



COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION

REVIEW OF LAHEY HEALTH SYSTEM'S
PROPOSED ACQUISITION OF
WINCHESTER HOSPITAL
(HPC-CMIR-2013-3)

PURSUANT TO M.G.L. c. 6D, § 13

PRELIMINARY REPORT
APRIL 16, 2014

INTRODUCTION

The Health Policy Commission (HPC) was established in 2012 by the Commonwealth's landmark health care cost containment law, Chapter 224 of the Acts of 2012, "An Act Improving the Quality of Health Care and Reducing Costs through Increased Transparency, Efficiency, and Innovation" (Chapter 224). The HPC is an independent state agency governed by an 11-member board with diverse experience in health care. It is charged with developing health policy to reduce overall cost growth while improving the quality of care, and monitoring the health care delivery and payment systems in Massachusetts.

Recognizing that excessive health care costs are crowding out other economic needs for government, households, and businesses, Chapter 224 set a statewide target for a sustainable rate of growth of total health care expenditures. This benchmark is set at 3.6% for 2014. Achieving this ambitious benchmark will require the continued development of a competitive, value-based health care market and a more efficient, accountable health care delivery system.

Chapter 224 tasks the HPC with many important responsibilities to support the Commonwealth's efforts to meet the health care cost growth benchmark, including to "foster innovative health care delivery and payment models" as well as to "monitor and review the impact of changes within the health care marketplace."¹ These dual values of **innovation** and **accountability** are at the core of that landmark legislation and the HPC's mission, and both are necessary to advance the goal of a more affordable and effective health care system.

A significant aspect of the health care system that requires more transparency and accountability is the evolving structure and composition of the provider market. Provider changes, including consolidations and alignments, have been shown to impact health care market functioning, and thus the performance of our health care system in delivering high quality, cost effective care. Due to confidential payer-provider contracts and limited information about provider organizations, the mechanisms by which market changes impact the cost, quality, and availability of health care services have not been apparent to government, consumers, and businesses who ultimately bear the costs of the health care system.

Chapter 224 directs the HPC to monitor this aspect of the Massachusetts health care system. With the newly required filing of notices of material change by provider organizations,² the HPC now tracks the frequency, type, and nature of changes in our health care market.³ The HPC may also engage in a more comprehensive review of particular transactions anticipated to

¹ MASS. GEN. LAWS ch. 6D, § 5 (2012).

² MASS. GEN. LAWS ch. 6D, § 1 (2012) defines a health care provider organization as "any corporation, partnership, business trust, association or organized group of persons, which is in the business of health care delivery or management, whether incorporated or not that represents 1 or more health care providers in contracting with carriers for the payments of health care services[.]" In this report, we use the terms provider organization and provider system interchangeably.

³ See MASS. GEN. LAWS ch. 6D, § 13 (2012) (requiring health care providers to notify the HPC before making material changes to their operations or governance). See also MASS. HEALTH POLICY COMM'N, BULLETIN 2013-01: INTERIM GUIDANCE FOR PROVIDERS AND PROVIDER ORGANIZATIONS RELATIVE TO NOTICE OF MATERIAL CHANGE (Mar. 12, 2013), available at <http://www.mass.gov/anf/docs/hpc/material-change-notices/20130312-interim-guidance-on-material-change-and-notice-form.pdf>.

have a significant impact on health care costs or market functioning. The result of such “cost and market impact reviews” (CMIRs) is a public report detailing the HPC’s findings. In order to allow for public assessment of the findings, the transactions may not be finalized until the HPC issues its Final Report. Where appropriate, such reports may identify areas for further review or monitoring, or be referred to other state agencies in support of their work on behalf of health care consumers.⁴

The HPC conducts its work during a period of dynamic change among provider organizations, including accelerating consolidation and new contractual and clinical alignments. In particular, hospital acquisition of physicians and the transition from independent or affiliated practices to employment models are significant trends both in Massachusetts and nationally, as is increased presence of alternative payment models focused on promoting accountable care. Through the CMIR process we seek to improve our understanding of these trends and other market developments affecting short and long term health care spending, quality, and consumer access. In addition, our reviews will enable us to identify particular factors for market participants to consider in proposing and responding to potential future organizational changes. Through this process, we seek to encourage providers and payers alike to evaluate and take steps to minimize negative impacts and enhance positive outcomes of any given material change.

This report examines the proposed acquisition of Winchester Hospital (Winchester) and its subsidiaries, including Winchester Physician Associates (WPA), by Lahey Health System (Lahey). Based on criteria articulated in Chapter 224 and informed by the facts of the transaction, we analyzed the likely impact of this acquisition, relying on the best available data and information. Our work included review of the parties’ stated goals for the transaction and the information they provided in support of how and when these alignments would result in efficiencies and care delivery improvements.

To the HPC’s knowledge, no other state has authorized such a policy-oriented, prospective review of the impact of health care transactions that is distinct from an administrative determination of need or law enforcement review of antitrust or consumer protection concerns. This public reporting process, a unique opportunity to enhance the transparency of significant changes to our health care system, is of great interest to all stakeholders – payers, providers, purchasers, and government alike – who have demonstrated a shared commitment to sustaining access to high-quality, affordable care. Our work is intended to complement the many important efforts of other state agencies, such as the Center for Health Information and Analysis (CHIA), the Department of Public Health (DPH), the Division of Insurance (DOI), and the Attorney General’s Office (AGO) in monitoring and overseeing our health care market. Consistent with the goals of Chapter 224, comprehensive and evidence-based reporting of provider organization performance brings important information to the public dialogue about how to develop a more affordable, effective, and accountable health care system.

⁴ For example, MASS. GEN. LAWS ch. 6D, §13(f) (2012) requires referral of the CMIR report to the state Attorney General’s Office if the HPC finds that a provider under review (1) has a dominant market share in its service area, (2) charges prices that are materially higher than the median prices in its service area for the same services, and (3) has a health status adjusted total medical expense that is materially higher than the median in its service area.

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ACRONYMS AND ABBREVIATIONS

ACO	Accountable Care Organization
AGO	Massachusetts Attorney General's Office
AHRQ	Agency for Healthcare Research and Quality
AMC	Academic Medical Center
APCD	All-Payer Claims Database
AQC	Blue Cross Blue Shield of Massachusetts' Alternative Quality Contract
Chapter 224	Chapter 224 of the Acts of 2012
CHIA	Massachusetts Center for Health Information and Analysis
CHIP	Children's Health Insurance Program
CMIR	Cost and Market Impact Review
CMS	Centers for Medicare and Medicaid Services
DOI	Massachusetts Division of Insurance
DOJ	United States Department of Justice
DPH	Massachusetts Department of Public Health
FTC	Federal Trade Commission
FY	Fiscal Year
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HEDIS	Healthcare Effectiveness Data and Information Set
HHI	Herfindahl-Hirschman Index
HIT	Health Information Technology
HMO	Health Maintenance Organization
HPC	Health Policy Commission
IP	Inpatient
IPA	Independent Practice Association
LPG	Local Practice Group
Mass-DAC	Massachusetts Data Analysis Center
MedPAC	Medicare Payment Advisory Commission
MHDC	Massachusetts Health Data Consortium
MHQP	Massachusetts Health Quality Partners
NPSR	Net Patient Service Revenue
OP	Outpatient
PCP	Primary Care Physician
POS	Point of Service
PPO	Preferred Provider Organization
PSA	Primary Service Area
RPO	Registered Provider Organization
SCIP	Surgical Care Improvement Project Measures
SCP	Specialty Care Physician
TME	Total Medical Expenses

NAMING CONVENTIONS

Parties and Related Organizations

Addison Gilbert	Addison Gilbert Hospital
BayRidge	BayRidge Hospital
Beverly	Beverly Hospital
Northeast	Northeast Health System
Highland	Highland Healthcare Associates IPA
Lahey	Lahey Health System
Lahey Peabody	Lahey Medical Center, Peabody
LCPN	Lahey Clinical Performance Network
LHMC	Lahey Hospital & Medical Center
NEPHO	Northeast Physician Hospital Organization
Winchester	Winchester Hospital
WPA	Winchester Physician Associates

Payers

Aetna	Aetna Health
BCBS	Blue Cross Blue Shield of Massachusetts
HPHC	Harvard Pilgrim Health Care
THP	Tufts Health Plan

Other Providers

Atrius	Atrius Health
BIDCO	Beth Israel Deaconess Care Organization
BIDMC	Beth Israel Deaconess Medical Center
BMC	Boston Medical Center
BWH	Brigham and Women's Hospital
CHA	Cambridge Health Alliance
Children's	Boston Children's Hospital
Hallmark	Hallmark Health
MGH	Massachusetts General Hospital
Mount Auburn	Mount Auburn Hospital
NEQCA	New England Quality Care Alliance
North Shore MC	North Shore Medical Center
Partners	Partners HealthCare System
PCHI	Partners Community Healthcare Inc.
Steward	Steward Health Care System
Tufts MC	Tufts Medical Center
UMass	UMass Memorial Health Care

EXECUTIVE SUMMARY

On September 27, 2013, Lahey Health System (Lahey) and Winchester Hospital (Winchester) executed an affiliation agreement (the Affiliation Agreement) for Lahey to acquire Winchester and all of its subsidiaries. Under the agreement, Winchester would become a fully integrated, community-based member of Lahey. Lahey would also acquire Winchester's employed physicians, Winchester Physician Associates (WPA). The stated objectives of Lahey's acquisition of Winchester are to maximize the use of community-based care at Winchester, direct residents of Winchester's service area seeking tertiary care to Lahey Hospital & Medical Center (LHMC) and away from Boston academic medical centers (AMCs), and maintain and enhance the parties' quality and efficiency of care.

Following a 30-day initial review, the HPC determined that the transaction was likely to have a significant impact on costs and market functioning in northeastern Massachusetts and warranted further review.⁵ This Preliminary Report presents our analysis and the key findings from our review. Following a 30-day opportunity for the parties to respond to these findings, the HPC will issue a Final Report.

This report is organized into five parts. Part I outlines our analytic approach to conducting CMIRs. Part II describes the parties to this CMIR and their goals and plans for undertaking the transaction. Parts III and IV then present our findings. Part III reports on the parties' baseline performance leading up to the transaction, and Part IV reports on the projected impact of the transaction on that baseline. We conclude in Part V. Below is a summary of the findings presented in Parts III and IV:

1. **Cost Profile:** The parties are in strong financial condition. Their hospital prices are generally in the medium range compared to other hospitals. Their physician prices and health status adjusted total medical expenses (TME) are generally in the low to medium range compared to other physician groups. The parties have moderately strong market share in their service areas.
2. **Quality and Care Delivery Profile:** The parties have strong quality performance, with few instances of material variation.
3. **Access Profile:** Winchester has lower Medicaid payer mix and higher commercial payer mix than other area hospitals. Winchester and LHMC provide a lower mix of behavioral health discharges than the mix in their respective service areas. Lahey's other two hospitals, Beverly and Addison Gilbert, provide a higher mix of behavioral health discharges than the mix in their service area.
4. **Cost Impact:** For the four major commercial payers studied, we modeled cost savings of up to \$2.7 million per year as a result of potential decreases in WPA physician prices and shifts in utilization from higher-priced hospitals to Lahey facilities. However, these savings depend on the resulting system not raising its prices relative to other providers, or adding facility fees.

⁵ See MASS. HEALTH POLICY COMM'N, MINUTES OF THE HEALTH POLICY COMM'N (Dec. 18, 2013) (approving continuation of the Cost and Market Impact Review of the Lahey/Winchester merger).

5. **Care Delivery Impact:** The parties' stated plan to improve clinical quality through the exchange of best practices demonstrates potential for improving care delivery and health outcomes. However, given Lahey and Winchester's strong overall quality performance, and their established experience managing populations through risk-based payments, it is unclear how this transaction is instrumental to raising their existing care delivery performance.
6. **Access Impact:** Lahey proposes to integrate behavioral health services into some Winchester physician practices in 2015. At the same time, Lahey and Winchester have not proposed specific changes in hospital services that would cause the HPC to anticipate changes to their existing inpatient service mix and payer mix trends.

In summary, based on our review, we find that the proposed transaction between Lahey and Winchester may decrease health care spending as a result of lower physician prices and redirection of care from higher-priced Boston AMCs to Lahey, which provides comparably high-quality care.

At the same time, we have identified two concerns with this transaction that could impact the potential to realize cost savings for employers and consumers. First, the merger of two financially strong direct competitors may reinforce the market strength of the resulting system, increasing the system's ability over time to leverage higher prices and other favorable contract terms in negotiations with commercial payers. Second, if Lahey adds or increases facility fees to Winchester's ancillary services, total medical spending will increase. We invite the parties to address these concerns in their written response, including how they would demonstrate any commitments in this regard. Following the period for written response, we look forward to publishing our Final Report, including any referral to the Massachusetts Attorney General's Office.

I. ANALYTIC APPROACH AND DATA RELIANCES

A. ANALYTIC APPROACH

In structuring a CMIR, we take the following steps. First, we identify the primary areas of impact for the HPC to study. MASS. GEN. LAWS ch. 6D, § 13 tasks the HPC with examining impact in three interrelated areas:⁶

1. **Costs.** The statute directs the HPC to examine prices, total medical expenses, provider costs and market share, and other measures of health care spending.
2. **Quality.** The statute directs the HPC to examine the quality of services provided, including patient experience.
3. **Access/market structure.** The statute directs the HPC to examine the availability and accessibility of services provided; the provider's role in serving at-risk, underserved, and government payer patient populations; the provider's role in providing low or negative margin services; the provider's methods for attracting patient volume and health care professionals; and the provider's impact on competing options for care delivery.

After identifying the primary areas for the HPC's review, we then gather detailed information in each of these areas. The HPC examines recent data to establish the parties' *baseline performance* in each of these areas prior to the transaction. The HPC then combines the parties' baseline performance with known details of the transaction, as well as the parties' goals and plans, to project the *impact of the transaction on baseline performance*. The analytic sections of this report are divided into two parts that mirror this framework: Part III addresses baseline performance and Part IV addresses impact analysis.

Within this general framework for CMIRs, the specific facts of a transaction, the availability of accurate data, and time constraints will affect the particular analyses included in our review of any given material change. We also seek to focus our work on analyses that complement, rather than duplicate, the work of other agencies. Future CMIRs may encompass new and evolving analyses, depending on the facts of a transaction, recent market developments, areas of public interest, and the availability of improved data resources, like an expanded All-Payer Claims Database (APCD) and Registered Provider Organization (RPO) information.⁷

B. DATA RELIANCES

To conduct this review, we relied on the documents and data the parties produced to us in response to HPC information requests, and their own description of the transaction as presented in their

⁶ The HPC may also examine consumer concerns and any other factors it determines to be in the public interest. MASS. GEN. LAWS ch. 6D, § 13(d) (2012).

⁷ *All-Payer Claims Database*, CTR. FOR HEALTH INFO. AND ANALYSIS, www.mass.gov/chia/apcd (last visited Apr. 16, 2014) ("The APCD is comprised of medical, pharmacy, and dental claims, as well as information about member eligibility, benefit design, and providers for all payers covering Massachusetts residents."); MASS. GEN. LAWS ch. 6D, § 11 (2012) (requiring provider organizations to register biennially with the HPC and provide information on contractual and operating structures, capacity, and other requested information).

material change notices and other filings with the Commonwealth.⁸ To further inform our review, the HPC obtained data and documents from a number of other sources. These include state agencies such as the AGO’s Non-Profit Organizations/Public Charities Division and CHIA, from which we received provider-level data as well as claims-level data in the APCD; federal agencies such as the Agency for Healthcare Research and Quality (AHRQ) and the Centers for Medicare and Medicaid Services (CMS); private organizations that collect health care data such as the Massachusetts Health Data Consortium (MHDC) and Massachusetts Health Quality Partners (MHQP); payers such as Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), Tufts Health Plan (THP), and Aetna Health (Aetna); and health care providers operating in the same areas of the state as the parties. The HPC appreciates the cooperation of all entities that provided information in support of this review.

Where our analyses rely on nonpublic information produced by the parties or other market participants, MASS. GEN. LAWS ch. 6D, § 13 prohibits the HPC from disclosing such information without the consent of the producing entity, except in a preliminary or final CMIR report where “the commission believes that such disclosure should be made in the public interest after taking into account any privacy, trade secret or anti-competitive considerations.”⁹ Consistent with this statutory requirement, this Preliminary Report contains only limited disclosures of such confidential information where the HPC has determined that the public interest in disclosure outweighs privacy, trade secret, and anti-competitive considerations.

To assist in our review and analysis of information, the HPC engaged consultants with extensive experience evaluating provider systems and their impact on the health care market. Working with these experts, the HPC extensively analyzed the data and other materials provided. For each analysis, the HPC utilized the most recent, reliable data available. Because data—whether publicly reported or privately held—is usually generated on a variable schedule from entity to entity, the most recent and reliable data sometimes reflects 2012 data and sometimes 2011. We have noted the applicable year for the underlying data throughout this report. Wherever possible, the HPC examined multiple years of data to analyze trends and to report on the consistency of findings over time. For data and materials produced by the parties and other market participants, the HPC tested the accuracy and consistency of the data collected to the extent possible, but also had to rely in large part on the producing party for the quality of the information provided.

Several of our analyses focus on the anticipated cost impact in the commercially insured market. In the commercially insured market, prices for health care services—whether fee-for-service, global budgets, or other forms of alternative payments—are established through private negotiations between payers and providers. The terms of these payer-provider contracts vary widely, both with regard to price and with regard to other material terms that impact health care costs and market functioning.¹⁰ Within the commercial market, we focused our review on four payers, the three largest Massachusetts payers (BCBS, HPHC, THP) and a national payer (Aetna), which together account for

⁸ *E.g.*, Application by Winchester Hospital for Determination of Need under 105 C.M.R. 100.600-603 for Change of Ownership of Winchester Hospital (Oct. 25, 2013).

⁹ MASS. GEN. LAWS ch. 6D, § 13(c) (2012), *amended by* 2013 Mass. Acts 38, § 20.

¹⁰ *See, e.g.*, OFFICE OF ATT’Y GEN. MARTHA COAKLEY, EXAMINATION OF HEALTH CARE COST TRENDS AND COST DRIVERS PURSUANT TO G.L. C. 118G, § 6 ½(b): REPORT FOR ANNUAL PUBLIC HEARING 40-43 (Mar. 16, 2010) [hereinafter AGO 2010 COST TRENDS REPORT], *available at* <http://www.mass.gov/ago/docs/healthcare/2010-hcctd-full.pdf>.

more than 80% of the commercial market.¹¹ As time and data have allowed, this report includes analysis of mechanisms that impact total medical spending in the government payer market, such as the potential to add facility fees when hospitals acquire physician groups and their ancillaries (e.g., imaging and laboratory facilities). For future reports, we hope to have access to consolidated data on the entire health care market through the APCD, RPO program, and other resources.

