Prospect employees on conditions in the hospitals and the impact of the merger. Second is the market for hospital employees in CT.

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Healthcare workers, and especially hospital workers, have suffered a significant toll on their physical and mental well-being during and after the COVID pandemic.[111] As more workers leave the force, it has further strained care delivery and care provider morale.

For Prospect CT employees, morale was tested by public accounts of Prospect CT management practices. For example, a number of news stories and other information suggest an organization struggled to provide high-quality care and may have put return on investment above patients. Consider:

- A September 2020 ProPublica article states that Prospect Medical investors withdrew $400 million from the hospital system in the lead-up to the pandemic, while at the same time, the hospitals were under-resourced and not properly maintained.[112]
- In recent years, Waterbury and Manchester Memorial Hospitals have been cited by state health officials and had faced financial penalties for operational and safety lapses.[113]
- From 2019 to 2021, the FTE headcount for RGH was reduced by more than half (340 to 150), largely driven by staff resignation.

The themes of these news stories and incidents are echoed by respondents to OHS' survey on the community impact of the proposed acquisition. Respondents who identified themselves as Prospect CT employees described challenging work conditions exacerbated by being under-resourced (see box). Each of the respondents was in favor of the YNHHS acquisition.

[111] See, for example Havaei F, Ma A, Staempfli S, MacPhee M. Nurses' Workplace Conditions Impacting Their Mental Health during COVID-19: A Cross-Sectional Survey Study. Healthcare (Basel). 2021 Jan 16;9(1):84.
[112] https://www.propublica.org/article/investors-extracted-400-million-from-a-hospital-chain-that-sometimes-couldnt-pay-for-medical-supplies-or-gas-for-ambulances
[113] https://www.courant.com/2019/06/02/after-2-deaths-and-a-series-of-medical-errors-the-for-profit-owner-of-waterbury-and-manchester-hospitals-faces-protests-major-sanctions/

Self-Identified Prospect CT Employees Comments from OHS Survey:

- "I have worked at Waterbury Hospital for many years (30) and see firsthand how the hospital has been impacted by going from a non-profit to a for-profit, and it had not been a good experience. Once the hospital became a for-profit, the services and quality of care suffered greatly."
- "I have been a part of [Waterbury Hospital] since 2001 and want to see WH succeed. Yale purchasing WH, Manchester Memorial Hospital and Rockville General Hospital is our only option."
- "I work at Waterbury, and Prospect is not serving the community. Something this agency should have considered prior to letting them buy the hospital. We don't have supplies or equipment; computers are awful."
- "I feel we will be better off financially; this hospital is not doing so good... we need new ideas and new management as well. Most people do not want to work here due to the disrespect and the way we get treated by our managers and team leads. The pay isn't the greatest either, and our ideas are worth nothing because they do not listen."
- "All 3 of the Prospect hospitals currently struggle to recruit and retain providers. Prospect is not making additional meaningful investments in the infrastructure (IT, workflow, staffing, etc.) that is currently needed. Yale has a much better IT infrastructure to deliver high-quality care, much better infrastructure to streamline policy and procedures and deploy consistent evidence-based clinical practices. As a physician leader, I fully support the acquisition."
- "We need a safer workplace for nurses and other health care workers…"

YNHHS has stated that it will hire substantially all employees in good standing; it has agreed to recognize all unions and assume all collective bargaining agreements; and it will provide benefits packages, overall, as generous as those from Prospect.[114] YNHHS says it will also assume Prospect CT's pension obligations under two plans (the Connecticut Health Care Associates Pension Fund and the New England Health Care Employees Pension Plan).[115]

Therefore, it can be understood that Prospect CT employees would welcome working for a prestigious, financially-sound buyer, such as YNHHS. Yet the acquisition also represents a new front in market consolidation and power: employee acquisition and retention. In Connecticut, that power is increasingly being concentrated into two healthcare systems: YNHHS and Hartford HealthCare (HHC). This acquisition would continue that trend.

Hospitals are large employers, often the largest in their town and collectively among the largest in the state. In 2021, Connecticut had 54,051 hospital employees.[116] Of those, 18,735 (35%) worked for YNHHS and 14,181 (26%) worked for HHC, totaling 61%. Should YNHHS acquire Prospect CT, it will employ 39% of Connecticut hospital employees. Then, the two largest hospital systems (HHC and YNHHS) will employ 65%

[114] Exhibit Y – O'Connor CON Presentation - REVISED

[115] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

[116] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

of CT hospital employees. Put another way, the two systems will control 65% of the hospital employee market.

