COMMONWEALTH OF MASSACHUSETTS

HEALTH POLICY COMMISSION

REVIEW OF PARTNERS HEALTHCARE SYSTEM'S PROPOSED ACQUISITION OF HALLMARK HEALTH CORPORATION

(HPC-CMIR-2013-4)

PURSUANT TO M.G.L. C. 6D, § 13

PRELIMINARY REPORT

JULY 2, 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 which ultimately bear the costs of the health care system.

Chapter 224 directs the HPC to monitor this aspect of the Massachusetts health care system. Through the filing of notices of material change by provider organizations,[2] the HPC 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 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

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[1] MASS. GEN. LAWS ch. 6D, § 5 (2012).

[2] In this report, we use the terms provider organization, defined in MASS. GEN. LAWS ch. 6D, § 1 (2012), 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.

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 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 document reports on the HPC's third CMIR, examining the proposed acquisition of Hallmark Health System (Hallmark) and its affiliates by Partners HealthCare System (Partners). 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.

Concurrent with the HPC's review, the Massachusetts Attorney General (AGO), Partners, and related health care providers filed a proposed consent judgment that would settle an extensive law enforcement investigation into Partners' market conduct and plans to acquire Hallmark, South Shore Hospital (the subject of the HPC's first CMIR), and their related physicians. Since that investigation includes the Hallmark transaction under review in this CMIR, aspects of this report address some topics common to that law enforcement review.

As discussed above, under Chapter 224, the HPC's CMIRs are intended to provide for public assessment of a spectrum of potential impacts from market changes, ranging from changes in cost and quality performance to impacts on the availability and accessibility of services. 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 is a unique opportunity to enhance the transparency of significant changes to our health care system, and can inform and complement the many important efforts of other agencies, such as the AGO, the Center for Health Information and Analysis (CHIA), the Department of Public Health (DPH), and the Division of Insurance (DOI), 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.

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[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

AGO	Massachusetts Attorney General's Office
AHRQ	Agency for Healthcare Research and Quality
AMC	Academic Medical Center
APCD	All-Payer Claims Database
Chapter 224	Chapter 224 of the Acts of 2012
CHIA	Massachusetts Center for Health Information and Analysis
CHIP	Children's Health Insurance Program
CLABSI	Central Line Associated Blood Stream Infections
CMHCB	Care Management for High Cost Beneficiaries
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
ED	Emergency Department
EMR	Electronic Medical Records
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
IT	Health Information Technology
HMO	Health Maintenance Organization
HPC	Health Policy Commission
IP	Inpatient
Mass-DAC	Massachusetts Data Analysis Center
MHDC	Massachusetts Health Data Consortium
MHQP	Massachusetts Health Quality Partners
NPSR	Net Patient Service Revenue
OP	Outpatient
PCP	Primary Care Physician
PHM	Population Health Management
PHO	Physician Hospital Organization
POS	Point of Service
PPO	Preferred Provider Organization
PSA	Primary Service Area
RPO	Registered Provider Organization
RSO	Regional Service Organization
SCIP	Surgical Care Improvement Project
TME	Total Medical Expenses

NAMING CONVENTIONS

Parties and Related Organizations	
BWH	Brigham and Women's Hospital
Cooley Dickinson	Cooley Dickinson Hospital
Faulkner	Brigham and Women's Faulkner Hospital
Hallmark	Hallmark Health System
Hallmark-LMH	Lawrence Memorial Hospital
Hallmark-MWH	Melrose-Wakefield Hospital
HHC	Hallmark Health Corporation
HHMA	Hallmark Health Medical Associates
HHPHO	Hallmark Health Physician Hospital Organization
Martha's Vineyard	Martha's Vineyard Hospital
McLean	McLean Hospital
MGH	Massachusetts General Hospital
MGPO	Massachusetts General Physicians Organization
Nantucket Cottage	Nantucket Cottage Hospital
Newton-Wellesley	Newton-Wellesley Hospital
NSHS	North Shore Health System
NSMC	North Shore Medical Center
NSPG	North Shore Physicians Group
NSMC-Salem	North Shore Medical Center Salem Hospital
NSMC-Union	North Shore Medical Center Union Hospital
Partners	Partners HealthCare System
PCHI	Partners Community Healthcare Inc.
Payers	
BCBS	Blue Cross Blue Shield of Massachusetts
HPHC	Harvard Pilgrim Health Care
THP	Tufts Health Plan
Other Providers	
Atrius	Atrius Health
BIDMC	Beth Israel Deaconess Medical Center
CHA	Cambridge Health Alliance
Lahey HMC	Lahey Hospital & Medical Center
Mount Auburn	Mount Auburn Hospital
NEQCA	New England Quality Care Alliance
Steward	Steward Health Care System
Tufts MC	Tufts Medical Center
UMass	UMass Memorial Health Care

EXECUTIVE SUMMARY

On January 31, 2014, Partners HealthCare System (Partners) and Hallmark Health Corporation (HHC) executed an Affiliation Agreement for Partners to acquire Hallmark Health System (Hallmark) and its affiliates, including two acute care hospitals (Lawrence Memorial Hospital in Medford and Melrose-Wakefield Hospital in Melrose) and multiple outpatient facilities, making Hallmark a fully integrated, community-based member of the Partners system.[5] The transaction builds on an eighteen-year clinical and contracting relationship between the parties.[6] The parties state that they are committed to "accepting responsibility (and financial risk) for controlling the total medical expenses . . . for patients cared for by their primary care physicians in the . . . communities served by [the parties]."[7] In order to achieve this objective, the parties seek to implement a "robust population health management (PHM) model" in their joint service area,[8] which they state will require relocating and rationalizing facilities and service lines, expanding and more fully integrating their primary care networks, and investing in integrated information systems.