Many of our analyses compare Winchester Hospital (Winchester) and Lahey Health System's hospitals, Lahey Hospital & Medical Center (LHMC),¹² Beverly Hospital (Beverly), and Addison Gilbert Hospital (Addison Gilbert), to similar Massachusetts hospitals. These comparator hospitals, shown below, were identified based on geography, service offerings, and patient flow patterns, and are intended to reflect a set of hospitals that a local patient could reasonably choose as a substitute for the focal hospital:

- **Winchester, Beverly, and Addison Gilbert:** Cambridge Health Alliance (CHA), Hallmark Health (Hallmark), Mount Auburn Hospital (Mount Auburn), North Shore Medical Center (North Shore MC);
- **LHMC:** Beth Israel Deaconess Medical Center (BIDMC), Boston Medical Center (BMC), Brigham and Women's Hospital (BWH), Massachusetts General Hospital (MGH), Tufts Medical Center (Tufts MC).¹³

Given that LHMC is an unusual hospital—a tertiary center located in a community setting—we compare LHMC's performance both to Boston academic medical centers and to Winchester, Beverly, and other community hospitals north of Boston.

¹¹ CTR. FOR HEALTH INFO. AND ANALYSIS, ANNUAL REPORT ON THE MASSACHUSETTS HEALTH CARE MARKET, 1 (Aug. 2013) [hereinafter CHIA ANNUAL REPORT AUG. 2013], available at <http://www.mass.gov/chia/docs/r/pubs/13/ar-ma-health-care-market-2013.pdf>. This report relies primarily on data from BCBS, HPHC, and THP, and notes where we were able to incorporate data from Aetna. Where our analysis reflects BCBS, HPHC, and THP data, we refer to these payers as the “three largest payers.” Where we are able to include Aetna data with the data of these three largest payers, we refer to the group as “four major payers” in Massachusetts.

¹² Although the HPC received some information from the parties that showed data for LHMC and Lahey Peabody separately, most information sources relied on for this Report provide only aggregated data for the two sites. Thus, in most places where we present data on LHMC, it includes data from Lahey Peabody.

¹³ In Section IV.B.2 of this report, which examines care delivery, we compare LHMC to all of these hospitals except BMC, which has had a case mix of less than 1.1 in recent years, which is not as high as LHMC and the four other Boston AMCs listed here. See Section II.A, *infra*, for a comparison of the case mix of these hospitals.

II. OVERVIEW OF THE PARTIES AND THE TRANSACTION

On September 27, 2013, Lahey Health System (Lahey) and Winchester Hospital (Winchester) executed an affiliation agreement (the Affiliation Agreement) for Lahey to acquire Winchester and all of its subsidiaries.¹⁴ Under the agreement, Winchester would become a fully integrated, community-based member of Lahey. Lahey would also acquire Winchester's employed physicians, Winchester Physician Associates (WPA). The stated objectives of Lahey's acquisition of Winchester are to maximize the use of community-based care at Winchester, direct residents of Winchester's service area seeking tertiary care to Lahey Hospital & Medical Center and away from Boston academic medical centers (AMCs), and maintain and enhance the parties' quality and efficiency of care.¹⁵ Under the Affiliation Agreement, Lahey will incorporate Winchester and its subsidiaries into Lahey's governance structure, invest in new health information technology (HIT) platforms, and provide ongoing capital support for Winchester.¹⁶ The Affiliation Agreement does not specify any specific changes to services by either party, but indicates that the parties will explore opportunities to rationalize duplicative services and expand needed services at Winchester.¹⁷ The remainder of this section describes each of these parties in turn.

A. LAHEY HEALTH SYSTEM

Lahey was formed in May 2012 by the merger of Northeast Health System (Northeast) and the Lahey Clinic Foundation. Lahey has a number of subsidiaries in northeastern Massachusetts and southern New Hampshire. Within Massachusetts, Lahey owns the following general acute care hospitals with a total of 629 licensed beds:¹⁸

- Lahey Hospital & Medical Center in Burlington and Peabody (LHMC) (327 beds)¹⁹
- Beverly Hospital in Beverly (Beverly; part of Northeast) (223 beds)
- Addison Gilbert Hospital in Gloucester (Addison Gilbert; part of Northeast) (79 beds)

LHMC, in Burlington and Peabody, is Lahey's central and largest hospital and serves as a teaching hospital of Tufts University School of Medicine. It has clinical affiliations with Atrius Health (Atrius)

¹⁴ Application by Winchester Hospital for Determination of Need under 105 C.M.R. 100.600-603 for Change in Ownership of Winchester Hospital, Exh. C, Affiliation Agreement (Oct. 25, 2013) [hereinafter Winchester Determination of Need Application, Exh. C, Affiliation Agreement]. On October 30, 2013, Winchester Hospital and Lahey Health System filed Notices of Material Change with the HPC pursuant to MASS. GEN. LAWS ch. 6D, §13 (2012).

¹⁵ LAHEY HEALTH SYS., NOTICE OF MATERIAL CHANGE TO THE HEALTH POLICY COMM'N (Oct. 30, 2013), AS REQUIRED UNDER MASS. GEN. LAWS CH. 6D § 13, Section 15 (2012) [hereinafter LAHEY NOTICE OF MATERIAL CHANGE].

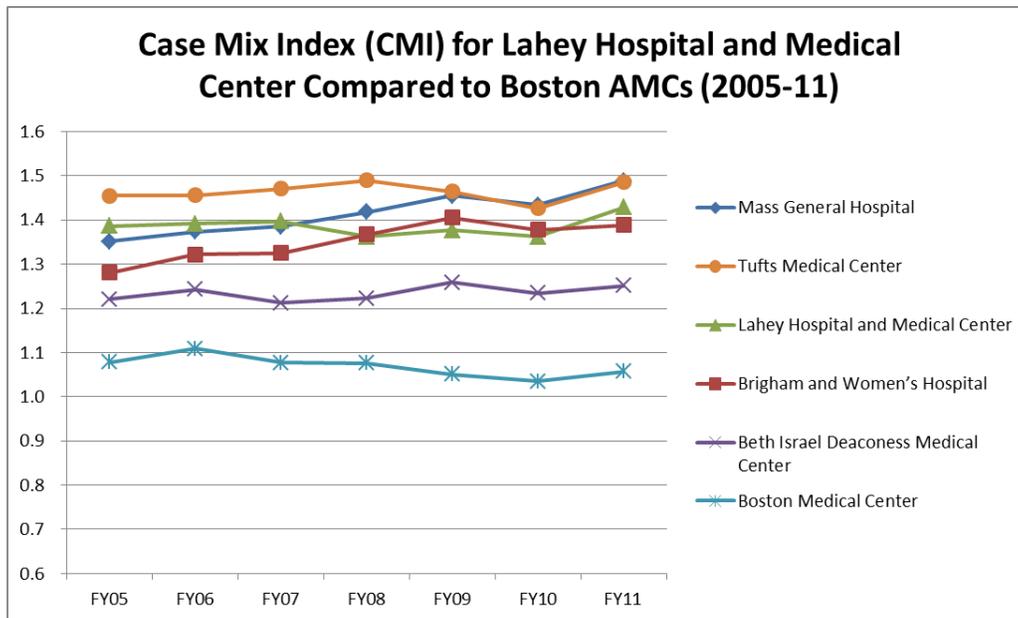
¹⁶ Lahey will make a one-time \$35 million investment in Winchester's HIT for the implementation of an Epic electronic health record, hospital and private practice connectivity infrastructure, and PeopleSoft financial software. Lahey has also committed to provide Winchester with a rolling capital commitment of no less than 110% of Winchester's post-closing annual depreciation for each of the five fiscal years following the Closing, which the parties have indicated would be approximately \$18.7 million per year. Winchester Determination of Need Application, Exh. C, Affiliation Agreement, *supra* note 14, at Section 5.8.2.

¹⁷ *Id.* at Sections 5.6.1 – 5.6.5.

¹⁸ MASS. DEPT. OF PUBLIC HEALTH, MASS. LICENSED OR CERTIFIED HEALTH CARE FACILITY/AGENCY LISTING (updated Apr. 8, 2014), available at <http://www.mass.gov/eohhs/docs/dph/quality/healthcare/healthcare-facilities.xls>.

¹⁹ LHMC's main campus in Burlington has 317 beds; its Peabody campus has 10 beds. In this report, data for the two campuses are reported together.

and Emerson Hospital. The complexity of the care LHMC provides, or “case mix index” (CMI), is much higher than the average Massachusetts community hospital, and is instead in line with the complexity of care provided at the five major adult AMCs in Boston,²⁰ as shown in the chart below:



Source: CTR. FOR HEALTH INFO. AND ANALYSIS, ACUTE HOSPITAL CASE MIX ADJUSTED DISCHARGES, 2005-2011

In addition to its general acute care hospitals, Lahey owns two outpatient centers, a 62 bed inpatient psychiatric hospital (BayRidge Hospital), two skilled nursing care facilities and a home health service (Lahey Health Senior Care), and a number of locations providing behavioral health care (Lahey Health Behavioral Services).

Lahey’s managed care network, Lahey Clinical Performance Network (LCPN), negotiates payer contracts on behalf of approximately 200 primary care physicians (PCPs) and 700 specialty care physicians (SCPs).²¹ This network includes over 30 PCP practices with offices in northeastern Massachusetts and southern New Hampshire.²² The network includes two local practice groups (LPGs), Lahey Clinic and Northeast Physician Hospital Organization (NEPHO), with Lahey acquiring NEPHO as part of the Northeast transaction.²³ The LPGs have separate contracts with most payers that predate the merger of Lahey Clinic and Northeast; they therefore still receive different prices from payers, although Lahey expects to transition over time to joint contracts with unified prices. Both

²⁰ For a general overview of characteristics of major AMCs, see AGO 2010 COST TRENDS REPORT, *supra* note 10. Like the five major adult AMCs in Boston, Lahey is considered a major teaching hospital by the Medicare Payment Advisory Commission (MedPAC).

²¹ These numbers include just over 300 Northeast Physician Hospital Organization (NEPHO) physicians. *Welcome to the Northeast PHO Announcement Page*, NORTHEAST PHYSICIAN HOSP. ORG., <http://nepho.org/> (last visited Apr. 16, 2014).

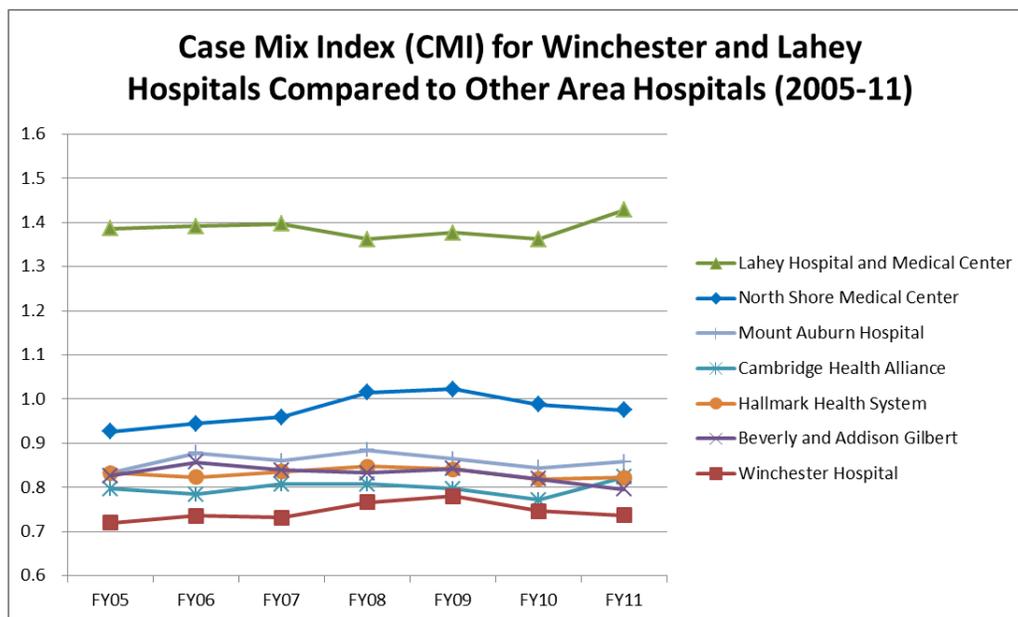
²² LAHEY NOTICE OF MATERIAL CHANGE, *supra* note 15, at Section 11.

²³ In this report, we will refer to the two LCPN LPGs as Lahey Clinic and NEPHO. When we refer to “Lahey physicians,” we are referring to both Lahey Clinic and NEPHO physicians.

groups participate in the Lahey Clinical Performance Accountable Care Organization (the Lahey ACO), a Medicare Shared Savings Program ACO.²⁴

B. WINCHESTER HOSPITAL

Winchester, owned by Winchester Healthcare Management, Inc., is a non-profit, acute care hospital located in Winchester, MA. It serves the northwest suburban Boston area, including Reading, Stoneham, Wilmington, and Woburn. Winchester has 189 licensed acute care beds, 24 bassinets, and collaborates with Boston Children’s Hospital (Children’s) to maintain 16 Level IIB Special Care bassinets.²⁵ In addition to Children’s, it is clinically affiliated with Tufts Medical Center (Tufts MC), Beth Israel Deaconess Medical Center (BIDMC), and McLean Hospital.²⁶ Winchester’s CMI is the lowest of area community hospitals, as shown in the chart below. We have included LHMC in the chart to show how dissimilar its CMI is to those of community hospitals.



Source: CTR. FOR HEALTH INFO. AND ANALYSIS, ACUTE HOSPITAL CASE MIX ADJUSTED DISCHARGES, 2005-2011

In addition to its hospital-based services, Winchester has numerous community satellite facilities, including outpatient centers in Wilmington and Woburn, an ambulatory surgery center, an endoscopy center, and a home care service. For some outpatient services, such as MRI and radiation oncology, Winchester participates in joint ventures with freestanding specialty providers.

²⁴ CTR. FOR MEDICARE & MEDICAID SERVS., MEDICARE SHARED SAVINGS PROGRAM ACCOUNTABLE CARE ORGS. 2012 & 2013 START DATE INFORMATION 70 (Dec. 2013), available at <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/ACO-Information-List.pdf>.

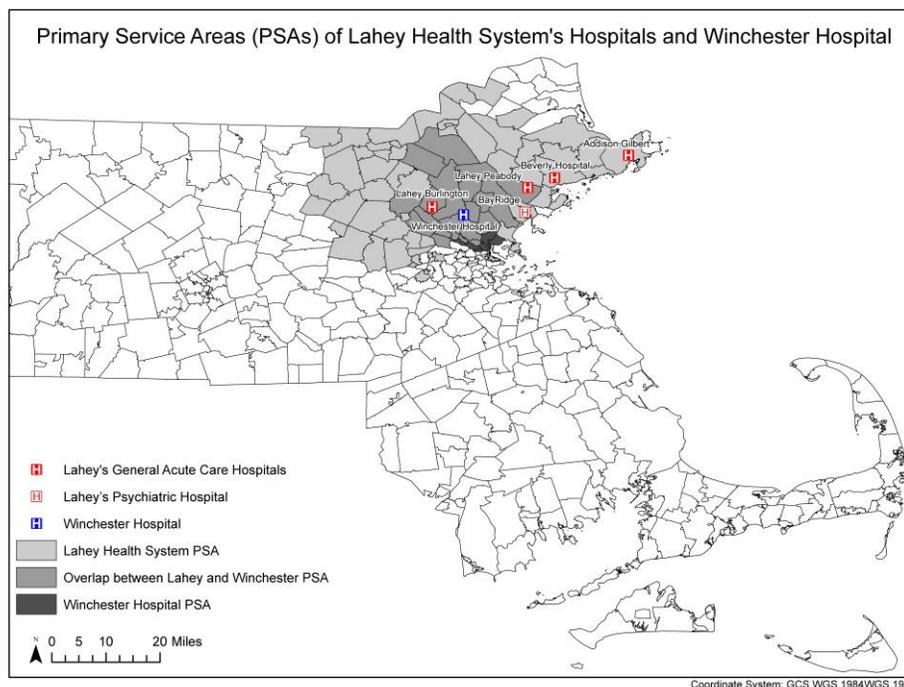
²⁵ WINCHESTER HOSP., NOTICE OF MATERIAL CHANGE TO THE HEALTH POLICY COMM’N (Oct. 30, 2013), AS REQUIRED UNDER MASS. GEN. LAWS CH. 6D § 13, Section 11 (2012) [hereinafter WINCHESTER NOTICE OF MATERIAL CHANGE]; *Special Care Nursery*, WINCHESTER HOSP., <http://www.winchesterhospital.org/our-services/medical-care/departments-centers/maternity-services/special-care-nursery-neonatology> (last visited Apr. 16, 2014).

²⁶ *About Us*, WINCHESTER HOSP., <http://www.winchesterhospital.org/about-us> (last visited Apr. 16, 2014).

Winchester counts over 400 physicians as active members of the hospital’s medical staff (physicians with admitting privileges).²⁷ Winchester’s owned physician group is WPA, which employs about 85 physicians, approximately 50 of whom are PCPs. Winchester also owns a 50% share of Stoneham Medical Group, a small private practice group.

WPA physicians are members of Highland Healthcare Associates IPA (Highland), a managed care contracting organization representing over 350 physicians. Highland is a member of the New England Quality Care Alliance (NEQCA), which contracts on behalf of Highland physicians (including WPA) with BCBS and HPHC.²⁸ For select payers, including THP, Highland contracts directly with payers on behalf of its physicians (including WPA), and not through NEQCA. Highland includes physician groups besides the 85-physician WPA, and is comprised of a total of about 100 PCPs and 250 SCPs.²⁹ WPA physicians represent about half of Highland’s covered lives. The Affiliation Agreement does not require Highland physicians besides those in WPA to join Lahey, but indicates that Highland physicians would have the option to join the Lahey contracting network as a third LPG on the same terms as Lahey Clinic and NEPHO.³⁰

Below is a map of the parties’ hospital primary service areas (PSAs).³¹



²⁷ WINCHESTER NOTICE OF MATERIAL CHANGE, *supra* note 25, at Section 11.

²⁸ Highland’s affiliation with NEQCA began in January 2010. *Highland Healthcare IPA Joins NEQCA*, NEW ENGLAND QUALITY CARE ALLIANCE, <http://www.neqca.org/SpotlightItems/HighlandIPA> (last visited Apr. 16, 2014).