In Connecticut, there remain 13 hospitals unaffiliated with HHC or YNHHS. Should YNHHS acquire Prospect CT, these 13 hospitals combined will account for only 35% of hospital employees, which would be 4% less than what would be YNHHS's share, alone.

Clearly, the sentiment expressed by Prospect CT employees and roughly three-quarters of the OHS survey respondents (who voiced support for the merger) is that workers and patients of the Prospect CT hospitals would likely benefit from YNHHS's acquisition, at least in the near term. However, it is essential to acknowledge the implications of the hiring power and resource control that it would hand to two hospital systems controlling between them 65% of the hospital employee market. YNHHS's enhanced market power would enable it not only to command higher commercial prices (to the detriment of patients, CT businesses, CT municipalities and the state government), but also to exert increased influence on the healthcare labor market, such as working conditions and wages. Monopsony, or dominance over the purchasing of an economic good, such as labor, is harmful in that it may artificially hold down workers' wages.[117]

[117] Prager E, Schmidt M: Employer consolidation and wages: Evidence from hospitals. Amer Econ Rev 111(2):397-427 (2021).

Discussion of Market Impact Analysis

A. Dominant Market Share

Section 639f requires that OHS determine whether a transacting party meets the following criteria:

A. Currently has or, following the proposed transfer of operations of the hospital, is likely to have a dominant market share for the services the transacting party provides.
B. Currently charges or, following the proposed transfer of operations of the hospital, is likely to charge prices for services that are materially higher than the median prices charged by all other healthcare providers for the same services in the same market, or currently has or, following the proposed transfer of operations of a hospital, is likely to have a health status adjusted total medical expense that is materially higher than the median total medical expense for all other healthcare providers for the same service in the same market.

The analysis that follows addresses both questions. It demonstrates that YNHHS's market position meets four components that determine market dominance: market prominence; largest player; barriers to entry; and strongest brand. Also, it finds that YNHHS has above average prices for inpatient services.

Prominent Market Share

YNHHS has held the leading share of the market for hospital services, whether measured in CT as a whole or in its service areas, and its share will become even greater as a result of the acquisition. Further, YNHHS' service areas are already highly concentrated and will become even more so.

Table 30: Impact on Inpatient Market Share Within YNHHS's Service Areas for Each Transacting Party

Service Area	Hospital or Health system	2021	Inpatient Market Share Following the Transaction	Percent Change Following the Transaction
Primary	Yale New Haven Health Services	62.4%	66.2%	6.2%
	Prospect CT, Inc.	3.9%	-	-
Dispersed	Yale New Haven Health Services	53.7%	57.2%	6.5%
	Prospect CT, Inc.	3.5%	-	-

YNHHS currently holds over 50% of the market share in both its PSA and DSA. By absorbing Prospect CT's 3.9% inpatient market share, YNHHS's share in its PSA would grow from 62.4% to 66.2% (see Table 30). In YNHHS's DSA, acquiring Prospect CT's 3.5% inpatient market share would result in YNHHS controlling 57.2% of that DSA.

Table 31: Impact on Service Area Market Concentration by Inpatient Discharges

Transacting Party	Service Area	HHI in 2021	HHI Following the Transaction	HHI Change
Yale New Haven Health Services	Primary	4181	4672	+ 491
	Dispersed	3320	3700	+ 380
Prospect CT, Inc.	Primary	2448	2866	+ 418
	Dispersed	2458	2639	+ 181

The changes in market share will increase market concentration in both YNHHS's and Prospect CT's service areas (see Table 31). Already "highly concentrated" by DOJ standards, YNHHS's HHI in its PSA will rise by 491 points, while its DSA HHI will rise by 380. The Prospect CT service areas were both just beneath the "highly

concentrated' market threshold in 2021. The HHI for its PSA will increase by 418, while the HHI for its DSA will increase by 181, placing each over 2500 HHI and in "highly concentrated" market territory.