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.[9] 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.

Concurrent with the HPC's review, the Massachusetts Attorney General (AGO), Partners, and related health care providers filed a proposed consent judgment in state court that would settle an extensive law enforcement investigation into Partners' market conduct and recent expansion plans.[10] Among other provisions, we understand this agreement would constrain Partners' contracting practices, network growth, and prices for five to ten years, and would allow Partners to acquire South Shore Hospital, Hallmark, and their related providers. The agreement

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[5] On November 8 and 12, 2013, Partners and HHC filed Notices of Material Change with the HPC pursuant to MASS. GEN. LAWS ch. 6D, § 13 (2012).

[6] As part of this relationship, Hallmark contracts with most of the major payers through Partners Community Healthcare Inc. (PCHI) for both its health maintenance organization (HMO)/point of service (POS) and preferred provider organization (PPO) rates for both its physician and hospital services. *See also infra* note 32 and accompanying text (noting the history of Hallmark's joint contracting relationship with PCHI).

[7] Application by Hallmark Health System, Inc. for Determination of Need under 105 C.M.R. 100.600-603 for Change of Ownership of Hallmark Health System, Attachment G, Affiliation Agreement, Art. 1, 4.5 (Apr. 4, 2014) [hereinafter Affiliation Agreement].

[8] The parties describe their joint service area as the "Northern Corridor," which is comprised of the combined primary and secondary service areas of Hallmark (Lawrence Memorial Hospital and Melrose-Wakefield Hospital campuses) and North Shore Medical Center (NSMC) (Union and Salem campuses). *Id.* at Exh. 4.4.1-A.

[9] *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 Partners/Hallmark merger).

[10] *See generally* Press Release, Office of Att'y Gen. Martha Coakley, AG Final Resolution with Partners Would Alter Provider's Negotiating Power, Restrict Growth and Health Care Costs (June 24, 2014), *available at* http://www.mass.gov/ago/news-and-updates/press-releases/2014/2014-06-24-partners-settlement.html (last visited June 25, 2014).

would also require the AGO and Partners to confer on mitigating any material price impacts identified by the HPC in this CMIR.

We understand the agreement limits average price growth across all Partners providers to no more than the rate of general inflation for the next 6.5 years, and separately holds the South Shore providers, as an individual group, to this same cap. Since the current agreement does not separately cap the prices of the Hallmark providers, we understand that Hallmark's prices could grow in excess of general inflation, so long as the impact of that increase was allocated across the rest of Partners' community network. The findings of this report thus bear on the need for mitigation of Hallmark-specific price impacts, as we anticipate increases in Hallmark's prices as a result of this transaction that would set a new, permanent baseline upon which future price increases would be negotiated, including prices negotiated after the expiration of the settlement. Similarly, we understand that other material price effects, such as changes in site of patient care across differently priced providers – especially for patients in Preferred Provider Organization (PPO) and non-risk Health Maintenance Organization (HMO)/ Point of Service (POS) insurance products – are not fully encompassed by the current agreement. Over time, the increased spending baseline from such site of care effects will impact consumers and payers in northeastern Massachusetts, as well as providers who refer their patients to Hallmark facilities and are increasingly at risk for these patients' total medical expenses.

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:** Partners and Hallmark are financially strong and have the highest share of inpatient and primary care services in the relevant service areas. In each region where Partners operates, its hospitals have higher prices than nearly all other area hospitals, and Partners' physicians have some of the highest prices in the state. Hallmark's prices are lower than those of other Partners hospitals and physician groups. Partners has higher health status adjusted total medical expenses (TME) than Hallmark, due in part to its higher prices.

2. **Quality Profile:** Partners is generally a strong quality performer, consistently exceeding Massachusetts and national averages across a spectrum of measures. Hallmark's hospitals have slightly above-average inpatient quality compared to state and national benchmarks and Hallmark's physician groups generally perform at or slightly below the state average among Massachusetts physician groups.

3. **Access Profile:** Hallmark and North Shore Medical Center (NSMC) provide a range of inpatient and outpatient services, including behavioral health, that are important to their local communities. While northeastern Massachusetts appears to have some excess inpatient bed capacity, evidence indicates there is likely a need for additional behavioral health capacity. While Partners' hospitals generally care for higher proportions of

commercially insured patients and lower proportions of Medicaid patients than other area hospitals, the exception is their hospital in northeastern Massachusetts, NSMC, which has a relatively high government payer mix. The Hallmark hospitals also have a relatively high government payer mix, particularly of Medicare patients, and a particularly high mix of Medicare behavioral health patients at Lawrence Memorial Hospital.

4. **Cost Impact:** This transaction will reinforce Partners' position as the provider with the highest share of inpatient and primary care services in its northeastern Massachusetts service areas. Over time, this transaction is anticipated to increase spending in northeastern Massachusetts by an estimated $15.5 million to $23 million per year for the three major commercial payers due to material price effects, which are not expected to be offset by commensurate savings from decreased utilization through population health management (PHM).

5. **Quality Impact:** The differences in Partners and Hallmark's historic quality performance indicate potential for the transaction to drive quality improvement. However, Partners and Hallmark have already been affiliated for nearly 20 years, including joint clinical and contracting efforts, and it is unclear how this merger is necessary to improve clinical quality in ways the parties' longstanding affiliation has not.