²⁹ *About the IPA*, HIGHLAND HEALTHCARE ASSOCS. IPA, <http://www.ipaconnect.com/> (last visited Apr. 16, 2014).

³⁰ Winchester Determination of Need Application, Exh. C, Affiliation Agreement, *supra* note 14, at Sections 5.4.3 – 5.4.4.

³¹ As discussed in Section IV.A.3, the HPC generally defines a hospital PSA to be the contiguous area closest to a hospital from which the hospital draws 75% of its commercial discharges, and for which the hospital represents a minimum proportion of the zip code’s total discharges. See *infra* note 110.

III. ANALYSIS OF PARTIES' BASELINE PERFORMANCE (2010 – 2013)

Our analysis of the impact of a proposed transaction on costs, quality, and access begins with the parties' baseline performance in these areas, prior to the transaction. Part III examines the recent performance of Lahey and Winchester in each of these areas.

A. COST PROFILE

The HPC examined different measures of the parties' cost and financial performance, including their size, prices, health status adjusted TME, and market share. We examined these measures over time and compared to other providers to establish the parties' baseline performance leading up to the proposed transaction. In Part IV, we will combine the parties' current performance with details of the parties' goals and plans to project the likely impact of the transaction on health care costs. In examining these elements of the parties' cost profile, the HPC found:

- The parties are in strong financial condition.
- The parties' hospital prices are generally in the medium range compared to other hospitals.
- The parties' physician prices and health status adjusted TME are generally in the low to medium range compared to other physician groups.
- The parties have moderately strong market share in their service areas.

1. The Parties Are in Strong Financial Condition

The HPC reviewed audited financial statements from 2010 through 2012 for the parties, which showed that they are in strong financial condition.³² Lahey's recent operating performance compares favorably to the other largest provider systems in Massachusetts.³³ From 2010 to 2012, Lahey generated higher operating margins than the other large provider systems, averaging 3.2% of revenue over the last three years. Lahey's patient service revenue has increased by about 5% per year, faster than BIDMC and UMass Memorial Health Care (UMass), but not as quickly as Partners HealthCare System (Partners) and Atrius. Lahey also has a healthy reserve of cash and short-term investments, its current ratio is strong, and its average age of plant is comparable to its peers. A review of Lahey's 2013 audited financial statements revealed continued positive operating results.

³² In order to examine the baseline financial position of Lahey Health System, we combined available financial data for the Lahey Clinic Foundation and Northeast Health System for fiscal year (FY) 2010 – FY2012. The figures provided do not account for variations between the two organizations' accounting practices or for transactions between the two companies.

³³ As shown in the table *infra*, the six largest provider systems in Massachusetts, measured by net patient service revenue (NPSR) in 2012, are Partners HealthCare, Inc. (Partners), the University of Massachusetts Memorial Health Care System, Inc. (UMass), Atrius Health (Atrius), Steward Health Care System LLC (Steward), Beth Israel Deaconess Medical Center, Inc. (BIDMC), and Lahey.

Financial Performance of Six Largest Massachusetts Provider Systems by NPSR (FY2011-2012)³⁴

	Partners	UMass	Atrius	Steward	BIDMC	Lahey
NPSR (\$000)						
FY 2011	6,342,273	2,014,247	1,680,797	1,356,704	1,407,985	1,360,497
FY 2012	6,828,189	2,035,378	1,909,009	1,678,068	1,448,824	1,427,172
Total Operating Revenue (\$000)						
FY 2011	8,481,112	2,204,754	1,740,119	1,604,185	1,758,738	1,401,986
FY 2012	8,981,337	2,223,984	2,007,603	1,963,164	1,795,614	1,475,233
Operating Margin						
FY 2011	2.7%	1.5%	3.0%	-2.8%	2.3%	4.3%
FY 2012	2.1%	0.2%	1.1%	-1.1%	1.7%	3.5%
Total Net Assets (\$000)						
FY 2011	5,453,587	561,797	269,253	95,565	787,346	531,350
FY 2012	5,282,679	603,524	297,521	21,322	913,739	554,445
Current Ratio						
FY 2011	2.4	1.8	1.3	0.9	3.5	1.9
FY 2012	2.6	1.7	1.4	1.0	3.3	2.0
Days Cash on Hand						
FY 2011	235	54	57	10	181	89
FY 2012	251	49	52	12	202	102
Cash and equivalents, and readily available investments (\$000)						
FY 2011	5,052,357	308,129	258,421	44,155	812,439	310,284
FY 2012	5,764,747	287,543	274,799	62,697	930,668	374,162
Average age of plant						
FY 2011	6.7	10.0	6.9	N/A	18.9	12.0
FY 2012	6.9	10.0	5.7	N/A	18.8	10.5

³⁴ PricewaterhouseCoopers LLP, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 14, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 2, 2011; PricewaterhouseCoopers LLP, Consolidated Financial Statements with Supplemental Consolidating Information: UMass Memorial Health Care, Inc. and Affiliates: Dec. 21, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements with Supplemental Consolidating Information: UMass Memorial Health Care, Inc. and Affiliates: Dec. 20, 2011; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Atrius Health, Inc. and Affiliates: Apr. 23, 2013; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Atrius Health, Inc. and Affiliates: May 11, 2012; Ernst & Young LLP, Consolidated Financial Statements: Steward Health Care System, LLC: Apr. 2, 2013; Ernst & Young LLP, Consolidated Financial Statements: Steward Health Care System, LLC: Jan. 30, 2012; KPMG LLP, Consolidated Financial Statements and Other Financial Information: Beth Israel Deaconess Medical Center, Inc. and Affiliates: Dec. 20, 2012; KPMG LLP, Consolidated Financial Statements and Other Financial Information: Beth Israel Deaconess Medical Center, Inc. and Affiliates: Jan. 9, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Lahey Clinic Foundation, Inc. and Affiliates: Jan. 18, 2013; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Lahey Clinic Foundation, Inc. and Affiliates: Feb. 1, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Northeast Health System, Inc. and Affiliates: Jan 18, 2013; Deloitte & Touche, LLP, Consolidated Financial Statements: Northeast Health System, Inc. and Affiliates: Jan 23, 2012.

NOTES

- (1) Net Patient Service Revenue (NPSR) is the provider’s total inpatient and outpatient revenue after deductions for free care charges and contractual adjustments. Provision for bad debt is also treated as an NPSR reduction. Variations in providers’ methods of accounting for free care and bad debt may affect these figures.
- (2) Total Operating Revenue includes all revenues gained from everyday business, including NPSR.
- (3) Operating Margin measures the system’s profitability from patient care services and other operations.
- (4) Total Net Assets is the system’s total assets minus its liabilities.
- (5) Current Ratio measures the system’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 system’s existing current assets.
- (6) Days Cash on Hand is the number of days of operating expenses that the system could pay with its current available cash, cash equivalents, and readily available investments.
- (7) Cash, cash equivalents, and readily available investments refer to assets that are readily available to use (e.g., stocks, bonds, and internally designated funds that could be quickly liquidated). Variations in providers’ methods of reporting their assets may affect these figures.
- (8) Average Age of Plant measures the average age of the system’s facilities, including capital improvements and major equipment purchases. Steward’s age of plant is not included because comparable data were not available.

Winchester is also in a relatively strong financial position. Its patient service revenue grew between 2010 and 2012 at a rate comparable to most area community hospitals, as shown in the table below.³⁵ While its operating margins were more modest than those of some other providers, they remained stable at a time that other area community hospitals experienced volatility. Winchester’s days cash on hand figure is relatively strong, and while its current ratio is low, it is not so low as to raise concern. A review of Winchester’s 2013 audited financial statements revealed continued positive operating results. The parties acknowledge that the proposed transaction is not motivated by any immediate financial distress on Winchester’s part.

Financial Performance of Winchester Compared to Area Community Hospitals (FY2011-2012)³⁶

	North Shore MC	Mt. Auburn	Hallmark	Winchester	CHA	Emerson
NPSR (\$000)						
FY 2011	481,208	340,450	291,795	276,050	230,455	168,643
FY 2012	503,511	348,007	293,455	290,350	282,232	177,004
Total Operating Revenue (\$000)						

³⁵ As described in Section I.B., the HPC selected comparators for Winchester based on geography, patient flow patterns, and community hospital status.

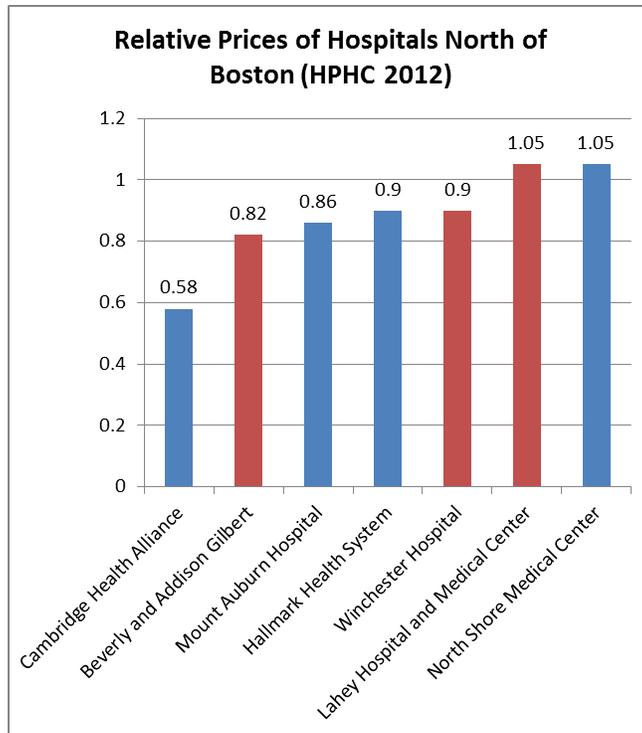
³⁶ PricewaterhouseCoopers LLP, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 14, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 2, 2011; KPMG LLP, Consolidated Financial Statements and Other Financial Information: Mount Auburn Hospital and Subsidiary: Dec. 29, 2012; KPMG LLP, Consolidated Financial Statements and Other Financial Information: Mount Auburn Hospital and Subsidiary: Jan. 9, 2012; Deloitte & Touche, LLP, Consolidated Financial Statements: Hallmark Health Corp. and Affiliates: Dec. 20, 2013; Deloitte & Touche, LLP, Consolidated Financial Statements: Hallmark Health Corp. and Affiliates: Jan. 18, 2012; KPMG LLP, Combined Financial Statements and Supplemental Schedules: Winchester Healthcare Management, Inc. and Affiliates: Dec. 20, 2012; KPMG LLP, Combined Financial Statements and Supplemental Schedules: Winchester Healthcare Management, Inc. and Affiliates: Dec. 22, 2011; PricewaterhouseCoopers LLP, Financial Statements and Supplemental Schedules: Cambridge Health Alliance: Nov. 20, 2012; PricewaterhouseCoopers LLP, Financial Statements and Supplemental Schedules: Cambridge Health Alliance: Nov. 14, 2011; PricewaterhouseCoopers LLP, Consolidated Financial Statements and Supplemental Schedules: Emerson Health System, Inc. and Affiliates: Dec. 20, 2012; PricewaterhouseCoopers LLP, Consolidated Financial Statements and Supplemental Schedules: Emerson Health System, Inc. and Affiliates: Dec. 20, 2011.

FY 2011	503,343	355,956	311,989	292,640	1,333,065	175,077
FY 2012	528,418	363,485	319,745	310,093	780,346	184,302
Operating Margin						
FY 2011	-3.9%	3.9%	4.4%	1.9%	3.8%	1.4%
FY 2012	-2.7%	3.1%	4.5%	2.0%	-1.4%	2.0%
Total Net Assets (\$000)						
FY 2011	2,097	219,316	152,672	173,063	264,526	43,811
FY 2012	-18,117	244,735	184,433	201,116	308,886	47,006
Current Ratio						
FY 2011	1.00	4.38	3.01	1.27	1.61	1.93
FY 2012	1.15	4.70	3.52	1.35	2.24	1.97
Days Cash on Hand						
FY 2011	33	125	230	145	88	68
FY 2012	52	146	259	170	121	76

2. The Parties' Hospital Prices Are Generally in the Medium Range Compared to Other Hospitals

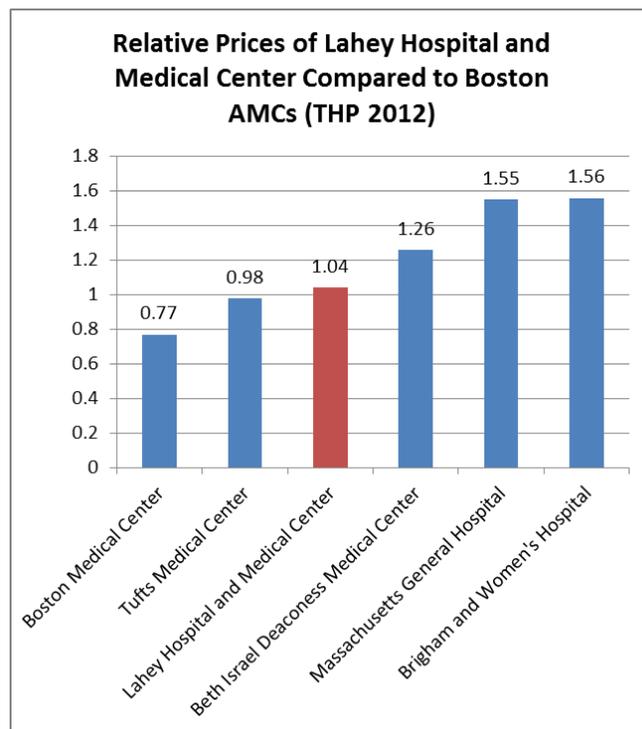
The HPC examined hospital relative price³⁷ data for the parties from 2010 to 2012, and found consistent trends across the top three payers. Winchester's prices are near the middle compared with other area hospitals. Among the Lahey hospitals, Beverly and Addison Gilbert's prices are near the middle, while LHMC's prices are on the high end compared with other area hospitals. The following chart is an example of this pattern, showing relative prices for inpatient and outpatient services for one major payer, with the parties shown in red.

³⁷ Relative price is a standardized pricing measure that accounts for differences among provider service volume, service mix, patient acuity, and insurance product types in order to allow comparison of negotiated price levels. CHIA ANNUAL REPORT AUG. 2013, *supra* note 11, at 35. For each payer, 1.0 is the average network-wide relative price for all Massachusetts hospitals in 2012. Thus, 0.94 is 6% lower than the network average, while 1.08 is 8% higher than the network average.



Source: CHIA 2012 RP, APM, and TME Databook, *infra* note 40.

While LHMC’s hospital prices are high compared to nearby community hospitals, they are low to medium compared to the Boston AMCs. The following chart is an example of this trend, showing relative prices for inpatient and outpatient services for one major payer.



Source: CHIA 2012 RP, APM, and TME Databook, *infra* note 40.

Through the design of tiered and limited networks, payers can incentivize some consumers to obtain care at lower-priced hospitals by offering consumers lower cost-sharing for care obtained at those hospitals. For two major payers, all of the parties' hospitals are in the lowest cost-sharing tier; for a third major payer, the parties' hospitals are in the middle tier.³⁸

3. The Parties' Physician Prices and Health Status Adjusted TME Are Generally in the Low to Medium Range Compared to Other Physician Groups

a. *Physician Prices*

The HPC examined physician relative price data from 2009 to 2011 for four of the major payers in the state,³⁹ and found that the physician prices for Lahey's two local practice groups, Lahey Clinic and NEPHO, are in the low to medium range,⁴⁰ with NEPHO's prices generally equal to or slightly higher than Lahey Clinic's. The 2011 physician prices for Winchester's employed physicians, Winchester Physician Associates (WPA), are equivalent to or slightly lower than Lahey's for three of the four major payers, and higher than Lahey's for the fourth—and largest—payer.

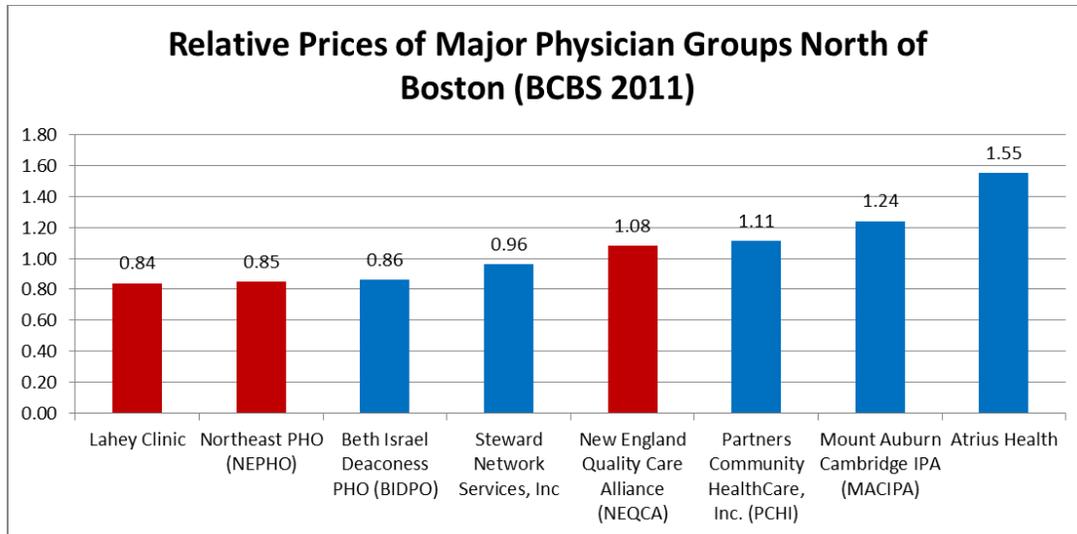
WPA is a member of the contracting entity Highland IPA (Highland), and contracts through Highland with two of the four payers examined, and through NEQCA for the other two.⁴¹ The following chart shows 2011 physician prices for one major payer for whom NEQCA negotiates WPA's prices. For this payer, Lahey Clinic and NEPHO have the lowest physician prices compared to other area providers, while WPA's prices, represented by NEQCA in this chart, are higher.

³⁸ *Hospital Choice Cost Sharing*, BLUE CROSS BLUE SHIELD OF MASS., <http://www.bluecrossma.com/plan-education/medical/hccs/> (last visited Apr. 16, 2014); *Your Choice Tiered Provider Network Options*, TUFTS HEALTH PLAN, http://www.tuftshealthplan.com/members/members.php?sec=how_your_plan_works&content=your_choice&rightnav=your_choice_nav (last visited Apr. 16, 2014); *Tiered Network Plans: ChoiceNet and Hospital Prefer*, HARVARD PILGRIM HEALTH CARE, https://www.harvardpilgrim.org/portal/page?_pageid=253,361264&_dad=portal&_schema=PORTAL (last visited Apr. 16, 2014).