For a local example, consider how concentration will change in the 18 zip codes comprising the Waterbury area. YNHHS' and Prospect's service areas partly overlap in Waterbury.

Table 32: Inpatient Market Share within Waterbury-Area Zip Codes

Transacting Party	2017	2018	2019	2020	2021	Inpatient Market Share Following the Transaction	Percent Change Following the Transaction (compared with 2021)
Yale New Haven Health Services	13.2%	12.9%	12.5%	12.8%	13.9%	45.4%	226.6%
Prospect CT, Inc.	32.4%	35.0%	36.3%	36.4%	31.5%	-	-

In 2021, YNHHS had a 13.9% share of the inpatient discharges in the Waterbury area. As a result of the transaction, it would hold 45.4% of the Waterbury inpatient market, a more than 2-fold increase.

Table 33: Inpatient Market Concentration in Waterbury-Area

	2017	2018	2019	2020	2021	Following the Transaction	HHI Increase Following the Transaction
Waterbury-area HHI[118]	2891	2834	2884	2777	2593	3467	+874

The Waterbury area is already highly concentrated. Its HHI was 2593 by 2021 (Table 33). It is anticipated that YNHHS's gain of Prospect CT's inpatient volume will result in an 874-point leap in HHI, from 2593 to 3467 – a 34% increase.[119]

Largest Market Player

YNHHS is the largest hospital health system in Connecticut, with $5.1 billion net patient service revenue in 2021. That is 32% of the $15.7 billion statewide NPSR for Connecticut health systems. (The next highest was HHC with $4.4 billion). YNHHS also held $4.5 billion in net assets in 2021. That amount represents 45% of

[118] This includes all hospitals in CT for any inpatient services provided for patients that live within the Waterbury-area zip code boundaries.

[119] The actual result will likely be greater. In its filing, YNHHS projects a post-merger 18.6% growth in inpatient volume at Waterbury Hospital. Depending on whether these are net new discharges or are taken from competing hospitals, the Waterbury-area HHI could rise further to 3,599-3,640.

the net assets for health systems in the state. (The next highest health systems was again HHC, with $3.4 billion).[120]

YNHHS indicates it is the second largest employer in Connecticut, with more than 29,000 employees. It is supported by more than 7,500 university and community physicians and advanced practitioners. YNHHS would become a still-larger employer of health care workers. Along with HHC's large workforce, CT has relatively few and declining options where health care workers may seek employment. The labor purchasing power of YNHHS and other systems could have the effect of depressing wages and benefits, and a worsening of working conditions.

YNHHS also cites its importance as an economic power in the state, noting it is a large purchaser of goods and services from other Connecticut businesses.[121]

Significant Barrier to Market Entry

The hospital market presents significant barriers to market entry by requiring a challenging combination of capital and regulatory requirements.

Hospitals are highly capital-intensive and require staff consisting of many licensed professionals (including nurses, technicians, and therapists, in addition to physicians). Hospitals are also highly regulated under state and federal law. Connecticut, like many states, requires hospitals to complete extensive certificate of need (CON) processes. One study found that states with CON laws have less market entry and lower market penetration of nonhospital and new hospital providers than do states that do not have those laws. Further, hospitals that opened before the implementation of a CON law face less competition in CON states than in non-CON states.[122]

Strongest Market Brand

YNHHS is one of the most prestigious hospital systems in the country and enjoys a national reputation. Its flagship hospital, YNHH, is nationally ranked among the best hospitals in the United States (#1 in Connecticut), according to U.S. News and World Report.[123] No other hospital in Connecticut received a national ranking.

YNHHS has been recognized for its clinical and technological capabilities. Hospitals and Health Networks have identified it as one of the "most wired" hospital systems in the country. With roots dating back to 1813, YNHHS is renowned for clinical innovations that include the first use of chemotherapy, the use of penicillin, use of insulin pump for diabetes, among others.

YNHHS's reputation is also enhanced by its affiliation with Yale University, an Ivy League research university in New Haven.

[120] Financial Status of Connecticut's Short Term Acute Care Hospitals for FY 2021, State of Connecticut Office of Health Strategy, September 2022

[121] https://www.ynhhs.org/about

[122] Stratmann, Thomas and Baker, Matthew, Barriers to Entry in the Healthcare Markets: Winners and Losers from Certificate-of-Need Laws (August 29, 2017).