6. **Access Impact:** The parties have proposed significant changes to care delivery that have the potential to expand access to a number of services in northeastern Massachusetts. However, the parties' current plans lack the detail necessary to evaluate the extent to which such potential will be realized. Given Hallmark and NSMC's high government payer mix, the proposed reconfiguration and relocation of services is anticipated to impact especially vulnerable populations as they seek to access services at new, more distant locations.

In summary, based on our review, we find that the proposed transaction between Partners and Hallmark is likely to increase health care spending in northeastern Massachusetts, reinforce Partners' market power, and, over time, increase premiums for employers and consumers. While the parties have described PHM initiatives that have the potential to reduce total medical spending, those potential savings are unlikely to offset the projected increases to health care spending. At the same time, this transaction has the potential to improve quality and increase access to certain health care services. The parties' current plans lack sufficient detail to enable us to assess the likelihood that this potential will be realized, or confirm that potential adverse impacts to vulnerable populations will be sufficiently mitigated. We invite the parties to address these concerns in their written response, including how they would demonstrate any commitments in this regard.

Based on these findings, this transaction may warrant further review and referral to the AGO pursuant to MASS. GEN. LAWS ch. 6D, § 13. These findings suggest, consistent with the terms of the proposed consent judgment, that further consideration of mitigation of transaction-specific impacts is likely warranted. 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:[11]

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.[12]

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

[11] 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).

[12] *All-Payer Claims Database*, CTR. FOR HEALTH INFO. & ANALYSIS, http://www.mass.gov/chia/researcher/hcf-data-resources/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).

in their material change notices and other filings with the Commonwealth.[13] 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), and Tufts Health Plan (THP); 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."[14] 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 generally reflects 2012 data and sometimes 2013 or 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.[15] Within the commercial market, we focused our review on four

[13] *E.g.*, Application by Hallmark Health System, Inc. for Determination of Need under 105 C.M.R. 100.600-603 for Change of Ownership of Hallmark Health System (Apr. 4, 2014).
[14] MASS. GEN. LAWS ch. 6D, § 13(c) (2012), *amended by* 2013 Mass. Acts 38, § 20.
[15] *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)

payers, the three largest Massachusetts payers (BCBS, HPHC, THP) and a major national payer, which together account for more than 80% of the commercial market.[16] 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 Hallmark and Partners' existing hospital in northeastern Massachusetts, NSMC, to other hospitals operating in the same area. 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:

- **North Shore Medical Center Salem Hospital** and **North Shore Medical Center Union Hospital (NSMC**, jointly, or **NSMC-Union** and **NSMC-Salem**, individually**)**: Hallmark-Lawrence Memorial Hospital (Hallmark-LMH), Hallmark-Melrose-Wakefield Hospital (Hallmark-MWH), Lahey-Addison Gilbert Hospital, Lahey-Beverly Hospital, Lahey Hospital & Medical Center (Lahey HMC);
- **Lawrence Memorial Hospital** and **Melrose-Wakefield Hospital** (**Hallmark hospitals**, jointly, or **Hallmark-LMH** and **Hallmark-MWH**, individually): Cambridge Health Alliance (CHA), Lahey HMC, Mount Auburn Hospital (Mount Auburn), NSMC, Winchester Hospital (Winchester).

Given that the Hallmark hospitals and NSMC operate in similar regions, we often present their data together, along with the comparators for both hospitals.

Throughout this report, we seek to present data in the manner that most accurately reflects the current state of the market. For example, Cooley Dickinson Hospital (Cooley Dickinson), which was acquired by Partners in July 2013, is included in Partners' hospital statistics. Cooley Dickinson Physician Hospital Organization, which the HPC understands has not joined Partners' physician organization, Partners Community Healthcare Inc. (PCHI), is not included in PCHI's information. Other recent transactions, such as Beth Israel Deaconess Medical Center's acquisition of Jordan Hospital, as well as pending transactions that have passed necessary regulatory approvals, are also reflected throughout our data except where explicitly noted.

II. OVERVIEW OF THE PARTIES AND THE TRANSACTION

On January 31, 2014, Partners HealthCare System (Partners) and Hallmark Health Corporation (HHC) executed an Affiliation Agreement for Partners to acquire HHC and its

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[hereinafter AGO 2010 COST TRENDS REPORT], *available at* http://www.mass.gov/ago/docs/healthcare/2010-hcctd-full.pdf.

[16] CTR. FOR HEALTH INFO. & 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, whom we commonly refer to as the "three largest payers." Where we are able to include data from the major national payer with the data of these three largest payers, we refer to the group as "four major payers" in Massachusetts.

affiliates, including Hallmark Health System (Hallmark).[17] This section describes the parties and their proposed transaction.

A. PARTNERS HEALTHCARE SYSTEM

Partners is the largest provider system in Massachusetts and, like most providers in Massachusetts, operates as a non-profit public charity. It was founded in 1994 by an affiliation between Brigham and Women's Hospital (BWH) and Massachusetts General Hospital (MGH). Partners owns eight general acute care hospitals[18] with a total of 2,793 licensed beds that operate across the following five regions within Massachusetts:

- **Boston**: BWH and MGH (academic medical centers) and Brigham and Women's Faulkner Hospital (community hospital)
- **Metro-West**: Newton-Wellesley
- **North Shore**: NSMC (two campuses, NSMC-Salem and NSMC-Union)
- **Cape and Islands**: Nantucket Cottage Hospital (Nantucket Cottage) and Martha's Vineyard Hospital (Martha's Vineyard)
- **Pioneer Valley**: Cooley Dickinson

Partners also contracts with most major payers on behalf of two non-owned affiliate hospitals, Hallmark and Emerson Hospital. BWH and MGH, Partners' largest hospitals, are academic medical centers (AMCs) that serve as principal teaching hospitals of Harvard Medical School. They are also the largest private hospital recipients of the National Institutes of Health funding in the nation.[19] BWH is clinically affiliated with South Shore Hospital and Cape Cod Healthcare, and MGH with Emerson Hospital and Hallmark. Both BWH and MGH have clinical affiliations with Dana Farber Cancer Institute and are the preferred tertiary/quaternary providers in Steward Health Care System's limited network products through Fallon Community Health Plan and THP. Through NSMC, Partners owns and operates Salem Hospital (NSMC-Salem) and Union Hospital (NSMC-Union) in northeastern Massachusetts, located six miles apart.