³⁹ 2012 physician relative price data will likely be available from CHIA in the second half of 2014.

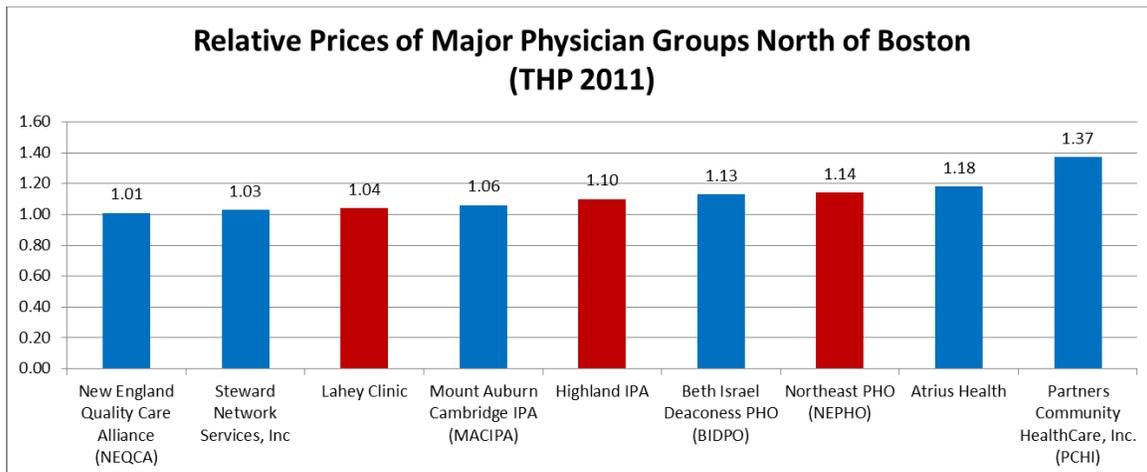
⁴⁰ See, e.g., CTR. FOR HEALTH INFO. AND ANALYSIS, *2012 Relative Prices, APM, and TME by Payer Databook* (last visited Apr. 15, 2014), <http://www.mass.gov/chia/docs/r/pubs/13/2013-annual-report-rp-ape-tme-data-book.xlsx> [hereinafter CHIA 2012 RP, APM, and TME Databook]; CTR. FOR HEALTH INFO. AND ANALYSIS, HEALTH CARE PROVIDER PRICE VARIATION: RESULTS FROM 2011 - *Data Appendix* (Feb. 2013), <http://www.mass.gov/chia/docs/r/pubs/13/relative-price-variation-data-appendix-2013-03-06.xlsx>.

⁴¹ Thus, where prices for Highland are shown in this report, Highland's prices (and not NEQCA's) represent the prices for WPA. Where only NEQCA's prices are shown, and no separate price for Highland is shown, this indicates that Highland and WPA are contracting through NEQCA, and NEQCA's prices are representative of the prices received by WPA and the other members of Highland.



Source: CHIA 2012 RP, APM, and TME Databook, supra note 40.

The following chart compares Lahey Clinic and NEPHO physician prices with the prices of Highland, WPA’s contracting entity for this payer. Lahey has been working with payers to migrate its Lahey Clinic prices to NEPHO’s prices over time. Section IV.A.1 will project how total medical spending may be impacted if WPA physicians join Lahey payer contracts at NEPHO prices.



Source: CHIA 2012 RP, APM, and TME Databook, supra note 40.

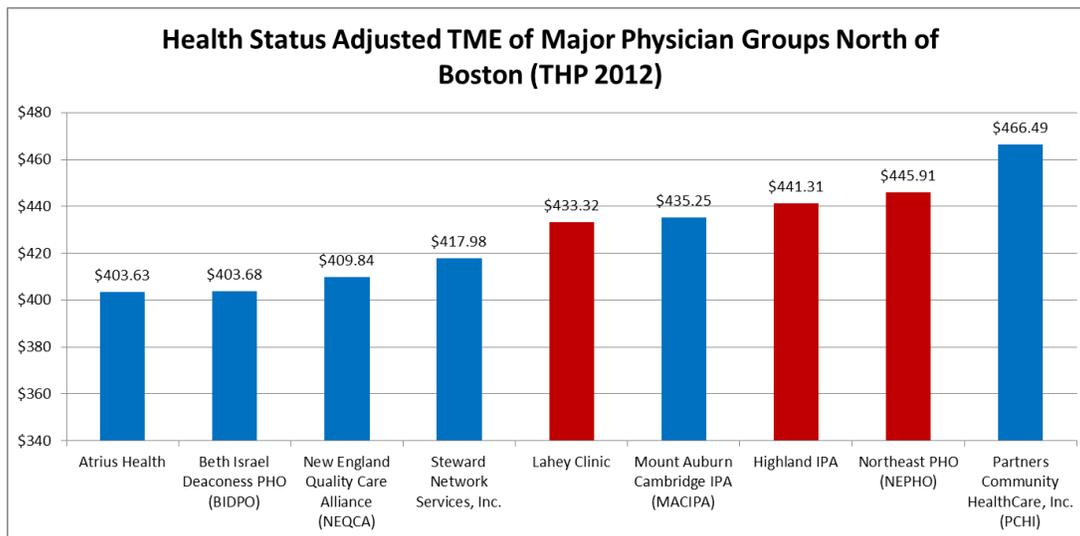
b. Health Status Adjusted TME

The HPC also reviewed the parties’ TME to examine the total cost of all health care services for health maintenance organization (HMO) and point of service (POS) patients cared for by the parties.⁴² TME reflects both utilization and price; high TME can reflect high utilization of services,

⁴² TME is expressed as a per member per month dollar figure that reflects the average monthly covered medical expenses paid by the payer and the member for all of the health care services the member receives in a year. TME is currently publicly reported by provider system for patients who have explicitly selected a PCP with the provider system (patients in HMO and POS products, which require patients to select a PCP and obtain referrals to other providers through that PCP).

but it can also reflect high prices of the hospitals or physicians that patients use. The TME data we present is adjusted according to the health status of the provider’s patient population.⁴³

The HPC found that the 2010 to 2012 health status adjusted TME of Lahey Clinic and Highland are in the medium range among area providers,⁴⁴ and consistently lower than that of NEPHO, despite the fact that LHMC’s hospital prices are higher than those of Winchester, Beverly, and Addison Gilbert. The following chart shows this TME trend for one payer in 2012.⁴⁵



Source: CHIA 2012 Physician Group TME Databook, *supra* note 45.

4. The Parties’ Hospital Market Share and Physician Market Share

Based on revenue data from the major commercial payers collected by CHIA, Lahey is the fifth largest acute hospital system in the state,⁴⁶ and the sixth largest physician group. If the WPA physicians were to join Lahey, Lahey would remain the sixth largest physician system in the state, after Partners Community Healthcare Inc. (PCHI), Atrius, Beth Israel Deaconess Care Organization (BIDCO), Steward Health Care System (Steward), and NEQCA.⁴⁷

a. Hospital Market Share

⁴³ It is standard industry practice to adjust for health status differences when comparing TME, so a provider caring for a sicker population will not appear to have higher spending solely for that reason. Since each payer calculates health status scores for its network according to its own methodology, TME should not be compared across payers.

⁴⁴ While we did not have access to TME data for WPA specifically, it is the largest primary care group in Highland, responsible for approximately half of Highland’s HMO/POS member months. *See supra* Section II.B.

⁴⁵ When the TME of these provider organizations was examined regionally, by focusing only on those practice groups within each provider organization that operate north of Boston, the results were very similar. The only exception was that for one payer, NEQCA’s TME on a regional basis was high compared to the regional TME of the other providers shown. CTR. FOR HEALTH INFO. AND ANALYSIS, MASSACHUSETTS TOTAL MEDICAL EXPENSES: RESULTS FROM 2010 - 2012 (Oct. 2013), <http://www.mass.gov/chia/docs/r/pubs/13/appendix-2-cy2010-cy2012-tme-by-provider.xlsx> [hereinafter CHIA 2012 PHYSICIAN GROUP TME DATABOOK].

⁴⁶ CHIA ANNUAL REPORT AUG. 2013, *supra* note 11, at 33.

⁴⁷ We estimated WPA’s share of statewide physician payments by taking a percentage of NEQCA’s physician payments. According to the parties, WPA physicians represent 18% of NEQCA’s covered lives.

In addition to size, we examined the parties' hospital market share and physician market share, or their share of hospital services and their share of physician services provided to residents of their respective service areas. We examined hospital market shares by measuring the commercial⁴⁸ inpatient utilization of residents of the parties' PSAs.⁴⁹ In Winchester's PSA, Winchester and Lahey's hospitals have the second and third largest shares, as shown in the table below. The largest market share in Winchester's PSA belongs to Partners, which has a large share primarily due to residents of the PSA traveling into Boston to obtain care at BWH and MGH. Lahey, BIDCO, and Mount Auburn all have roughly similar market shares.

Hospital Market Shares in Winchester's PSA

Hospital System	Commercial Discharges	Market Share
Partners	8,854 – 11,286	31.5% - 40.2% ⁵⁰
Winchester	4,322	15.4%
Lahey	2,632	9.4%
BIDCO	2,612 – 3,483	9.3% - 12.4% ⁵¹
Mt. Auburn	2,392	8.5%

In LHMC's PSA, Lahey's hospitals have the second largest share of commercial discharges and Winchester has the fourth largest, as shown below. Partners has the largest market share, Circle Health (Lowell General Hospital, including the former Saints Medical Center) has the third largest, and BIDCO has the fifth largest. Qualitatively, Circle Health, Winchester, and BIDCO all have similar market shares.

Hospital Market Shares in LHMC's PSA

Hospital System	Commercial Discharges	Market Share
Partners	17,575 – 21,928	30.7% - 38.4% ⁵²
Lahey	7,204	12.6%
Circle Health	5,494	9.6%

⁴⁸ Because hospitals primarily negotiate with commercial, not government, payers for prices, commercial market share is more relevant for assessing the competitive impact of a transaction. See Section I.B.

⁴⁹ As discussed in Section IV.A.3, the HPC generally defines a hospital PSA to be the contiguous area closest to a hospital from which the hospital draws 75% of its commercial discharges. See *infra* note 110 (describing PSA methodology).

⁵⁰ Where the HPC reports a range for a provider organization's hospital market share in this report, that range reflects the fact that the provider organization has non-owned hospital contracting affiliates, and the scope of the provider organization's market share depends on whether those non-owned hospital affiliates are treated as part of the provider organization for purposes of reporting market shares. In this case, Partners has two non-owned hospital affiliates, Emerson and Hallmark (which has two hospital campuses). If PSA discharges from those two hospitals are included in Partners' market share, Partners' market share in Winchester's PSA increases from 31.5% to 40.2%.

⁵¹ BIDCO would have the third largest market share, with 12.4% of discharges, if PSA discharges from CHA, BIDCO's non-owned hospital contracting affiliate, were included in reporting BIDCO's market share. *Id.*

⁵² See *supra* note 50.

Winchester	5,287	9.3%
BIDCO	4,232 – 4,848	7.4% - 8.5% ⁵³

As shown below, in Beverly’s PSA, Lahey’s hospitals have the second largest share of commercial discharges, and Winchester’s share makes it a distant third. Partners has the largest market share, while BIDCO and Children’s respectively have the fourth and fifth largest market shares.

Hospital Market Shares in Beverly’s PSA

Hospital System	Commercial Discharges	Market Share
Partners	6,178 – 6,890	43.9% - 49.0% ⁵⁴
Lahey	4,603	32.7%
Winchester	799	5.7%
BIDCO	662 – 701	4.7% - 5.0% ⁵⁵
Children’s	451	3.2%

b. Physician Market Share

We also examined Lahey’s and Winchester’s share of primary care physician (PCP) services in their respective service areas. Using claims-level data from the All Payer Claims Database (APCD) for the largest commercial payer in Massachusetts, we constructed PSAs for Lahey’s and WPA’s PCPs (hereinafter primary care PSA).⁵⁶ We found that in WPA’s primary care PSA, WPA physicians have the second largest share of PCP services, as measured by either revenue or visits. Partners physicians have the largest share, Lahey physicians (Lahey Clinic and NEPHO) have the third largest share, and NEQCA physicians have the fourth largest share, as shown below. Atrius and BIDCO have the fifth and sixth largest shares of PCP services, with their precise rank depending on whether their shares are measured by revenue or visits.

Physician Market Shares in Winchester’s Primary Care PSA

Physician Group	Revenue-Based Shares	Volume-Based Shares (Visits)
Partners	26%	22%
WPA	18%	18%
Lahey	11%	13%
NEQCA	11%	11%

⁵³ See *supra* note 51.

⁵⁴ See *supra* note 50.

⁵⁵ See *supra* note 51.

⁵⁶ For the purposes of this review, we defined a primary care PSA to be the area from which a physician group draws 75% of its primary care visits. This is the first time the HPC has analyzed market share using APCD data. Due to time and data constraints, our analysis is based on data for the largest commercial payer. As the APCD is expanded and refined, we look forward to further developing our APCD-based analyses.

Atrius	7%	5%
BIDCO	6%	6%

In Lahey’s primary care PSA, Lahey has the largest share of PCP services and WPA has the third largest share, as shown below. Partners had the second largest share, while Atrius and NEQCA have the fourth and fifth largest shares, with their precise rank depending on whether their shares are measured by revenue or visits.⁵⁷ When a provider’s share of revenue is below its share of visits in a given area, that provider’s revenue per visit is below average relative to other providers in the same area. For example, Lahey’s share of visits in its PSA is 32% whereas its share of revenue is 30%. This reflects a combination of lower unit prices and/or lower patient acuity.

Physician Market Shares in Lahey’s Primary Care PSA

Physician Group	Revenue-Based Shares	Volume-Based Shares (Visits)
Lahey	30%	32%
Partners	28%	24%
WPA	8%	8%
Atrius	6%	5%
NEQCA	5%	5%
BIDCO	4%	5%

B. QUALITY AND CARE DELIVERY PROFILE

The HPC examined the parties’ quality performance⁵⁸ in recent years to establish a baseline from which to assess whether differences in the parties’ performance could be expected to drive beneficial clinical impacts following the transaction.⁵⁹ We focused on four core dimensions of quality: health care system structures, clinical processes, clinical outcomes, and patient experience of care. We discuss each of these below.

After examining over 90 nationally recognized measures across these dimensions,⁶⁰ we found:

⁵⁷ We also examined PCP market shares based on headcounts of 2012 Massachusetts Health Quality Partners (MHQP) data, which contains the number, practice location, and system affiliation of most physicians in Massachusetts. While there are methodological limitations to headcount-based market share analysis, including that each physician is counted equally regardless of variation in the patient volume seen by different PCPs, the headcount-based findings were qualitatively consistent with the results of our claims-based APCD analysis.

⁵⁸ Our analysis is based on the best available, nationally accepted measures of quality and care delivery performance. As additional measures of quality performance are developed, we look forward to incorporating them into our future work.

⁵⁹ An important factor that may increase the likelihood of a beneficial quality impact from a transaction is substantial pre-merger clinical superiority of the acquiring party, though differences in quality by themselves do not guarantee a transaction will result in quality improvements. See Patrick Romano & David Balan, *A Retrospective Analysis of the Clinical Quality Effects of the Acquisition of Highland Park Hospital by Evanston Northwestern Healthcare*, 18 INTL. J. OF ECON. OF BUSINESS 45 (2011) (“[P]re-merger quality differences suggest one hospital has something of value to impart to the other.”).

⁶⁰ We assessed a broad spectrum of measures capturing different segments of care. Where possible, measures were drawn from the Massachusetts Standard Quality Measure Set. See CTR. FOR HEALTH INFO. AND ANALYSIS, MASS. STANDARD

- LHMC, Beverly,⁶¹ and Winchester have strong quality performance compared with Massachusetts hospital averages. Lahey Clinic physicians, NEPHO, and Highland perform in line with the state average among Massachusetts medical groups. Each party performs better on certain measures, but their overall quality profiles are similar.
- Available data do not indicate that the 2012 merger of the Lahey Clinic system with Northeast has yet had a clear impact on inpatient quality performance.

1. Lahey and Winchester Have Strong Quality Performance, with Few Instances of Material Variation

Provider organizations in Massachusetts generally deliver high quality care, and demonstrate improvement over time. The parties' performance is generally consistent with this norm. We examined quality measures over the most recently available three-year period,⁶² analyzing the parties' system-wide performance and any variation in performance among providers within each system. We then compared the results to other Massachusetts providers and to national and state benchmarks.

a. Measures of Health System Structures

Our examination of a series of structural factors related to quality and patient safety (including, e.g., staff policies, accreditation, certification, and staff influenza vaccination) indicates that the parties perform satisfactorily, with Lahey outperforming Winchester in some areas.⁶³ Winchester met the 2013 state average rate of influenza vaccination for healthcare personnel of 86%, while 97% of LHMC personnel were vaccinated.⁶⁴ Both parties have well-developed internal systems for tracking quality and supporting clinical improvement.⁶⁵ The parties also use HIT systems to support their inpatient

QUALITY MEASURE SET RECOMMENDATION (Mar. 7, 2014), available at <http://www.mass.gov/chia/docs/g/sqac/2013/2013-final-report-appendix-b-standard-quality-measure-set.pdf>.

⁶¹ In most cases, sources of inpatient quality data aggregated information on Addison Gilbert with data for Beverly. We include disaggregated information in this section when available.

⁶² CMS released some quality data using four-quarter time frames that do not match calendar years. For CMS Hospital Compare inpatient process and patient satisfaction measures discussed in this report, 2012 data cover the first quarter (Q1) of 2011 through Q3 of 2012, and 2013 data cover Q2 of 2012 through Q1 of 2013. For inpatient mortality and readmissions measures, 2010 data cover Q3 of 2009 through Q2 of 2010, 2011 data cover Q3 of 2010 through Q2 of 2011, and 2012 data cover Q3 of 2011 through Q2 of 2012.

⁶³ The Leapfrog Group[®] conducts an annual assessment of hospital patient safety performance across the nation. Based upon a series of factors, including utilization of computerized physician order entry (CPOE), ICU physician staffing ratios, core safety practices, five surgical care improvement project measures, data on seven hospital acquired conditions, and six patient safety indicators, the Leapfrog Group assigns a Hospital Safety ScoreSM to each hospital. LHMC, Beverly, and Addison Gilbert all received a score of "A," while Winchester received a "B." The Hospital Safety ScoreSM grades hospitals on data related to how safe they are for patients. See *Hospital Safety Score*, THE LEAPFROG GROUP, www.hospitalsafetyscore.org (last visited Apr. 6, 2014).