[123] https://health.usnews.com/best-hospitals/area/ct/yale-new-haven-hospital-6160400#rankings

B. Relative Price

As demonstrated in Factor 2: Price of Services, the analysis of inpatient discharges for all hospitals in Connecticut found that for all three of the state's largest commercial payers, YNHHS's relative prices are above the state average reference price and among the highest in the state.

A similar examination of relative price for outpatient services found that as a system, YNHHS had higher average relative prices with two of the three carriers. However, the outpatient relative prices were not demonstrably higher than the state average reference price.

An analysis of price changes among all Connecticut carriers found that prices for both Lawrence + Memorial Hospital and Milford Hospital increased at a faster rate than the state average subsequent to being acquired by YNHHS.

C. Summary

As this section demonstrates, YNHHS would emerge post-merger as an organization with a strong plurality or majority share across different measures of hospital markets, including the entire state. This report finds that YNHHS has market dominance by these criteria.

Prominent market share: Does the entity hold a leading share of the hospital market over an extended period?

- While this section focused on market areas (PSAs, DSAs, Waterbury) where the impact of the acquisition would be most acute, the analysis for this report has demonstrated that statewide YNHHS is the largest health system by multiple measures (inpatient discharges, inpatient NPSR, outpatient NPSR) for a decade or more. Most of these market areas are highly concentrated; the acquisition will increase both the degree of concentration and the size of YNHHS' market share.

Largest market player: Does the entity hold the largest amount of capital, assets, employees, or patient volume?

- YNHHS has the most capital and the largest amount of assets of any CT hospital system, and it is the second largest employer in the state.

Significant barrier to market entry: Is market entry contingent upon the attainment of a challenging combination of capital and regulatory oversight?

- The capital requirements and regulatory oversight would make it very difficult for a new market entrant; further, studies have found that states with CON requirements provide significant advantage to those systems in place prior to the CON implementation.

Brand and consumer market awareness: Does the entity hold a brand that is well-known, respected, and prestigious enough to give it market advantage in resource and customer attainment?

- YNHHS is a nationally recognized hospital system and is rated the best system in the state. It has achieved a number of medical innovations and is associated with one of the most prestigious universities in the world. This position provides significant advantage in terms of attracting talent and patients.

As for prices of services, this analysis found that the YNHHS system's relative prices for inpatient services were higher than the state's average reference price.

Conclusion

To the questions posed by Section 639f:

Will YNHHS have a dominant market share for the services it provides?

- This CMIR finds that YNHHS already has a dominant market position in inpatient care, measured both by discharges and NPSR. The proposed transaction between YNHHS and Prospect CT would further strengthen YNHHS's dominance in existing markets, while providing it with new ones where it would immediately become dominant.

Will the proposed transfer of operations of the hospital likely result in prices for services that are materially higher than the average prices charged by all other healthcare providers for the same services in the same market?

- YNHHS has higher average prices for inpatient services with CT's three largest insurance carriers. If the proposed transaction were to be consummated, YNHHS's market dominance will provide the leverage to enable it to negotiate higher commercial rates, particularly the rates for the newly acquired Prospect CT hospitals.
- YNHHS has not ruled out price increases and has indicated that higher rates may be necessary for the Prospect CT hospitals to close operational losses.
- In its most recent hospital acquisitions, YNHHS raised the price of services at a faster rate than the state average.

Although price increases are not certain, they appear to be a likely outcome based on YNHHS's existing market power, the additional market power that would result from the merger, it's record of raising prices after its most recent transactions, and the financial pressure that YNHHS forecasts after completing the deal. Importantly, YNHHS will have the ability to raise commercial rates at the time of its choosing. The economic literature reveals that horizontal hospital mergers involving a market dominant provider yield higher prices and no measurable improvement in quality.

In conclusion, this CMIR analysis has found that YNHHS is in a dominant position in all markets that it participates in, and already has higher than average prices in various markets. It has increased prices for services at hospitals it has acquired in the past and has the motive to do so with this proposed acquisition. This proposed transaction may provide short-term benefits to Connecticut residents, particularly those who work at and are served by the Prospect CT hospitals. However, that will be offset by likely higher prices at all YNHHS hospitals (particularly those now held by Prospect CT), and further intensifying of market concentration.