In addition to its general acute care hospitals, Partners owns a psychiatric hospital (McLean Hospital), a network of rehabilitation facilities (Spaulding Rehabilitation Network), and a home care agency (Partners HealthCare at Home). Partners' managed care network, PCHI, negotiates contracts on behalf of approximately 6,200 primary care physicians (PCPs) and specialists. PCHI is organized into Regional Service Organizations (RSOs), which vary in size and structure.[20] Many of Partners' community hospitals have affiliated physician groups. For example, the physicians affiliated with NSMC are organized into North Shore Health System

[17] *See supra* note 5 (reporting filing dates for the parties' notices of material change).
[18] As referenced throughout this Report, Partners is seeking to acquire three more hospitals, South Shore Hospital and the two Hallmark Hospitals.
[19] *See* PARTNERS HEALTHCARE SYSTEM, Series L Bond Statement at A-3 (Dec. 9, 2011), *available at* http://emma.msrb.org/ER539808-ER417769-ER819686.pdf.
[20] PCHI's larger RSOs are tied to its AMCs. PCHI includes approximately 1,300 PCPs, 1,700 community-based specialists, and 3,560 academically-based specialists. *Id.* at A-5; *Partners Community Healthcare, Inc.*, PARTNERS HEALTHCARE, http://www.partners.org/services/general/patient-care/community-based-programs/partners-community-healthcare-inc.aspx (last visited Apr. 30, 2014).

(NSHS) Physician Hospital Organization (PHO), which includes both physicians who are directly employed by Partners, as well as those who are not, but who are affiliated with Partners for contracting and clinical purposes.[21] The NSHS physicians receive varying rates depending on whether they are employed or affiliated.[22]

Partners has continued to grow in recent years. In October 2012, Partners acquired Neighborhood Health Plan, a Massachusetts payer with over 260,000 members. In July 2013, Partners acquired 140-bed Cooley Dickinson Hospital in Northampton, Massachusetts. Partners has also proposed acquiring South Shore Hospital and Harbor Medical Associates, the topic of the HPC's first Cost and Market Impact Review (CMIR), and upon which the HPC released a Final Report in February 2014.[23]

On June 24, 2014, the AGO, Partners, South Shore Health and Educational Corporation, and Hallmark Health Corporation filed a proposed consent judgment (AGO Settlement) in Suffolk Superior Court that would settle an extensive law enforcement investigation into Partners' market conduct and plans to acquire Hallmark, South Shore Hospital, and their related physicians.[24] The AGO Settlement includes provisions that:

- Allow payers to contract with Partners providers on a component basis. AMCs and community hospitals would remain separate components for 10 years. South Shore Hospital and Hallmark would remain separate components for seven years and then become part of the community hospital group;
- Prohibit joint contracting by Partners on behalf of non-owned physician group affiliates outside of its physician hospital organizations for 10 years;
- Prohibit Partners' system-wide price growth and the price growth of South Shore providers from exceeding the rate of general inflation for 6.5 years;
- For the next three years, limit the growth of Partners' physician network to 2012 levels (approximately 550 more physicians than current levels), and for two additional years, limit physician network growth to two percent each year; and

[21] NSHS is comprised of approximately 600 physicians, more than one-third of which are employed by North Shore Physician Group (NSPG), the employed subgroup of NSHS. *About NSMC*, NORTH SHORE MED. CTR., http://nsmc.partners.org/about_nsmc (last visited June 30, 2014); NORTH SHORE PHYSICIANS GRP., http://www.northshorephysicians.org/ (last visited June 30, 2014).

[22] *See* note 83 *infra* regarding the difference between Partners' rates for its employed or "integrated" physicians and its affiliated physicians.

[23] 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 (Feb. 19, 2014), *available at* http://www.mass.gov/anf/docs/hpc/20140219-final-cmir-report-phs-ssh-hmc.pdf [hereinafter PHS-SSH-HARBOR FINAL CMIR REPORT]. The HPC released its Preliminary Report of the CMIR on December 18, 2013. 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, PRELIMINARY REPORT (Dec. 18, 2013), *available at* http://www.mass.gov/anf/docs/hpc/hpc-preliminary-review-of-phs-ssh-harbor-12-18-2013.pdf.

[24] *See supra* note 10 (citing the Massachusetts Attorney General's press release regarding the proposed consent judgment with Partners).