⁶⁴ These data are from the Massachusetts Department of Public Health for 2012-2013; DPH's target rate of vaccination for 2013 was 90%. See MASS. DEPT. OF PUBLIC HEALTH, 2012 HEALTHCARE ASSOCIATED INFECTION ANNUAL REPORT (2013), available at <http://www.mass.gov/eohhs/docs/dph/quality/healthcare/hai/employee-flu-vac/acute-care-hospital-2012-2013.pdf>.

⁶⁵ The development and implementation of systems to track and improve quality can play a part in improving clinical performance. See Loes Schouten et al, *Evidence for the Impact of Quality Improvement Collaboratives: Systematic Review*, 336 BMJ 1491 (Jun. 24, 2008), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440907/pdf/bmj-336-7659-res-01491-el.pdf>.

clinical processes.⁶⁶ The HPC's review of records of regulatory compliance relevant to operating a safe, high quality provider organization indicates that the parties have consistently complied with core safety requirements and responded appropriately to routine events.

b. Clinical Process Measures

Clinical processes are the elements of workflow in a clinical environment, such as adherence to guidelines or the timely provision of certain accepted services. We examined the following clinical process measures:

- *Hospital Process Composites for Acute Myocardial Infarction (AMI), Pneumonia, Heart Failure, and Surgical Care Improvement Project (SCIP) Measures.*⁶⁷ LHMC and Beverly perform slightly above national and state averages on these measures, while Winchester performs slightly below those averages. This is, however, a small difference among high-performing institutions.⁶⁸ All three hospitals demonstrate consistent improvement over the time period examined.
- *Ambulatory Care (HEDIS) Process Measures.*⁶⁹ The HPC analyzed 25 measures that show how primary care providers perform on preventative care services, including hypertension, cancer screening, heart failure, and diabetes. Lahey Clinic physicians and NEPHO are above the state averages for these metrics, while Highland (which includes WPA⁷⁰) performs at about the state average.⁷¹

⁶⁶ Lahey plans to implement an Epic HIT system starting in 2015, which will replace the various clinical support HIT systems currently in use at its hospitals.

⁶⁷ The HPC used CMS Hospital Compare data to create a singular weighted composite process measure of the parties' performance from 2010 through Q1 of 2013. The weighted process measure was composed of hospital process composites for AMI, pneumonia, heart failure and SCIP measures. *See Measures Displayed on Hospital Compare*, CTR. FOR MEDICARE & MEDICAID SERVS., <http://www.medicare.gov/hospitalcompare/Data/Measures-Displayed.html> (last visited Apr. 16, 2014) (process measures for AMI, heart failure, pneumonia, and SCIP listed under the heading of "Timely and Effective Care").

⁶⁸ In 2013, Winchester achieved a 96.5% score in the CMS Hospital Compare Hospital Process Composite, compared to the Massachusetts average score of just over 98% and Lahey's score of just over 99%. This lower score was driven mainly by a lower rate of statin prescription at discharge for heart attack patients, lower rate ACE inhibitor or ARB prescription for heart failure patients with left ventricular systolic dysfunction, and lower frequency of discharge instructions being given to heart failure patients.

⁶⁹ The HPC obtained 2009 and 2010 data from MHQP and used measures derived from the Healthcare Effectiveness Data Information Set (HEDIS) to assess clinical processes in the outpatient setting. The composite presented includes metrics for adult diagnostic and preventive care, depression, medication management, asthma care, heart disease and chronic disease management, diabetes care, well-child visits (where applicable), pediatric medications and testing (where applicable), and women's health. Certain pediatric measures for which no data were available for Lahey physicians were excluded. *See What is HEDIS?*, NATIONAL COMMITTEE FOR QUALITY ASSURANCE, <http://www.ncqa.org/HEDISQualityMeasurement/WhatIsHEDIS.aspx> (last visited Apr. 16, 2014).

⁷⁰ Disaggregated data for WPA was not available, and we therefore present the available data on Highland IPA for this metric. WPA is the single largest primary care group in Highland, and cares for about half of Highland's covered lives. *See supra* note 44.

⁷¹ Lahey Clinic and NEPHO scored better than Highland on 70% and 58% of the individual metrics, respectively, although the amount of variation on most of these measures is small.

Overall, on these nationally accepted process measures, LHMC and Beverly perform above the state and national averages, while Winchester performs slightly below the averages. Lahey Clinic and NEPHO generally exceed Highland's performance on most measures of outpatient process quality, also by narrow margins.

c. Clinical Outcome Measures

We also examined clinical outcomes, or the results of a given course of care, in the hospital setting. On measures of mortality, inpatient performance at Winchester exceeds the state average and has consistently improved over the period examined; LHMC performs approximately equal to the state average, while Beverly's performance declined rapidly from 2010 to 2011 before stabilizing slightly below the state average in 2012.⁷² On measures of readmissions, Winchester and LHMC perform comparably at about the state average, while Beverly performs slightly better than average.⁷³ On a three-year average of performance on a composite of AHRQ Patient Safety Indicators, which measures the frequency of preventable harm in the hospital setting,⁷⁴ Winchester outperformed LHMC, but both hospitals performed slightly worse than the state average; Beverly and Addison Gilbert both performed better than the state average. The Lahey hospitals' performances on Massachusetts Data Analysis Center (Mass-DAC) measures of mortality after cardiac procedures were not statistically significantly different from the state average.⁷⁵ There was no statistical difference between the rate of hospital acquired infections at the parties' hospitals and the national average, except that LHMC experienced a lower incidence of surgical site infections related to hip replacements in 2011.⁷⁶

⁷² These findings are based on a composite of CMS Hospital Compare measures of hospital mortality among AMI, heart failure, and pneumonia patients for each year Q3 of 2009 through Q2 of 2012. Performance on outcome measures is adjusted for differences in patient acuity. Compared to national averages, Winchester's performance was statistically significantly better for AMI and heart failure mortality, while LHMC's and Beverly's performance was not statistically better or worse than the national average. See *Outcome Measures*, CTR. FOR MEDICARE & MEDICAID SERVS., <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/OutcomeMeasures.html> (last visited Apr. 16, 2014).

⁷³ Based on a composite of CMS Hospital Compare measures of the rate of readmissions within 30 days among AMI, heart failure, and pneumonia patients in Q3 of 2009 through Q2 of 2012. None of the parties performed statistically significantly better or worse than the national average on individual measures of readmissions. See *id.*

⁷⁴ The HPC computed Patient Safety Indicators (PSI) and Inpatient Quality Indicators (IQI) from MHDC hospital discharge data for 2010 through 2012 using code available from AHRQ. See *Patient Safety Indicators Overview*, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, http://www.qualityindicators.ahrq.gov/modules/psi_resources.aspx (last visited Apr. 16, 2014) (discussing the use of PSIs to measure the frequency of a variety of adverse outcomes and preventable harm); AGENCY FOR HEALTH CARE RESEARCH AND QUALITY, *Patient Safety for Selected Indicators, Technical Specifications, Patient Safety Indicators #90*, <http://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V45/TechSpecs/PSI%2090%20Patient%20Safety%20for%20Selected%20Indicators.pdf>) (showing the measures that are part of the PSI #90 health status adjusted composite).

⁷⁵ Mass-DAC mortality measures examine coronary artery bypass surgery and elective and emergency percutaneous coronary interventions. Winchester does not perform the complex cardiac procedures monitored by Mass-DAC. See *Reports*, MASS. DATA ANALYSIS CTR., <http://www.massdac.org/index.php/reports/> (last visited Apr. 16, 2014).

⁷⁶ Based on DPH data on healthcare associated infections for 2010 through 2012. See MASS. DEPT. OF PUBLIC HEALTH, MASS. 2012 HAI DATA UPDATE (Jun. 2013), available at <http://www.mass.gov/eohhs/docs/dph/quality/healthcare/hai/hai-hospital-data-2012.xls>.

d. Patient Experience of Care Measures

We assessed the parties' performance on ten hospital experience measures⁷⁷ and eight ambulatory patient experience measures.⁷⁸ On a composite measure of hospital patient experience, Winchester performed better than both state and national averages; LHMC and Beverly performed slightly above the state average and slightly below the national average.⁷⁹ On the adult ambulatory care experience composite, NEPHO, Lahey Clinic physicians, and Highland all perform approximately equal to the state average.⁸⁰

2. Available Data Do Not Show a Clear Inpatient Quality Change Since the Lahey-Northeast Merger

The parties have a stated goal of exchanging best practices to improve quality both at Winchester and at the Lahey hospitals. The recent merger between the Lahey Clinic system and Northeast provides an opportunity to assess Lahey's ability to successfully standardize and improve quality as a result of acquiring a new community hospital. In conducting this analysis, the HPC was only able to examine performance on inpatient hospital process and patient experience measures, since these were the only data available for the period after the formation of the Lahey Health System in May 2012.⁸¹

On a composite of CMS Hospital Compare process measures, LHMC and Beverly were both high-performing hospitals in 2012. Although Beverly improved its performance slightly in 2013, this increase continued its performance trend prior to its acquisition, and was comparable to the state average trend of improvement. In terms of patient experience, both hospitals' ratings improved from 2012 to 2013.⁸² These data from the first ten months after acquisition do not clearly show that LHMC and Beverly have yet had an influence on each other's quality performance.

In sum, based upon available measures, Lahey and Winchester both have strong clinical quality performance, and the differences between them are for the most part small. Based on available data,

⁷⁷ We obtained and analyzed Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) data from CMS for years 2010 through Q1 of 2013, focusing on HCAHPS "top-box" scores. See *Survey of Patients' Experiences*, CTR. FOR MEDICARE & MEDICAID SERVS., <http://www.medicare.gov/hospitalcompare/About/Survey-Patients-Experience.html> (last visited Apr. 16, 2014) (explaining HCAHPS survey criteria); *Summary Analyses*, CTR. FOR MEDICARE & MEDICAID SERVS., <http://www.hcahponline.org/SummaryAnalyses.aspx> (last visited Apr. 16, 2014) (explaining HCAHPS "top box" methodology).

⁷⁸ We obtained and analyzed Adult and Pediatric Ambulatory Care Patient Experience Surveys for 2009 and 2011 from MHQP. Two of the eight measures were phased out by MHQP between 2009 and 2011. Because no pediatric patient experience data was available for Lahey Clinic physicians, we compared the parties only on adult ambulatory patient experience measures. See *Quality Insights: 2011 Patient Experiences in Primary Care, Technical Appendix*, MASS. HEALTH QUALITY PARTNERS, <http://www.mhqp.org/quality/pes/pesTechApp.asp?nav=031638> (last visited Apr. 16, 2014) (explaining the Adult and Pediatric Ambulatory Care Patient Experience Survey).

⁷⁹ On individual hospital experience measures related to care coordination and population health management (pain management, discharge planning and medication reconciliation) Lahey, Beverly and Winchester Hospitals tended to perform equal to or better than state averages.

⁸⁰ Between 2009 and 2011, Highland had a negative trend, while Lahey Clinic had a positive trend.

⁸¹ CMS updates most Hospital Compare data quarterly. The most recent process and patient experience data available are for Q1 of 2013, but data on outcomes had been updated only through Q2 of 2012 as of the time of this report.

⁸² See *supra* note 77 (explaining Hospital Compare "top box" composite).

the 2012 creation of Lahey Health System has not yet produced clear changes in inpatient quality at LHMC or Beverly.

C. ACCESS PROFILE

The law governing cost and market impact reviews (CMIRs) tasks the HPC with monitoring factors that relate to health care access,⁸³ including:

1. **Provider payer mix.** Payer mix shows the proportion of care a provider delivers to patients covered by different forms of insurance, including government payer patients.
2. **Provider service mix.** Service mix shows the proportion of care a provider delivers in different service lines, including lower margin service lines.

Differences in payer mix and service mix can have significant financial implications for how our health care system sustainably apportions care for the neediest populations, and provides adequate access to all needed services. Given presumed lower payments by government payers, there are financial implications for providers who care for a greater proportion of government payer patients, and those who do not.⁸⁴ Similarly, service mix has financial implications: certain service lines (e.g., behavioral health) tend to be lower margin than other service lines (e.g., surgery). Consistently tracking and reporting on payer mix and service mix will complement the work of other agencies⁸⁵ in monitoring health care trends that impact access to services.

In examining available measures of payer mix and service mix,⁸⁶ the HPC found:

- Winchester has lower Medicaid payer mix and higher commercial payer mix compared to other area hospitals, as measured by both revenue and discharges.

⁸³ The HPC recognizes that “access” is a broad term that encompasses a spectrum of interrelated factors. For example, in evaluating the accessibility of services, health care experts examine factors as varied as: (1) financial barriers, which may restrict access either because patients have limited ability to pay for services or because providers avoid treating patients of limited means; (2) structural barriers, which may impede access through a poor match between the needs of the population and the number, type, location, hours of operation, or organizational configuration of health care providers; and (3) personal and cultural barriers, which may inhibit people who need medical attention from seeking it or adhering to plans of care, and which can impact effective communication with providers. *See, e.g.,* INSTITUTE OF MEDICINE, ACCESS TO HEALTH CARE IN AMERICA 39-44 (Michael Millman ed., 1993); J. Emilio Carillo et al., *Defining and Targeting Health Care Access Barriers*, 22 J. OF HEALTH CARE FOR THE POOR AND UNDERSERVED 562, 564-68 (2011).

⁸⁴ *See* INSTITUTE OF MEDICINE, *supra* note 83, at 40 (“[M]ost structural barriers to access have their roots in the way health care is financed. Despite a greatly enlarged physician force and the existence of some 600 community health centers, many of today’s poor still find it difficult to identify physicians who will accept Medicaid. A major reason for this dilemma is Medicaid’s low reimbursement rates.”).

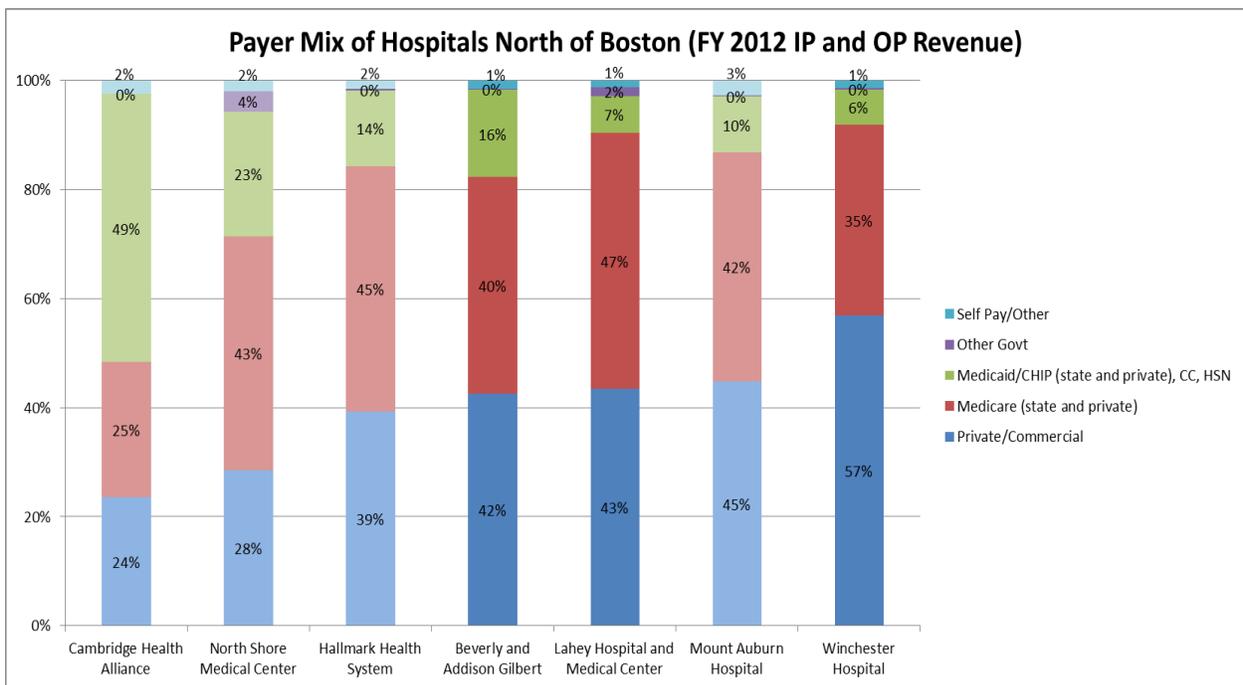
⁸⁵ In Massachusetts, different agencies monitor access to health care in different ways. For example, CHIA tracks rates of insurance coverage and the DOI monitors levels of coverage and insurance network adequacy. The DPH is responsible for licensing and health resource planning, including the Determination of Need program, which relate to structural dimensions of access. The AGO reviews health care consumer complaints, which may reveal patterns in barriers to health care access.

⁸⁶ The HPC examined hospital payer mix using (1) data gathered by CHIA on hospital inpatient (IP) and outpatient (OP) revenue by payer and (2) MHDC data on hospital discharges by payer. The HPC examined IP service mix using the MHDC’s hospital discharge database. In analyzing discharges by payer and by service line, we excluded normal newborn discharges. Including normal newborns effectively double-counts a single obstetrics case as two discharges.

- In their respective PSAs, Winchester and LHMC provide a lower mix of behavioral health discharges than the mix in the overall PSA; Beverly and Addison Gilbert provide a higher mix of behavioral health discharges than the mix in their overall PSA.⁸⁷

1. Winchester Has Lower Medicaid Payer Mix and Higher Commercial Payer Mix Compared to Other Area Hospitals

The HPC examined the payer mix of LHMC, Beverly and Addison Gilbert, and Winchester, as measured by revenue (encompassing inpatient (IP) and outpatient (OP) services) and discharges (IP services). From 2010 to 2012, Winchester and LHMC had the lowest mix of Medicaid patients compared to other area hospitals, as measured by both revenue and discharges. Beverly and Addison Gilbert’s Medicaid mix is more in line with that of other area hospitals, as shown in the chart below.



Source: CTR. FOR HEALTH INFO. & ANALYSIS, HOSPITAL DATA ON GROSS PATIENT SERVICE REVENUE, FY10-FY12 (HPC Analysis).

When examined by PSA,⁸⁸ the above patterns in payer mix are quite similar. A review of payer mix by PSA is instructive because it focuses on a fixed population (the residents of a hospital’s PSA). Within that fixed population, we examine the cross-section that each hospital serves, and the payer mix of that cross-section. For example, the below table shows (in the column to the left) that the residents of Winchester’s PSA “used” or “needed” 87,871 discharges in 2012. The table then organizes the hospitals that serve residents of the PSA, and collectively provided these 87,871 discharges, into five categories: (1) Winchester, (2) Lahey Health System (LHMC, Beverly, and Addison Gilbert), (3) other area community hospitals (CHA, Hallmark, Mount Auburn, North Shore MC), 4) Boston AMCs

⁸⁷ Due to data limitations, we were unable to include behavioral health discharges from Lahey’s BayRidge psychiatric hospital in this analysis. We anticipate that including BayRidge discharges would increase the reported mix of behavioral health services provided by Lahey hospitals in these PSAs. See *infra* note 96.

⁸⁸ As discussed in Section IV.A.3, the HPC generally defines a hospital PSA to be the contiguous area closest to a hospital from which the hospital draws 75% of its commercial discharges. See *infra* note 110 (describing PSA methodology).

(BMC, BIDMC, BWH, MGH, Tufts MC), and (5) All Other MA Hospitals. This table allows us to examine the cross-section of the PSA that each hospital (or category of hospitals) serves, and the payer mix of that cross-section.

As shown, Winchester accounted for 12% of all PSA discharges in 2012 (10,148 Winchester discharges of 87,871 total PSA discharges).⁸⁹ Within its share of discharges, Winchester cared for a higher mix of commercial patients and a lower mix of Medicaid patients than the overall mix in its PSA. Lahey’s hospitals, which collectively served 13% of the discharges in the PSA (or 11,380 discharges), cared for a lower mix of Medicaid patients and a higher mix of Medicare patients compared with the mix in the overall PSA; most of Lahey’s Medicaid discharges took place at Beverly and Addison Gilbert. By contrast, the other community hospitals near Winchester cared for a higher mix of Medicaid patients in the PSA.

Residents of Winchester’s PSA also often traveled outside of the PSA to obtain care at Boston AMCs. At 26,703 discharges, these five AMCs cared for 30% of all PSA discharges in 2012, or more than twice as many as Winchester. The five AMCs served a greater mix of commercial patients, and lower mix of Medicare patients, than the overall mix in the PSA.

Inpatient Payer Mix for Residents of Winchester’s PSA – 2012

	All Discharges from PSA		Winchester		Lahey Health System		Area Community Hospitals		Boston AMCs		All Other MA Hospitals	
Commercial	35%	30588	43%	4356	25%	2884	25%	7204	43%	11427	46%	4717
Medicare	46%	40179	48%	4845	62%	7030	52%	15360	35%	9188	36%	3756
Medicaid/CHIP	18%	15443	8%	804	10%	1194	21%	6167	22%	5720	15%	1558
Other Gov’t	1%	498	0%	25	1%	104	0%	125	0%	91	1%	153
Self Pay/Other	1%	1163	1%	118	1%	168	2%	441	1%	277	2%	159
Total Discharges	87,871		10,148		11,380		29,297		26,703		10,343	

NOTES

- (1) Source: 2012 MHDC Discharge Data, all discharges (all hospitals, commercial and non-commercial payers).
- (2) “Area Community Hospitals” are the other hospitals located north of Boston, who serve residents of Winchester’s PSA: CHA, Hallmark, Mt. Auburn, and North Shore MC.
- (3) “Boston AMCs” include BIDMC, BMC, BWH, MGH, and Tufts MC.
- (4) Medicaid/CHIP includes Commonwealth Care and Health Safety Net discharges.
- (5) Lahey Health System includes LHMC, Beverly, and Addison Gilbert.

We also examined the payer mix of each of Lahey’s hospitals within its respective PSA. Like Winchester, LHMC cares for a lower mix of Medicaid patients than the mix in its PSA. Unlike LHMC

⁸⁹ Twelve percent is Winchester’s share of all discharges (commercial and non-commercial) in its PSA; the previously reported 15% market share reflects Winchester’s share of commercial discharges only.

and Winchester, Beverly and Addison Gilbert’s payer mix in their PSA mirrors the PSA’s overall mix.⁹⁰ In all of Lahey’s PSAs, the Boston AMCs drew a significant commercial payer mix.

2. Winchester and LHMC Provide a Lower Mix of Behavioral Health Discharges than the Mix in Their Respective PSAs; Beverly and Addison Gilbert Provide a Higher Mix of Behavioral Health Discharges⁹¹

We also examined the mix of inpatient services that Winchester, LHMC, Beverly, and Addison Gilbert provide to residents of their PSAs, compared to the services provided by other area hospitals.⁹² The below table again examines the discharges from Winchester’s PSA in 2012. Within Winchester’s share of PSA discharges, a greater share was for deliveries and newborns⁹³ and a far smaller share was for behavioral health. This finding is consistent with public data showing that Winchester does not have licensed inpatient psychiatry beds.⁹⁴ Compared to the overall service mix in Winchester’s PSA, Boston AMCs also provided a greater share of obstetrics and a smaller share of behavioral health discharges. By contrast, the other community hospitals near Winchester provided a smaller share of obstetrics and surgery and a larger share of behavioral health discharges.

All of Lahey’s deliveries and most of its behavioral health discharges came from Beverly and Addison Gilbert (like Winchester, LHMC does not have any licensed psychiatric beds⁹⁵). It is important to note that Lahey has one non-general acute care hospital in its system, BayRidge psychiatric hospital. Because we were unable to include BayRidge discharges in our analysis of service mix by PSA, the table below understates the inpatient behavioral health discharges provided by Lahey hospitals.⁹⁶

Inpatient Service Mix for Residents of Winchester’s PSA – 2012

	All Discharges from PSA		Winchester		Lahey Health System		Area Community Hospitals		Boston AMCs		Other	
Medical	55%	48602	64%	6446	64%	7303	61%	17783	45%	12067	48%	5003

⁹⁰ Addison Gilbert’s PSA has only three zip codes, all of which are also part of Beverly’s PSA. Thus, their combined PSA is the same as Beverly’s PSA.

⁹¹ Due to data limitations, we were unable to include behavioral health discharges from Lahey’s BayRidge psychiatric hospital in this analysis. We anticipate that including BayRidge discharges would increase the reported mix of behavioral health services provided by Lahey hospitals in these PSAs. See *infra* note 96.

⁹² This analysis focuses on inpatient services provided by Winchester and area general acute care hospitals. Winchester’s mix of outpatient services may be very different than the mix of inpatient services described in this section.

⁹³ Obstetrics can be a desirable service line because women drive many of the health care decisions for their families; a good labor and delivery experience can make it more likely that the entire family will return to the hospital in the future. See Rhoda Nussbaum, *Studies of Women’s Health Care: Selected Results*, 4 THE PERMANENTE JOURNAL 62 (2000); Dagmara Scalise, *Defining and Refining Women’s Health*, HOSP. & HEALTH NETWORKS MAGAZINE (Oct. 2003).

⁹⁴ See DIV. OF HEALTH CARE FIN. & POLICY, MASS. EXEC. OFFICE OF HEALTH & HUMAN SERVS., 403 HOSPITAL STATEMENT OF COSTS, REVENUES & STATISTICS files provided to CHIA (FY2012).

⁹⁵ *Id.*

⁹⁶ We received information that BayRidge had about 2,900 behavioral health discharges in 2012. While we were unable to include these discharges in our PSA analysis without data on the geographic origin of each discharge, for general comparison purposes, Beverly Hospital – Lahey’s general acute care hospital located closest to BayRidge and with the greatest number of behavioral health discharges – had about 3,605 behavioral health discharges in 2012.

Surgical	23%	20316	19%	1894	24%	2775	16%	4723	30%	8052	28%	2872
Obstetrics	14%	12664	17%	1708	4%	442	12%	3616	22%	5954	9%	944
Behavioral Health	7%	6289	1%	100	8%	860	11%	3175	2%	630	15%	1524
Total Discharges		87,871		10,148		11,380		29,297		26,703		10,343

NOTES

- (1) Source: 2012 MHDC Discharge Data, all discharges (all hospitals, commercial and non-commercial payers).
- (2) Service categories based on methodology set forth in *2012 Health Care Cost and Utilization Report*, HEALTH CARE COST INSTITUTE, available at <http://www.healthcostinstitute.org/files/HCCI%202012%20Methodology.pdf>.
- (3) “Area Community Hospitals” are the other hospitals located north of Boston, who serve residents of Winchester’s PSA: CHA, Hallmark, Mount Auburn, and North Shore MC.
- (4) “Boston AMCs” include BIDMC, BMC, BWH, MGH, and Tufts MC.
- (5) Lahey Health System includes LHMC, Beverly, and Addison Gilbert.

When we examined the service mix of each of Lahey’s hospitals within its respective PSA, we found that LHMC provides a lower mix of behavioral health discharges than the overall mix in its PSA, while Beverly and Addison Gilbert provide a higher mix. Beverly and Addison Gilbert also provide a higher mix of deliveries than the mix of their overall PSA; LHMC does not perform deliveries.

IV. IMPACT PROJECTIONS (2014 ONWARD)

Chapter 224 directs the HPC to enhance the transparency of significant changes to our health care market, given that provider alignments and consolidations impact health care system performance and levels of medical spending.⁹⁷ The parties before us are high-quality provider organizations with a stated commitment to improving care delivery in the region north of Boston. They plan, as a combined entity, to deliver health care more efficiently by keeping more care in-system, increasing their independence from the Boston AMCs. The remainder of this report first examines ways in which the transaction may facilitate both cost savings and cost increases. It then turns to how the transaction may facilitate improvements in quality and care delivery.

A. COST IMPACT

One of the HPC’s central responsibilities is to monitor the Commonwealth’s progress in meeting the health care cost growth benchmark set forth in Chapter 224.⁹⁸ Growth in total medical spending is driven by four principal factors: price, utilization, provider mix, and service mix. Provider consolidations or alignments can affect all of these factors, resulting in:

- Changes in physician prices as physicians join new provider groups;

⁹⁷ See, e.g., OFFICE OF ATT’Y GEN. MARTHA COAKLEY, EXAMINATION OF HEALTH CARE COST TRENDS AND COST DRIVERS PURSUANT TO G.L. C. 6D, § 8: REPORT FOR ANNUAL PUBLIC HEARING, at Part III(C) (Apr. 24, 2013) [hereinafter AGO 2013 COST TRENDS REPORT], available at <http://www.mass.gov/ago/docs/healthcare/2013-hccid.pdf> (“While a provider alignment may improve an organization’s ability to bear risk or promote more efficient, coordinated care, those potential benefits should be balanced against the concerns of increasing market leverage and reducing consumer options.”).

⁹⁸ MASS. GEN. LAWS ch. 6D, § 9 (2012) (requiring the HPC to establish annually “a health care cost growth benchmark for the average growth in total health care expenditures in the commonwealth,” pegged to the growth rate of the gross state product).

- Changes in referral patterns (provider mix) as physicians shift utilization to a different system;
- Increased bargaining leverage to negotiate higher commercial prices and other favorable contract terms; and
- Added facility fees when physician groups and their ancillaries are acquired by a hospital system.

We examined each of these mechanisms for cost impact⁹⁹ and found demonstrated potential for lowering total medical spending, at the same time that we identified two areas of potential cost concern. Specifically, we found:

- As WPA physicians join Lahey's contracting network, changes in physician prices are anticipated that may decrease total medical spending.
- Utilization of LHMC is anticipated to increase as a result of the transaction, which will lower total medical spending if this increased LHMC volume is drawn from higher-priced as opposed to lower-priced competitors.¹⁰⁰

At the same time:

- The commercial inpatient market will become moderately more concentrated as a result of the proposed transaction, potentially increasing the ability of the resulting system to leverage higher prices. Any future increase in price would likely impact the scope of the long-term savings possible from this transaction: potentially positively, by enhancing the resulting system's long-term ability to compete with higher-priced systems; but also potentially negatively, by canceling out or exceeding the cost savings we have modeled.
- Total medical spending will increase if facility fees are increased or added to Winchester's outpatient services, including its freestanding MRI and radiation oncology services.

In short, while there is potential for lowered total medical spending as a result of positive developments in unit price and provider mix, that potential is tempered by the possibility that the resulting system may have enhanced ability to charge supracompetitive rates, or to levy additional fees, which would increase medical spending. We examine each of these factors in greater depth below.

1. In the Near Term, Changes in Physician Prices As a Result of Lahey's Acquisition of Winchester Physician Associates (WPA) May Decrease Total Medical Spending¹⁰¹

As described above in Section III.A.2, Lahey is working with a number of payers to shift its Lahey Clinic rates to NEPHO rates over time. Based on the most recent data available, from 2011, we

⁹⁹ Our cost impact analysis is based primarily on data from the three largest payers, who represent 80% of the commercial market. As such, our cost projections tend to underestimate the total dollar impact to commercial spending.

¹⁰⁰ Lahey has stated that it does not anticipate increasing capacity at LHMC to accommodate additional patient volume from Winchester's PSA. In 2012, LHMC had an average occupancy rate of 81%, indicating that it has some excess capacity. CTR. FOR HEALTH INFO. AND ANALYSIS, HOSPITAL PROFILE: LAHEY CLINIC (Mar. 2014), *available at* <http://www.mass.gov/chia/docs/r/hospital-profiles/2012/lahey.pdf>. In addition, Lahey has indicated it intends to continue directing non-tertiary care to its community hospitals, which should free up additional capacity at LHMC.

¹⁰¹ Our analysis of changes in physician prices is based on 2011 relative price data, the most recent physician price data available for this review. As reliable, market-wide data for more recent years becomes available, these data may affect our projections.

found that NEPHO's rates are lower than WPA's for the payer from whom WPA receives the greatest percentage of its commercial revenue. Thus, one mechanism by which this transaction may decrease total medical spending, at least in the near term, is that some payers would shift WPA physicians into Lahey contracts, which could result in a lower unit price for WPA's services.

The HPC interviewed four major commercial payers to develop a deeper understanding of their contracts with Lahey, NEQCA, and Highland. Although this transaction would result in Lahey immediately owning the WPA physicians, WPA may elect to complete its current rate contracts negotiated through NEQCA before joining Lahey's contracts. Based on 2011 physician price data, we found that when the WPA physicians do join Lahey's contracts, their shift to NEPHO prices could decrease health care spending for these four major payers by up to \$1.4 million each year.¹⁰² These potential cost savings are based on changes in the rates that payers would pay for the care that WPA physicians provide; Lahey would decide the terms of the actual compensation that WPA physicians would receive.¹⁰³

These potential savings may not be permanent. Physician prices are renegotiated every several years when physician contracts are renewed. It is possible that Lahey's increased physician market share, as a result of WPA joining Lahey, would enable Lahey to negotiate higher physician rates.

2. LHMC's Volume is Anticipated to Increase Following this Transaction; If Drawn from Higher-Priced Competitors, this Increase in LHMC Volume Will Lower Total Medical Spending

The parties have estimated cost savings of up to \$3.3 to \$5 million per year over a three year period based on intended changes in the care referral patterns of residents of Winchester's PSA. The HPC examined changes in care referral patterns that are likely to result from the transaction, and the impact of those changes on costs. We found that changes in care referral patterns could decrease total medical spending by as much as \$1.3 million a year. Whether total medical spending actually decreases will depend on the extent to which Lahey redirects care from higher-priced providers as opposed to growing market share at the expense of lower-priced competitors. In addition, the negotiation of hospital prices, like physician prices, is subject to market leverage. Lahey's increased market share may enable the new system to negotiate higher hospital prices, which over time could cancel out or even exceed the potential cost savings we have modeled here.

a. Cost Impact of Parties' Historic Performance Redirecting Care to LHMC

To project the magnitude and cost impact of these care referral changes, we examined Lahey's recent performance in redirecting the care referral patterns of patients of its recently acquired system, Northeast Health System. We obtained site of care data by physician group for HMO/POS patients.¹⁰⁴

¹⁰² Lahey has indicated that other members of Highland, in addition to the owned WPA physicians, would be welcome to join its contracting network. If additional physicians join Lahey, there could be additional cost impacts beyond what we have modeled here. The resulting system's physician market share would also increase, with the accompanying potential for increasing the system's ability to leverage higher rates.

¹⁰³ The parties have noted that to recruit physicians effectively, it is unrealistic to set terms of compensation that would amount to less than the compensation the physicians currently receive.

¹⁰⁴ In addition, we reviewed network-wide site of care data for total HMO/POS and preferred provider organization (PPO) populations, and noted they had similar distributions. This may be explained in part by the fact that many PPO patients –

For each payer, we compared Northeast Physician Hospital Organization (NEPHO) physicians' rates of referral to the Lahey system for inpatient, outpatient, and physician care in 2011 (prior to the Lahey-Northeast merger) with NEPHO physicians' rates of referral in 2013 (the first full year after the merger). We found that for some service lines, care of NEPHO patients at LHMC did increase and care at Boston AMCs did decrease after NEPHO became part of Lahey. However, we also found that for some service lines, utilization of competitor community hospitals and of Beverly and Addison Gilbert decreased. The data varied across payers and service lines.

The shifts in utilization from generally higher-priced Boston AMC providers to more efficient Lahey providers decreased costs, while shifts in utilization from lower-priced community hospitals to LHMC increased costs. When we applied these same shifts for each payer to the current care referral patterns of WPA physicians, we did not find any meaningful changes in spending levels. However, this result is based on only one full year of post-merger data. It is reasonable to posit that the parties may improve their ability to retain care in-system over time that would otherwise go to higher-priced Boston AMCs. In the next section, we therefore examine the savings potential from changes in care referral patterns over time.

b. Potential Scope of Care Referral Savings Over Time

To examine the potential for care referral savings over time, we conducted a diversion analysis using detailed data on hospital volumes and the characteristics of patients and providers. Diversion modeling predicts where a hospital's current patients would seek care (where care would be "diverted") if the hospital was no longer available to these patients (for example, no longer included in the patient's health plan). This type of analysis allows us to identify the hospitals that operate as direct competitors, and the likelihood that care could be diverted, or redirected, to another hospital.

We examined diversions for all residents of Winchester's PSA who received inpatient care at a Boston AMC. We found that if Boston AMCs were no longer an option, 11% of these patients would go to LHMC, 19% would go to Winchester, and 4% would go to Beverly. Next, we modeled the cost impact of this shift in care. We found that if WPA physicians shifted 11% of their patients' inpatient and outpatient care currently obtained at Boston AMCs to LHMC, 19% to Winchester, and 4% to Beverly, it would result in cost savings of approximately \$1.3 million a year.¹⁰⁵

Our modeled \$1.3 million in savings from shifting hospital care, while significant, is less than the \$3.3 to \$5 million in annual savings that the parties have posited. The parties project that Lahey will be able to redirect a share of all discharges from Winchester's PSA currently going to Boston hospitals. The HPC modeled shifts in hospital care for a somewhat smaller population – HMO and preferred provider organization (PPO) patients¹⁰⁶ of WPA physicians – as opposed to any patient living

though they are not required by product design to select a PCP to direct their care – functionally have PCPs who help direct their care. See DIV. OF HEALTH CARE FIN. & POLICY, HEALTH CARE IN MASS.: KEY INDICATORS 18 (NOV. 2010), available at <http://www.mass.gov/chia/docs/r/pubs/10/key-indicators-november-2010.pdf> (reporting that 90% of Massachusetts residents identified as having a personal health care provider in 2009).