- For the next seven years, prohibits Partners from acquiring hospitals in eastern Massachusetts other than South Shore Hospital and Hallmark without AGO approval, with Emerson Hospital, in light of its existing joint contracting relationship with Partners, excepted from this AGO discretionary approval.[25]

B. HALLMARK HEALTH SYSTEM

Founded in 1997, Hallmark Health System (Hallmark) serves residents in northern suburban Boston, including Malden, Medford, Melrose and Wakefield.[26] Hallmark is a non-profit integrated health system that operates two acute care hospitals under a single license, Melrose-Wakefield Hospital (Hallmark-MWH) in Melrose and Lawrence Memorial Hospital (Hallmark-LMH) in Medford.[27] Located five miles apart, Hallmark-MWH and Hallmark-LMH have 174 and 132 licensed acute care beds, respectively. Both hospitals offer general acute care inpatient and outpatient services, including emergency and psychiatric care.[28] Hallmark has clinical affiliations with MGH for cardiology and Tufts Medical Center (Tufts MC) for neonatology. Hallmark also owns a number of outpatient facilities in northeastern Massachusetts, including a Stoneham outpatient campus that is the site of the Hallmark Health System Hematology and Oncology Center as well as the CHEM Centers for MRI and Radiation Oncology.[29]

Hallmark Health Physician Hospital Organization (HHPHO) is the managed care contracting organization for Hallmark's hospitals and physicians, including Hallmark's employed physicians in Hallmark Health Medical Associates, Inc. (HHMA).[30] HHPHO has approximately 400 participating physicians, more than 50 of whom are PCPs.[31] HHPHO

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[25] *Id.*

[26] Hallmark Health System, Inc. is one of several entities owned by Hallmark Health Corporation (HHC). Partners and HHC executed an Affiliation Agreement on January 31, 2014, pursuant to which Partners will acquire HHC and all of its affiliates. *See infra* Section II.C for details regarding the transaction.

[27] HALLMARK HEALTH CORP., NOTICE OF MATERIAL CHANGE TO THE HEALTH POLICY COMM'N (Nov. 12, 2013), AS REQUIRED UNDER MASS. GEN. LAWS ch. 6D § 13 (2012) [hereinafter HALLMARK NOTICE OF MATERIAL CHANGE].

[28] Hallmark-MWH and Hallmark-LMH have 24 and 34 licensed inpatient psychiatric beds, respectively. Application by Hallmark Health System, Inc. for Determination of Need under 105 C.M.R. 100.600-603 for Change of Ownership of Hallmark Health System, Section III (Apr. 4, 2014) [hereinafter Hallmark Determination of Need].

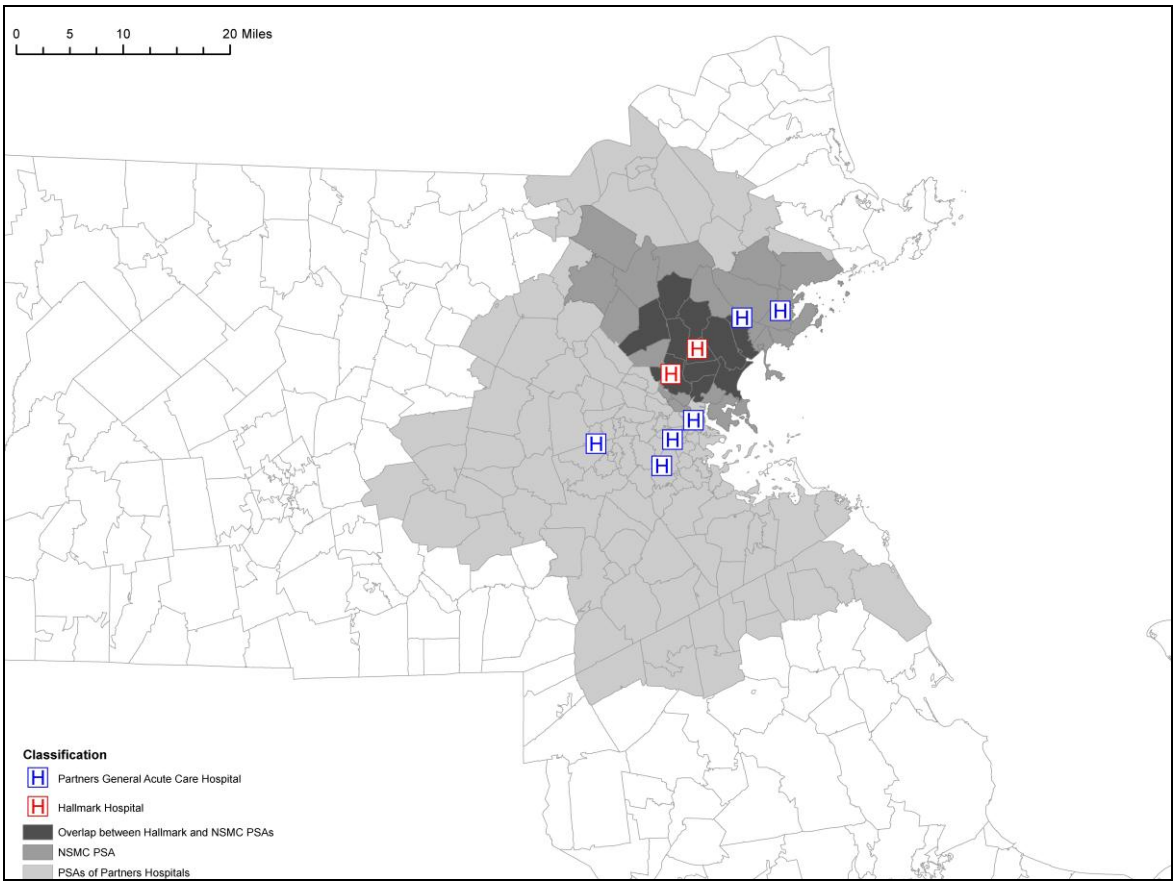
[29] The Stoneham outpatient campus also includes the Comprehensive Breast Center and Montvale PET/CT. Hallmark also owns Hallmark Health Medical Center (Reading), Hallmark Health Visiting Nurse Association (HHVNA) and Hospice, Inc. (Malden), Lawrence Memorial/Regis College Nursing Radiography Programs (Medford), Malden Family Health Center (Malden), and the Dutton Center/Adult Supportive Day Care (Wakefield). *Hospitals & Health Centers*, HALLMARK HEALTH SYS., http://www.hallmarkhealth.org/Hospitals-Health-Centers/ (last visited June 24, 2014).

[30] HHMA employs approximately 30 PCPs and has 23 practice locations in the following nine cities and towns north of Boston: Malden, Medford, Melrose, Reading, Revere, Saugus, Somerville, Stoneham, and Winthrop. Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-B; *Locations*, HALLMARK HEALTH MED. ASSOCS., http://hhma.org/locations/ (last visited May 1, 2014).

[31] *Find a Provider*, HALLMARK HEALTH SYS., http://physicians.hallmarkhealth.org/ (last visited June 30, 2014); Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-B.

currently contracts through PCHI for its hospital and physician HMO, POS, and PPO rates for most of the major payers.[32]

Below is a map of the parties' service areas. It shows the primary service areas (PSAs)[33] of Partners' general acute care hospitals in the greater Boston area in light gray and NSMC's PSA in medium gray. The Hallmark PSA is contained within and overlaps entirely with the NSMC PSA, and is shown in dark gray. The map also shows the location of Partners' general acute care hospitals in the greater Boston area (BWH, Faulkner, MGH, Newton-Wellesley, and the two NSMC campuses), as well as Hallmark's two acute care hospitals.



C. THE PROPOSED TRANSACTION

On January 31, 2014, Partners and Hallmark Health Corporation (HHC) executed an Affiliation Agreement for Partners to acquire Hallmark Health System (Hallmark) and its affiliates, including Hallmark-LMH, Hallmark-MWH, and multiple outpatient facilities, making

[32] For most of the major payers, HHPHO has contracted through Partners as a community regional service organization (RSO) of PCHI since the mid-1990s. HHPHO contracts directly with a number of smaller payers in Massachusetts, including many of the national payers.

[33] As discussed in Section IV.A.1, 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 161.

Hallmark a fully integrated, community-based member of the Partners system.[34] The transaction builds on an eighteen-year clinical and contracting relationship between the parties.[35] The parties state that they are committed to "accepting responsibility (and financial risk) for controlling the total medical expenses . . . for patients cared for by their primary care physicians in the . . . communities served by [the parties]."[36] In order to achieve this objective, the parties seek to implement a "robust population health management (PHM) model" in their joint service area,[37] which they state will require relocating and rationalizing facilities and service lines, expanding and more fully integrating their primary care networks, and investing in integrated information systems.

To accomplish these goals, the Affiliation Agreement sets out three principal initiatives that would be implemented over five years at a cost of approximately $595 million at the two Hallmark hospitals, the two North Shore Medical Center (NSMC) hospitals, and Hallmark's outpatient cancer care facilities in Stoneham.[38] The first initiative is the ***Program and Facilities Rationalization Initiative*** (Rationalization Initiative), which involves rationalizing services at the parties' four acute care hospitals in the region[39] and decreasing the net number of medical/surgical beds at these facilities by up to 110. Under this initiative, two hospitals would continue to provide general acute care services, while the other two hospitals would be repurposed:

- **Hallmark-LMH** would become a 30-40 bed facility for ambulatory care and "short-stay" inpatient care lasting three days or fewer, operated under the MGH license.[40] Hallmark-LMH would have an urgent care center, certain expanded outpatient services,[41] and, during at least the transition period of Hallmark-LMH's conversion (2-3 years), the parties have committed to keeping the emergency department open. The parties anticipate spending up to $107 million on this conversion.[42]
- **Hallmark-MWH** would remain an acute care hospital under the Hallmark license. The hospital would receive an estimated $152 million worth of substantial renovation, including expansion of capacity.
- **NSMC-Union** would host "Centers of Excellence" for primary care and behavioral health. All of the behavioral health beds from Hallmark-LMH and NSMC-Salem would be consolidated and relocated to NSMC-Union, where psychiatry, substance abuse, and