¹⁰⁵ Similar changes in specialty care referral patterns, not reflected in this figure, would likely increase the modeled \$1.3 million savings.

¹⁰⁶ While we received site of care data from the three largest payers only for WPA's HMO/POS patients, we calculated a proportionate cost impact to each payer's regional PPO population to approximate the cost impact of similar shifts in care for WPA's PPO patients. See *supra* note 104.

in Winchester’s PSA (whose physician may be affiliated with another provider system, like Partners, BIDCO, or NEQCA). The patient population associated with Winchester physicians is the one we believe the parties can most realistically be expected to influence.¹⁰⁷

An important caveat is that the changes in patient flows predicted by diversion analysis reflect a scenario in which a given hospital becomes entirely unavailable to a patient. Given that the Boston AMCs would still be available to WPA patients following the proposed transaction (despite the parties’ best efforts to keep WPA patients within their system), the patient flows predicted by a diversion model should be considered an “upper bound” estimate of the amount of hospital care that could be redirected to the parties’ in-system hospitals.

3. This Transaction May Increase the Ability of the Resulting System to Leverage Higher Prices, Thus Affecting the Scope of the Long-Term Savings Potential of the Transaction

While, as analyzed above, there is potential for this transaction to lower total medical spending by driving positive developments in unit price and provider mix, that potential is tempered by the possibility that the resulting system may have enhanced ability to charge supracompetitive rates, which would ultimately increase medical spending. This section examines this question of the transaction’s competitive effects in two parts. First, it quantitatively assesses whether the resulting system’s bargaining leverage is likely to increase, by analyzing market shares, anticipated changes in market concentration, and anticipated changes in patient flow patterns if one of the parties became unavailable to consumers (diversion analysis).¹⁰⁸ Second, it qualitatively examines the market landscape in which the transaction occurs, including the parties’ claims regarding their likely future conduct.

a. Market Shares

Commercial prices for health care services are established through contract negotiations between payers and providers. The results of these negotiations – both the prices that payers will pay for services and other contractual terms – are influenced by the bargaining leverage of the negotiating parties. Bargaining leverage impacts negotiations because a payer network that excludes important providers will be less marketable to purchasers (employers and consumers). If there are few or no effective substitutes for that provider in a market, the potential cost to a payer of excluding the provider from that payer’s network will be high, and that provider will have increased ability to command a higher price (or other favorable contract terms) from the payer. The merger of close competitors in a health care market can reduce choices available to payers and employers building desirable provider networks and, as such, enhance the ability of the merging parties to negotiate higher prices and more favorable contract terms.

¹⁰⁷ Even for these WPA patients, the parties may face unique challenges in influencing their site of care. For example, if WPA physicians elect to remain in NEQCA contracts for some period of time following acquisition by Lahey, that persisting NEQCA affiliation, and NEQCA’s own “preferred” referral hospitals, may pose challenges to Lahey’s goals of redirecting WPA patients to Lahey providers for care.

¹⁰⁸ Historically, it has been the role of state and federal law enforcement agencies such as the state AGO, the DOJ, and the FTC to investigate market consolidation through enforcement of antitrust law. However, that work is often non-public. This review does not repeat all of the econometric modeling of changes in competition (e.g., “willingness-to-pay” analysis) that might be pursued in a law enforcement context. Rather, we mirror many of the initial steps that would likely be included in an antitrust investigation to provide a public analysis of the likely nature of a transaction’s competitive effects.

An analysis of competitive effects often begins with an assessment of relevant markets. For this transaction, the HPC analyzed the competitive effects on inpatient general acute care services¹⁰⁹ and primary care physician services in Winchester's and Lahey's PSAs.¹¹⁰ In Winchester's hospital PSA, as described in Section III.A.4, we found that Winchester and Lahey respectively have the second (15.4%) and third (9.4%) largest shares of commercial discharges. Combined, they would capture approximately 25% of the commercial discharges in the PSA, which would solidify the parties' position as the provider with the second largest share of inpatient services in this PSA. Partners has the largest inpatient market share in Winchester's PSA, with 32% to 39% of commercial discharges, and BIDCO has the fourth largest share, with 9% to 12% of commercial discharges.¹¹¹

In LHMC's PSA, we found that Lahey's hospitals and Winchester respectively have the second (12.6%) and fourth (9.3%) largest shares of commercial discharges. Combined, they would capture approximately 22% of commercial discharges in the PSA, which would solidify the parties' position as the provider with the second largest market share in this PSA. Partners has the largest market share in this PSA, with 31% to 38% of commercial discharges,¹¹² and Circle Health has the third largest share, with 9.6% of commercial discharges. In Beverly's PSA, Lahey's hospitals and Winchester respectively have the second (32.7%) and third (5.7%) largest shares of commercial discharges; combined, they would capture about 38% of commercial discharges in the PSA. Partners has the largest market share in Beverly's PSA, capturing 44% to 49% of commercial discharges.¹¹³

The HPC also analyzed changes in the share of PCP services in the parties' primary care PSAs, using APCD data. As discussed in Section III.A.4, we found that Winchester and Lahey respectively have the second and third largest shares of PCP services in Winchester's primary care PSA.¹¹⁴ In Lahey's primary care PSA, Lahey and Winchester respectively have the first and third largest shares of PCP services. Combined, Lahey and Winchester would have the largest share of PCP services in both primary care PSAs (29% by revenue and 31% by volume in Winchester's primary care PSA; 38% by revenue and 41% by volume in Lahey's primary care PSA). In the next section, we examine the impact of these changes in hospital and physician market share on market concentration, and also examine hospital diversions. Based on these quantitative analyses of market share, market

¹⁰⁹ This analysis focuses on hospital discharges for general acute care services, excluding normal newborns (including normal newborns would effectively double-count a single delivery as two discharges), non-acute discharges (e.g., discharges with a length of stay of greater than 180 days, rehabilitation discharges), and out-of-state patients. Given the importance of inpatient care to the health care market, competitive effects in the market for inpatient general acute care services may also be probative of competitive effects in other, related health care markets, such as for outpatient care.

¹¹⁰ The HPC applied its general method for defining a hospital PSA, which focuses on the contiguous zip codes closest to the hospital from which the hospital draws 75% of its commercial discharges. For more information on the HPC's PSA methodology, see the MASS. HEALTH POLICY COMM'N, REVIEW OF PARTNERS HEALTHCARE SYSTEM'S PROPOSED ACQUISITIONS OF SOUTH SHORE HOSPITAL (HPC-CMIR-2013-1) AND HARBOR MEDICAL ASSOCIATES (HPC-CMIR-2013-2), PURSUANT TO M.G.L. C. 6D, § 13, FINAL REPORT 37, n.115 and 38, n.118 (Feb. 19, 2014), available at <http://www.mass.gov/anf/docs/hpc/20140219-final-cmir-report-phis-ssh-hmc.pdf> [hereinafter PHS-SSH-HARBOR FINAL CMIR REPORT].

¹¹¹ Where the HPC reports a range for a provider organization's hospital market share in this report, that range reflects the fact that the provider organization has non-owned hospital contracting affiliates, and the scope of the provider organization's market share depends on whether those non-owned hospital affiliates are treated as part of the provider organization for purposes of reporting market shares. See *supra* notes 50-51.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ The provider with the largest share of PCP services in Winchester's primary care PSA is Partners. Other providers of PCP services in this PSA, in order of revenue-based market share, include NEQCA, Atrius, and BIDCO.

concentration, and hospital diversions, we provide some preliminary thoughts regarding the potential market impact of this transaction.

b. Market Concentration

The HPC calculated market concentration before and after the proposed transaction in Winchester’s PSA and in the PSA of each of Lahey’s hospitals using the Herfindahl–Hirschman Index (HHI). The HHI is a commonly used measure of market concentration and an indicator of the amount of competition among systems.¹¹⁵ The change in concentration associated with a transaction can be indicative of the likely impact of the transaction on market power and the ability to negotiate higher prices.¹¹⁶ The Department of Justice (DOJ) and the Federal Trade Commission (FTC) use HHIs as initial screens for determining whether a given transaction raises competitive concerns and warrants further scrutiny.¹¹⁷

DOJ/FTC Horizontal Merger Guideline HHI Thresholds¹¹⁸

Post-Merger Market	HHI	Δ in HHI	Presumption
Moderately Concentrated	1,500 to 2,500	>100	Potentially raises significant competitive concerns and often warrants scrutiny
Highly Concentrated	> 2,500	100 to 200	Potentially raises significant competitive concerns and often warrants scrutiny
		> 200	Presumed to be likely to enhance market power

This transaction is anticipated to impact the concentration of the acquiring system’s service areas as well as of the service area of the acquired hospital (Winchester). Below, we provide pre-merger and post-merger inpatient HHIs in the parties’ respective PSAs in two ways: (1) in a “lower bound” scenario, we calculate HHIs by excluding any non-owned hospital contracting affiliates of a

¹¹⁵ The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 (900 + 900 + 400 + 400 = 2,600). HHIs range from near 0 (perfect competition) to 10,000 (one firm with a monopoly). When firms are equally sized, the HHI is equal to 100 times the per-firm market share. For example, two firms with a 50% share each give rise to an HHI of 5,000. Three firms with 33.3% share each give rise to an HHI of 3,333, and so on.

¹¹⁶ For example, the FTC and DOJ have noted that “[m]ost studies of the relationship between competition and hospital prices generally find increased hospital concentration is associated with increased price.” FED. TRADE COMM’N & U.S. DEPT. OF JUSTICE, IMPROVING HEALTHCARE: A DOSE OF COMPETITION 1, 15 (July 2004), available at <http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf> (last visited Apr. 16, 2014).

¹¹⁷ See, e.g., FED. TRADE COMM’N & U.S. DEPT. OF JUSTICE, PROPOSED STATEMENT OF ANTITRUST ENFORCEMENT POLICY REGARDING PARTICIPATING IN THE MEDICARE SHARED SAVINGS PROGRAM 6 (2011), available at <http://www.justice.gov/atr/public/guidelines/269155.pdf> (last visited Apr. 16, 2014). See also 76 Fed. Reg. 67026, 67028 (Oct. 28, 2011), available at <http://www.gpo.gov/fdsys/pkg/FR-2011-10-28/pdf/2011-27944.pdf>.

¹¹⁸ See U.S. DEPT. OF JUSTICE & FED. TRADE COMM’N, HORIZONTAL MERGER GUIDELINES (Aug. 19, 2010), available at <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>.

provider system from that system’s market share, and (2) in an “upper bound” scenario, we include non-owned hospital contracting affiliates in the affiliated system’s market share.¹¹⁹ The results and our findings remain consistent across both scenarios.

Inpatient HHI Calculations: Winchester, LHMC, and Beverly PSAs

	LOWER BOUND ANALYSIS		UPPER BOUND ANALYSIS		Δ HHI
	Pre-Merger HHI	Post-Merger HHI	Pre-Merger HHI	Post-Merger HHI	
Winchester PSA	1,590	1,879	2,206	2,494	+288
LHMC PSA	1,447	1,680	1,959	2,193	+233
Beverly PSA	3,096	3,468	3,544	3,916	+372

NOTES

- (1) The lower bound HHIs are calculated by excluding any non-owned hospital contracting affiliates of a provider system from that system’s market share, while the upper bound HHIs are calculated by including non-owned hospital contracting affiliates in the affiliated system’s market share.
- (2) The HHI changes noted in the far right column apply to both the lower bound and upper bound analyses.
- (3) Due to rounding, the difference between post-merger and pre-merger HHIs may not equal Δ HHI.

The increases in concentration of inpatient services from this transaction, which range from an increase of 233 points to 372 points depending on the PSA, indicate that the transaction may increase the ability of the resulting system to leverage higher reimbursement and other favorable contract terms.¹²⁰ We use the term “may,” as opposed to “likely to,” because, among other factors, in the two PSAs where the parties would experience the largest increase in market share – Winchester’s and LHMC’s PSAs – both PSAs would remain below the threshold for a highly concentrated market. As an initial screen, then, the changes in concentration in these PSAs potentially raise competitive concerns, but are not presumed likely to enhance market power. We similarly examined changes in concentration of PCP services in the parties’ primary care PSAs and preliminarily found that post-merger they would be moderately concentrated as opposed to highly concentrated markets, as the FTC and DOJ define those concepts.¹²¹

c. Diversion

Another way to measure anticipated competitive effects of a hospital merger is to conduct a diversion analysis, described above in Section IV.A.2. Diversion analysis predicts where inpatient care would be diverted if a hospital were no longer an option for its patients, allowing us to identify close substitutes for a hospital. This is probative of competitive effects because mergers between close

¹¹⁹ The *change in the HHI* is a function of the merging parties’ shares and does not depend on the market shares of other hospital systems; thus, there is a single “Δ HHI” that is applicable to both the lower bound and upper bound analyses.

¹²⁰ Econometric studies of health care transactions and market models indicate that significant HHI increases, particularly in concentrated markets, increase providers’ ability to leverage higher prices and other favorable contract terms from commercial payers. One review found that an HHI increase of 800 points within a metropolitan statistical area (a generally larger geographic area than a PSA) led to an average price increase of 5%. William Vogt & Robert Town, *How Has Hospital Consolidation Affected the Price and Quality of Hospital Care?* ROBERT WOOD JOHNSON FOUND., SYNTHESIS RESEARCH PROJECT REPORT NO. 9 (Feb. 2006), available at http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2006/rwjf12056/subassets/rwjf12056_1.

¹²¹ Due to time and data constraints, this finding is based on APCD data for BCBS only; to the extent that claims data from other health plans were to show significantly different patterns, our conclusions may change.

substitutes effectively remove a competitor from the marketplace that could otherwise have acted as a constraint on price increases.

In examining where Lahey's discharges would shift if Lahey were no longer an option for consumers, we found that Partners hospitals are Lahey's closest substitute: more than half of Lahey's discharges would shift to a Partners hospital. Winchester is Lahey's second closest substitute, receiving under one tenth of the diverted discharges. Lahey's third, fourth, and fifth closest substitutes are BIDCO, Hallmark, and Steward respectively.

In examining where discharges would be diverted if Winchester were no longer an option for patients, we found that Partners is also Winchester's closest substitute: more than one third of Winchester's discharges would move to Partners. Lahey is Winchester's second closest substitute, receiving approximately one sixth of the diverted care. Winchester's third and fourth closest substitutes are Hallmark and BIDCO. While Lahey is a more significant substitute for Winchester, receiving one sixth of Winchester's care, than Winchester is for Lahey, receiving less than one tenth of Lahey's diverted care, this analysis shows that Lahey and Winchester are each other's second closest substitutes.

Overall, our market share, market concentration, and diversion analyses resulted in consistent findings. They show that Lahey and Winchester directly compete with one another, but that each is one of several close competitors to the other and neither is the other's closest substitute. The effect of the merger – combining two of the three leading competitors in several of the hospital and primary care PSAs examined – certainly raises the possibility that the transaction may reduce competition, thereby enhancing the resulting system's ability to negotiate higher prices and more favorable contract terms.

At the same time, concerns in this case may be lessened by several factors. First, in the two PSAs in which the parties would experience the largest increases in inpatient market share, the resulting system would still have a market share below 25%. Moreover, as discussed above, the changes in concentration in these two PSAs would not result in a highly concentrated market. Nor does it appear that changes in concentration in the parties' primary care PSAs would result in a highly concentrated market.¹²² Finally, as discussed above, preliminary data indicates Lahey is already the market leader for PCP services in its primary care PSA; however, as discussed in Section III.A, its PCP prices have remained low to medium relative to other groups. TME for patients under the care of Lahey's PCPs are also in the low to medium range. Both observations—low to midrange pricing and TME—are also true of WPA, though to a lesser degree. In sum, our quantitative analyses indicate some risk that the proposed transaction will enhance the resulting system's ability to leverage more favorable contract terms, but do not support a strong presumption of likely, significant anticompetitive effects. In the next section, we turn to some qualitative considerations of the market context in which this proposed transaction occurs.

d. Market Landscape and the Parties' Claims

The above market concentration and diversion analyses indicate the parties may have an increased ability to leverage higher prices as a result of this transaction. However, the parties note that

¹²² *Id.*

some limited exercise of this additional leverage may be pro-competitive. Specifically, they claim that modest increases in their prices will enable the resulting system to better compete with higher-priced systems in the long-term, which will ultimately foster a competitive marketplace that will support achievement of the health care cost growth benchmark.

The parties also claim that their ability to exercise any increased leverage to extract significantly higher prices will be moderated by two countervailing forces. First, they state that Lahey has a business imperative to keep its prices below those of the currently more expensive Boston AMCs; they believe that from the perspective of payers and purchasers, it is their lower price point that distinguishes them from the current market leader. Second, they assert that recent increased transparency for consumers and employers and expanded oversight by state agencies such as the HPC will provide a constraint on their system's ability to charge supracompetitive rates.

It is beyond the scope of this review to quantify the impact of increased transparency and oversight as a constraint on market leverage. More information on the parties' prices post-transaction may be necessary to ensure that, as claimed, the parties do not exercise any increased ability to leverage higher prices to the detriment of sustainable achievement of the health care cost growth benchmark.

4. Adding or Enhancing Facility Fees Would Increase Costs

We have some concern that as a result of this transaction, Lahey may be able to add or increase facility fees at Winchester's outpatient or ancillary sites. The addition of facility fees for office visits and ancillary procedures is another mechanism by which health care spending can increase as the result of a hospital acquisition. Facility fees are payments assessed by hospitals to cover their overhead costs, such as medical records, medical equipment, facility upkeep, and salaries of nurses and other staff. Facility fees are routinely included in hospital outpatient department visits, but can also apply to care delivered at off-campus sites—such as a physician's office or an ambulatory care center—if that site is considered an outpatient clinic that bills through the hospital.