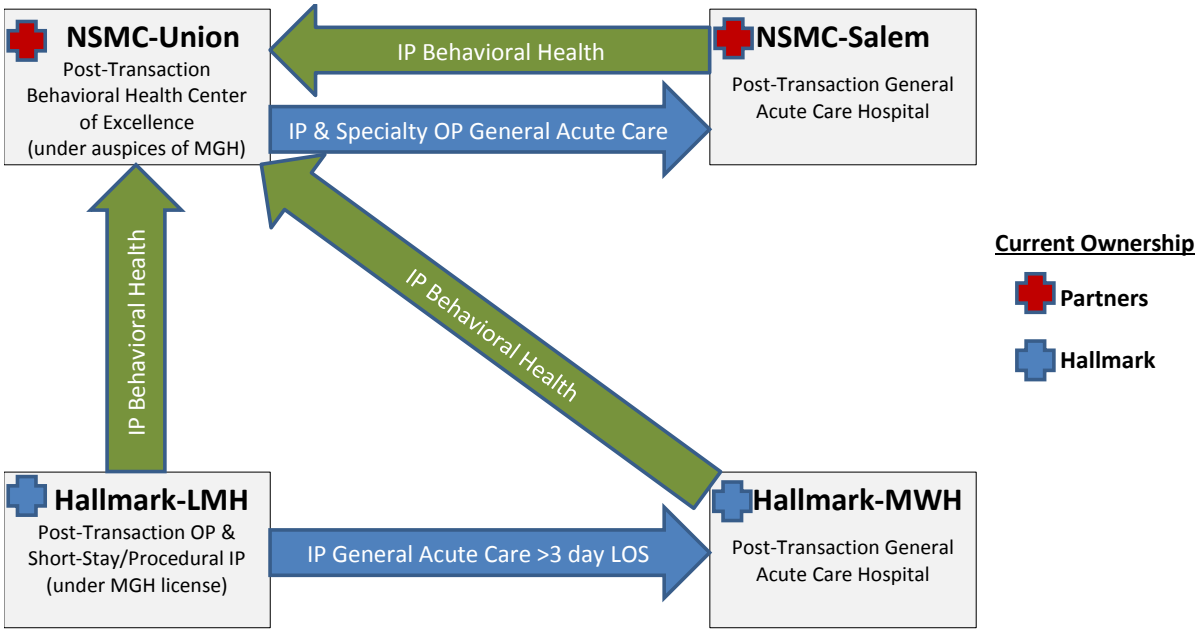
[34] *See supra* note 5 (reporting filing dates for the parties' notices of material change).
[35] *See supra* note 32 and accompanying text (noting the history of HHPHO's joint contracting relationship with PCHI).
[36] Affiliation Agreement, *supra* note 7, at Art. 1.
[37] *See supra* note 8 (describing the parties' joint service area).
[38] Affiliation Agreement, *supra* note 7, at Exh. 4.4.3. Partners and Hallmark will make capital contributions of approximately $245 and $124 million, respectively, equaling $370 million. In addition, the parties estimate capital investments by Partners of $190 million at NSMC-Salem and $30-$40 million for the NSMC-Union reorganization. *Id.* at Exh. 4.4.1-A, Exh. 4.4.3.
[39] *Id.* at Exh. 4.4.1-A.
[40] The parties identify endoscopy and short stay operations as examples of short stay care. *Id.*
[41] For example, the parties propose expanding cardiology, gastroenterology, chronic disease management, and spine services.
[42] Affiliation Agreement, *supra* note 7, at Exh. 4.4.3.

behavioral health services would be operated by MGH.[43] "Non-medical/psychiatry cases" at Hallmark-MWH would also be relocated to NSMC-Union.[44] As a complement to these behavioral health services, primary care and specialty outpatient services would be operated by North Shore Physicians Group (NSPG) at the NSPG practice site adjacent to NSMC-Union. The parties have stated they intend to maintain emergency services on at NSMC-Union, and will determine the level of emergency care capacity based on the needs of the community. The parties estimate these changes will require $30-$40 million in investments.[45]

- **NSMC-Salem** would continue to operate as a general acute care hospital and would receive investments of approximately $190 million to expand its emergency department and to build two new inpatient floors.[46]
- Hallmark's **Hematology and Oncology Center and the CHEM Center for Radiation Oncology** in Stoneham would be replaced by an expanded capacity MGH-licensed outpatient cancer center, the MGH Stoneham Cancer Center, at a cost of approximately $45 million.[47]

The changes at the four hospital campuses are summarized in the chart below.

Proposed Repurposing and Rationalization of Hallmark and NSMC Hospitals



[43] *Id.* at Exh. 4.4.1-A.
[44] The parties plan that a "yet-to-be determined number of medical/psychiatry beds" would remain at Hallmark-MWH. *Id.*
[45] *Id.* at Exh. 4.4.3.
[46] *Id* at Exh. 4.4.1-A.
[47] Affiliation Agreement, *supra* note 7, at Exh. 4.4.3. The MGH Stoneham Cancer Center will increase capacity in both medical and radiation oncology that the parties believe will accommodate savings-generating redirection of care from MGH back into the community. *Id.* at 4.4.1-A.

As a second component of the Rationalization Initiative, the parties plan to reorganize and rationalize certain other service lines currently provided by Hallmark, NSMC, and MGH.[48] The parties estimate that these changes would generate savings for payers and consumers of $11.8 – $24.7 million per year by keeping patients in community settings who would otherwise have gone to MGH for care.

The ***Population Health Management and Primary Care Network Development Initiative*** (PCP Initiative) encompasses population health management (PHM) strategies intended to better manage patients with chronic diseases and the recruitment and alignment of physicians to support PHM.[49] In order to succeed in PHM, the parties cite a need for joint coordination and investment in the key systems and infrastructure in the area, beginning with adequate levels of primary care coverage. The parties plan to recruit 25 "Net New PCPs"[50] and 17 "Replacement PCPs"[51] in Hallmark communities over a five-year period.[52] In addition, the Affiliation Agreement underscores the importance of tighter integration of physicians and other practitioners to support a "right care, right site" strategy for patients.[53] In line with this emphasis on tighter integration, the Agreement provides that Hallmark medical staff who are "interested in a more integrated relationship" will be given a choice of being directly employed by either Hallmark Health Medical Associates (HHMA), Partners community physician organization (newly created), or the Massachusetts General Physicians Organization (MGPO).[54]

The parties further plan under the PCP Initiative to develop urgent care centers in areas with the greatest need to serve lower acuity patients who currently seek treatment in emergency departments. The parties also describe enhancing access to primary care through the promotion of remote care services like virtual visits, and developing PHM interventions to address the needs of patients with chronic illnesses.[55] In total, the parties estimate that such PHM strategies will save between $2 to 20 million per year, or an average of $10.9 million per year in the first five years.