When professional services are combined with a technical (facility) fee, the total bill is often higher than it would be at a freestanding practice. Facility fees can be added both for commercially insured patients and patients insured through government programs like Medicare. According to the Medicare Payment Advisory Commission (MedPAC) in its 2012 Report to Congress, the combined Medicare facility and professional payment to a practice billing as a hospital outpatient clinic can be 80 percent more than the equivalent professional payment to a freestanding practice.¹²³

Our preliminary analysis suggests that not all of the potential mechanisms for added facility fees are necessarily of concern in this transaction. For example, Lahey has stated it does not anticipate charging facility fees for routine physician office visits. In terms of facility fees for other outpatient and ancillary services, our preliminary analysis suggests that Winchester-affiliated physicians already include facility fees for some of these services. At the same time, there are likely other services delivered in physician office settings for which Winchester physicians do not currently charge a facility fee. If Lahey is able to add facility fees to such services following the transaction, health care

¹²³ MEDICARE PAYMENT ADVISORY COMM'N, REPORT TO THE CONGRESS: MEDICARE PAYMENT POLICY (Mar. 2012), available at http://www.medpac.gov/documents/Mar12_EntireReport.pdf.

spending would increase. Additionally, since LHMC's prices, including its facility fees, are higher than Winchester's, any redirection of outpatient or ancillary care from Winchester to Lahey would result in increases in health care spending. Finally, as discussed above, we are generally concerned whether the post-merger system will negotiate increases in their prices, including higher facility fees, which would in turn impact health care spending.

Of the four mechanisms for cost impact described in this section—changes in physician prices, changes in referral patterns, changes in market concentration, and added facility fees—we modeled in detail changes in spending due to the first two mechanisms. As described above, we found that changes in physician prices for four major commercial payers could decrease total medical spending by up to \$1.4 million per year. The timing of WPA physicians joining Lahey contracts will depend on whether WPA completes its current contractual affiliation with NEQCA. With regard to changes in care referral patterns, if the parties succeed at redirecting care from higher-priced providers, and do not themselves become significantly higher priced, they could realize decreases in TME for hospital services of up to \$1.3 million per year. In sum, for changes in physician price and referral patterns, we modeled a potential decrease in total medical spending of up to \$2.7 million per year for four major commercial payers. While we did not model the price impact of increased market concentration or added facility fees, the spending impact of any such price increases could cancel out or even exceed the cost savings potential of this transaction.

B. CARE DELIVERY IMPACT: POTENTIAL FOR COST SAVINGS AND QUALITY IMPROVEMENT

The parties have described a set of goals for the transaction related to care delivery changes.¹²⁴ These include:

- Improving the parties' clinical quality through the exchange of best practices
- Enhancing LHMC's position as a high-quality, low-cost alternative to the Boston AMCs
- Providing support to Winchester physicians that will enhance their performance under commercial risk contracts
- Achieving greater efficiencies through joint management of Lahey and Winchester's Medicare Shared Savings Program (MSSP) patients

In this section, we assess the likelihood that the proposed transaction will result in the achievement of these goals, based on available evidence. We then conclude with an examination of whether the proposed transaction is necessary to achieving these goals.

1. Potential for Improvements in the Parties' Clinical Quality

The parties have stated that they plan to approach quality improvement through the proposed transaction as an exchange of best practices. Both parties have stated that they regard any variation in performance as an opportunity for quality improvement, with Winchester leading in certain areas and Lahey in others. In order to assess whether the parties can realize the potential for such an exchange, the HPC examined three aspects of their historical performance:

¹²⁴ LAHEY NOTICE OF MATERIAL CHANGE, *supra* note 15, at Section 15.

- Whether the parties have substantial differences in quality that could be expected to drive improvements by the weaker party¹²⁵
- Whether the trends of the parties' quality performance over time suggest that one is improving more rapidly and could serve as a model for the other
- Whether Lahey has successfully realized system-wide improvements in quality as a result of its acquisition of Northeast

As outlined in Section III.B.1, Lahey and Winchester generally perform well on structural, process, outcome, and patient experience quality metrics in both inpatient and outpatient settings. The differences in their performance discussed in the baseline section are small, and we would not expect a merger to result in meaningful improvement of the parties' overall quality based on these historic differences.

On nearly all quality measures, the parties' hospitals and physicians have followed similar quality trends over the time periods we examined. For inpatient measures, LHMC and Winchester Hospital mirror each other's performance trends. Both hospitals' process, mortality, patient safety indicators, and patient satisfaction ratings have been improving at similar rates, while readmission performance has declined at a similar rate.¹²⁶ Beverly's trends are generally similar, except that its mortality performance deteriorated and its readmissions rate improved.¹²⁷ In the outpatient setting, Lahey Clinic physicians and Highland (including WPA) both improved on ambulatory care process measures, while NEPHO experienced little change; of the three groups, only Lahey Clinic physicians improved on ambulatory patient experience. We would not expect a merger to result in a meaningful impact on overall quality based only on these minimal differences in the parties' quality trends.

As discussed in Section III.B.2, there are limited data available showing the quality impact of the 2012 merger of the Lahey Clinic system and Northeast.¹²⁸ Without additional data, it is difficult to model Lahey's potential influence on Winchester's quality of care based on this prior transaction. Lahey has provided information showing internal quality tracking, the development and implementation of unified evidence-based order sets, and other efforts that indicate its commitment to a systemic approach to quality improvement. However, the available data on the first ten months after the formation of Lahey do not provide a clear indication that Lahey's purchase of Winchester will impact the parties' clinical quality.

¹²⁵ Pre-merger clinical superiority of one party may indicate the likelihood of a quality impact on the other, though differences in quality by themselves do not guarantee a transaction will result in quality improvements. *See Romano & Balan, supra* note 59.

¹²⁶ Inpatient measures are based on CMS Hospital Compare composites and MHQP data processed through AHRQ code. Readmissions trend is from Q3 of 2009 through Q2 of 2012, while patient experience trend is for 2011 through Q1 of 2013.

¹²⁷ Because the inpatient mortality and readmissions trends and outpatient process and patient experience trends discussed here are based entirely on data from prior to the merger of the Lahey Clinic system and Northeast, it is possible that these trends are not representative of post-merger performance of the Lahey hospitals and LPGs.

¹²⁸ The Lahey Clinic-Northeast merger was completed in May, 2012. While CMS Hospital Compare process and patient experience measures show post-merger performance on inpatient quality from Q2 of 2012 through Q1 of 2013, none of the data we examined besides Hospital Compare is recent enough to show post-merger performance.

2. LHMC's Quality Relative to Boston Academic Medical Centers

One of the primary goals of the parties in the proposed transaction is for the Lahey system to retain more of the patients living in Winchester's PSA who currently go to Boston AMCs for care. Section IV.A.2 assesses the impact that such a shift would have on total medical spending for the region north of Boston. In this section, we assess whether patients would be likely to see a difference in the quality of their care as the result of such a shift.

The HPC compared LHMC's performance on selected inpatient quality metrics to that of Boston AMCs that are commonly used by patients in Winchester's PSA and have comparable case mix.¹²⁹ On the CMS Hospital Compare process measure composite,¹³⁰ Lahey and the comparator AMCs all performed well. LHMC scored slightly worse than the comparator AMCs on mortality outcomes,¹³¹ but its rate of readmissions was comparable to BWH and MGH, and slightly better than that of Tufts MC and BIDMC.¹³² Lahey also had a better three-year average on the AHRQ Patient Safety Indicator composite than any of the comparator AMCs.¹³³ In 2013, LHMC's patient experience ratings were a few percentage points behind those of BWH and MGH, but consistent with state and national averages.¹³⁴

Overall, the Boston AMCs and Lahey are high-quality providers. If more patients from Winchester's PSA seek care at LHMC instead of the Boston AMCs as a result of the transaction, historic data indicates that they would generally receive care of comparable quality.

3. The Parties' Experiences in Commercial Risk Contracts

The parties state that one of the goals of the transaction is to support the transition from fee-for-service to population health management-based reimbursement that rewards efficient, high quality care.¹³⁵ Lahey states that its experience in risk contracting,¹³⁶ particularly NEPHO's history of participation in the BCBS Alternative Quality Contract (AQC) since 2010, will help Winchester efficiently manage care for its risk population. The parties have not provided specific estimates of how much they expect Winchester's risk performance to improve as a result of the transaction.

¹²⁹ Selected comparators were BWH, MGH, Tufts MC, and BIDMC. Boston Medical Center was not included for comparison due to its low case mix index and market share in Winchester's PSA. See Section II.A for a description of these hospitals' case mixes.

¹³⁰ See *supra* note 67.

¹³¹ See *supra* note 72.

¹³² See *supra* note 73.

¹³³ See *supra* note 74.

¹³⁴ Based on Hospital Compare "top box" composite. See *supra* note 77 (explaining "top box" methodology).

¹³⁵ LAHEY NOTICE OF MATERIAL CHANGE, *supra* note 15, at Section 15.

¹³⁶ Under a commercial global risk contract, providers negotiate a "global budget" for the total cost of care of the commercial members in the risk contract. The budget is a targeted maximum amount the payer will pay for the cost of all of the care these members receive in a given year (including the cost of care the members receive from other providers). At the end of the year, if the total cost of care is less than the negotiated budget, the provider may receive a surplus payment from the payer. If the total cost of care exceeds the budget, the provider may owe a deficit payment to the payer. Risk budgets, like other aspects of commercial contracts, are negotiated, and subject to the exercise of bargaining leverage. As previous Massachusetts reports have noted, there is significant variation in the size of budgets that different providers receive to care for comparable patient populations. See AGO 2013 COST TRENDS REPORT, *supra* note 97, at 24.

In order to assess the likelihood of efficiency improvements at Winchester as a result of access to the experience of NEPHO and Lahey Clinic, the HPC examined the parties' performance in the two commercial payer risk contracts in which they participate: BCBS's AQC and THP's HMO/POS population risk contract. We examined the parties' performance against their respective target budgets (whether they earned a surplus or deficit) to assess how well they are currently managing their risk contracts. We also examined the parties' effective budgets to determine whether the parties are managing care under equivalent budgets.¹³⁷

Lahey Clinic and NEPHO both participate in the AQC as separate practice groups. NEPHO entered the AQC in 2010, while Lahey Clinic joined in 2012. Highland (including WPA) participates in the AQC through its contracting affiliation with NEQCA, which entered the AQC in 2009.¹³⁸ In 2012, the first year in which Lahey Clinic participated in the AQC, it did not meet the target budget and instead owed a deficit. NEPHO and NEQCA achieved surpluses, with NEQCA achieving the larger percentage surplus. Both NEPHO and NECQA received substantially larger effective budgets than Lahey Clinic, although not so large as to completely account for the differences in their performance.

Lahey Clinic, NEPHO, and Highland (including WPA)¹³⁹ have all held risk contracts with THP since 2011, covering THP's fully-insured HMO/POS population. In 2011 and 2012, all three groups achieved surpluses relative to their target budgets, with Lahey Clinic achieving the largest percentage surplus of the three in 2011 and Highland achieving the largest percentage surplus in 2012. Highland's large percentage surplus in 2012 was due in part to its effective budget being substantially larger than those of the other groups.

Our review indicates that WPA already has risk contracting experience through participation in contracts with Highland and NEQCA. The surpluses that Highland and NEQCA have achieved indicate that WPA physicians are successfully managing their risk contracts, even when their larger effective budgets are taken into account. Because 2012 settlement data capture only the first eight months after NEPHO joined Lahey, we have insufficient information to determine whether successes in risk contracting are being replicated across the Lahey system. While such improvements may be possible, we are unable to project any efficiency savings based on the data available.

4. Joint Management of Medicare Shared Savings Program Patients

Both Lahey and Winchester formed Medicare ACOs in 2013 in order to begin participating in the CMS Medicare Shared Savings Program (MSSP).¹⁴⁰ Under the MSSP, provider groups are attributed Medicare patients who receive the majority of primary care from physicians in their ACO.¹⁴¹

¹³⁷ We calculated the parties' effective budgets by adjusting their negotiated budgets to account for differences in the health status of their members and differences in services covered by the risk contracts. If a provider receives a larger effective budget to care for its members, it may more easily achieve surpluses.

¹³⁸ Disaggregated data for WPA or Highland's risk performance in the AQC was unavailable.

¹³⁹ Disaggregated data for WPA was not available.

¹⁴⁰ *Lahey Clinical Performance ACO*, LAHEY HEALTH SYS., <http://www.laheyhealth.org/lahey-clinical-performance-aco> (last visited Apr. 16, 2014); *WinACO*, WINCHESTER HOSP., <http://www.winchesterhospital.org/our-services/medical-care/departments-centers/winaco> (last visited Apr. 16, 2014).

¹⁴¹ See Michael Bailit and Christine Hughes, Bailit Health Purchasing, LLC, *Key Design Elements of Shared-Savings Payment Arrangements*, THE COMMONWEALTH FUND 2-3 (Aug. 16, 2011), available at

CMS establishes a benchmark budget for this group of patients, and requires participating ACOs to reach a certain level of savings as compared to this budget. If the ACO achieves this benchmark level of savings, the provider and CMS share any additional savings above the benchmark.

The Lahey ACO has 35,000 patients, and the Winchester Community ACO has 6,000. Because both parties started participating in 2013, there are no data available concerning their relative performance, and the parties have not provided projections for performance improvement based on the transaction. While the parties have provided information that some minor administrative savings could result if the Medicare ACOs were combined, the HPC has no information indicating that the proposed transaction would result in additional efficiencies of care for the parties' Medicare ACO populations.

5. The Need for Corporate Integration

The parties describe full corporate integration as necessary to generate operational efficiencies, support investments in health infrastructure, and systematize clinical quality.¹⁴² In terms of operational efficiencies, the parties project administrative and business savings from the transaction that include \$3 to \$6 million in savings per year on facilities costs, about \$1 million in annual savings from consolidation of human resources and consulting services, about \$1.5 million in savings over five years in consolidated laboratory services, and several million dollars in savings through group purchasing and services contracts. Although our preliminary review did not encompass independent substantiation of each of the parties' projections, we find it generally credible that operating efficiencies could offset at least some of the costs of the parties' proposed investments, though this will not necessarily translate into lower health care spending for consumers.

In terms of infrastructure investments, Lahey has committed to two sets of investments as part of the proposed transaction: capital funding for five years equal to 110% of Winchester's annual post-closing depreciation, and \$35 million for HIT infrastructure. In terms of capital funding, Lahey's commitment is consistent with spending levels observed in Winchester's audited financial statements from previous years, as well as with Winchester's projected budget for FY2014. Winchester has stated it expects to make these expenditures regardless of whether the transaction is completed.

Regarding HIT infrastructure, the parties have described the \$35 million investments as important to their goals of improved care coordination and system-wide quality standardization and improvement. An in-depth analysis of whether and on what terms outside financial support may be instrumental to facilitating this HIT investment, and whether each element of this \$35 million investment is integral to the achievement of the parties' goals, is beyond the scope of this review.¹⁴³

http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2011/Aug/1539_Bailit_key_design_element_s_sharesavings_ib_v2.pdf (summarizing MSSP patient attribution methodology).

¹⁴² See *supra* Section II for a detailed description of the parties' stated goals.

¹⁴³ The implementation of HIT can facilitate as well as raise challenges for care coordination and health care competition. HIT tools that facilitate interoperability, both within a provider organization and between different provider organizations, can enhance coordinated, effective care delivery. Tools that lack interoperability can create silos, with challenges both for care coordination and access to competitors. See Katherine Baicker & Helen Levy, *Coordination versus Competition in Health Care Reform*, 369 NEW ENGL. J. MED. 789-91 (Aug. 29, 2013), available at <http://www.nejm.org/doi/pdf/10.1056/NEJMp1306268>. The parties have indicated that Lahey's new Epic IT system will be highly interoperable within the Lahey system, but that patients may experience barriers to accessing records and scheduling appointments when using non-Lahey providers.

Ultimately, the stated benefits of this \$35 million investment should be carefully considered by employers and consumers – the health care purchasers who ultimately fund such investments – as they seek to balance health care spending with other priorities in their communities.¹⁴⁴

C. ACCESS IMPACT

As discussed in Section III.C, data on the parties' hospital payer mix and service mix show:

- Winchester has lower Medicaid payer mix and higher commercial payer mix compared to other area hospitals.
- Winchester and LHMC provide a lower mix of behavioral health discharges than the mix in their respective PSAs; Beverly and Addison Gilbert provide a higher mix of behavioral health discharges than the mix in their overall PSA.¹⁴⁵

Because LHMC and Winchester have similar payer mix patterns (lower Medicaid payer mix), the HPC does not anticipate that Winchester's payer mix will change as a result of this transaction.

The transaction may impact behavioral health access. Lahey has described its plans to integrate behavioral health services into patient centered medical homes, both for its current system and eventually for Winchester as well. It is currently piloting this program at four Lahey physician practice sites, and plans to provide behavioral health support to three Winchester sites in 2015. The parties have not shared any specific plans to make service line changes at Winchester Hospital, or to increase its mix of inpatient behavioral health services.

Contrasting trends in payer mix and service mix across different providers can contribute to, or exacerbate, financial distress at providers that care for the highest mix of Medicaid patients, or provide the greatest proportion of low-margin services – with potential long-term consequences for access for such patients and to such services. Combining providers with similar profiles of high commercial payer mix may reinforce the resulting system's financial strength vis-à-vis area competitors.

V. CONCLUSION

As described in Part IV, the HPC found:

- **Cost Impact:** For the four major commercial payers studied, we modeled cost savings of up to \$2.7 million per year as a result of potential decreases in WPA physician prices and shifts in utilization from higher-priced hospitals to Lahey facilities. However, these savings depend on the resulting system not raising its prices relative to other providers, or adding facility fees.

¹⁴⁴ There are also examples of provider alignment models in the Commonwealth other than corporate integration, such as clinical affiliations, sharing in risk contract incentives, and other alternative arrangements, that offer approaches to improving care coordination, quality, and efficiency. *See generally* PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 110, at Section IV.B.2.b.

¹⁴⁵ Even this higher mix is likely understated, as behavioral health discharges from Lahey's BayRidge psychiatric hospital near Beverly are not included in this analysis. *See supra* notes 87, 91, and 96.

- **Care Delivery Impact:** The parties' stated plan to improve clinical quality through the exchange of best practices demonstrates potential for improving care delivery and health outcomes. However, given Lahey and Winchester's strong overall quality performance, and their established experience managing populations through risk-based payments, it is unclear how this transaction is instrumental to raising their existing care delivery performance.
- **Access Impact:** Lahey proposes to integrate behavioral health services into some Winchester physician practices in 2015. At the same time, Lahey and Winchester have not proposed specific changes in hospital services that would cause the HPC to anticipate changes to their existing inpatient service mix and payer mix trends.

The parties have described a business case for keeping their prices below those of currently higher-priced providers. We invite the parties to respond to the concerns we have outlined in this Preliminary Report regarding potential increases in Lahey's rates over time that could cancel out or even exceed the cost savings we have modeled here. Following the period for written response, we look forward to publishing our Final Report, including any referral to the Massachusetts Attorney General's Office.



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