The third principal initiative, the ***Information Technology and Infrastructure Initiative*** (IT Initiative), aims to develop an integrated information technology (IT) and electronic medical

[48] For example, the parties plan to establish joint service lines in obstetrics and oncology. Additional proposed service line collaborations include cardiology, orthopedics and digestive health. The joint service lines will be subject to MGH oversight, policies and standard of care, and MGH clinicians will participate and/or lead most of the joint service lines. Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-A.
[49] *Id.* at Exh. 4.4.1-B.
[50] The parties describe these "Net New PCPs" as additional PCPs needed in various communities in the Hallmark service area, and project an investment of $12.5 million to recruit them over five years. *Id.*
[51] "Replacement PCPs" are replacements for existing PCPs in the Hallmark service area, given projected physician retirements in the next five years. *Id.*
[52] *Id.*
[53] Affiliation Agreement, *supra* note 7, at Art. 5.6.1.
[54] *Id.*
[55] Example areas in which the parties are considering creating coordinated interventions include heart failure, diabetes, obesity, and pain management.

record (EMR) infrastructure to facilitate coordination among providers.[56] The parties' estimated capital investments and savings are summarized in the table below.

Summary of Parties' Estimates of Provider Capital Expenditures, Provider Efficiencies, and Payer/Consumer Savings		
Estimated Provider Expenditures		
		Capital Expenditures (millions)
Rationalization Initiative	Hallmark-LMH	$107
	Hallmark-MWH	$152
	NSMC-Union	$30-$40
	NSMC-Salem	$190
	Stoneham Outpatient Cancer Center	$45
PCP Initiative		$12.5
IT Initiative		$55
TOTAL CAPITAL INVESTMENT		**$591.5-$601.5**
Estimated Provider Efficiencies		
		Annual Efficiencies (millions)
ANNUAL OPERATING & OVERHEAD EFFICIENCIES[57]		**$25 - $30**
Estimated Payer/Consumer Savings		
		Annual Savings (millions)
Care Redirection Savings		$11.8 - $24.7
PHM Savings		$2 - $20
AVERAGE ANNUAL SAVINGS (FY15-FY20)		**$13.8-44.7**

As shown above, the parties propose a significant capital investment in northeastern Massachusetts of approximately $595 million. Pursuant to the HPC's responsibility to enhance the transparency of significant changes to the health care system, we report here on several questions raised by our review regarding the size, purpose, and allocation of this investment. Given that premium dollars are one source of the provider revenue that funds capital spending, health care stakeholders have sought to better understand the public value of these investments, including how they will improve quality of and access to care, rather than lead to unintended consequences such as reinforcing or perpetuating market dysfunction.[58]

[56] Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-C. Hallmark's current IT systems will be replaced with Partners eCare, which is a single system that incorporates electronic health records and revenue management systems. The parties also plan to implement certain "bridging technologies" until roll out of Partners eCare is completed. The parties project an investment of $55 million.

[57] The parties describe the reduction of operational and overhead inefficiencies as "savings." While reducing these inefficiencies should certainly result in savings to the parties, it is not clear that they will result in direct savings to payers or consumers, and so we report on this category of savings separately from direct payer/consumer savings. *See infra* Section IV.A.7 (analyzing these claims in further detail).

[58] Competitor providers have stated that the proposed investments, supported by historic payments not tied to value, will tend to perpetuate a non-value-based advantage of the parties to drive up the level of competitive spending in the region, such as in the recruitment and retention of physicians, with negative effects for the delivery of high-value health care. *See also* AGO 2010 COST TRENDS REPORT, *supra* note 15, at 38-39 (contrasting "highly paid providers [who] are able to fund depreciation consistently at or above industry standard" with "hospitals with lower prices

To better understand how the proposed extensive service reconfigurations and infrastructure changes will improve quality of or access to care, it would be helpful to have further detail and specific evidence regarding how the parties' prioritization of expenditures tracks to community need. For example, it may be worth further exploring why the NSMC-Union campus, which is undergoing perhaps the most significant transformation in becoming a specialized behavioral health center of excellence, is anticipated to receive the smallest investment of the four hospital campuses, especially as compared to Hallmark-LMH, which is receiving a substantially larger investment despite the planned elimination of a majority of its beds. Similarly, it would be helpful to better understand, especially in light of Partners' longstanding and commendable commitment to behavioral health, why the parties have not yet committed any minimum expenditures for certain urgently needed services related to the transaction, such as outpatient behavioral health,[59] but have committed significant portions of the $595 million to expanding certain higher-margin specialty services for which we have not received similar evidence of unmet need.[60,61] We invite the parties to provide additional detail on these questions in their Written Response to this report.

[who] are unable to put comparable resources toward building maintenance or equipment acquisition," resulting "in a loss of volume to better capitalized, more expensive hospitals").

[59] Throughout this report, we include intensive outpatient and partial hospitalization services among "outpatient" behavioral health services, recognizing that behavioral health treatment occurs in a variety of settings that range in intensity and duration. Hallmark currently provides some such intensive outpatient services. *Intensive Outpatient Program at Community Counseling Services*, HALLMARK HEALTH SYS., http://www.hallmarkhealth.org/Behavioral-Health/Psychiatric-Services/Intensive-Outpatient-Program.html (last visited June 27, 2014). Intensive outpatient and partial hospitalization services generally involve regular individual and/or group counseling services during the day, before and after work or school, in the evenings, or on weekends to enable patients to apply treatment skills in real-world environments. These programs often include medical and psychiatric consultation, psychopharmacological consultation, medication management, and 24-hour crisis services. *See* D. Mee-Lee & D.R. Gastfriend, *Patient Placement Criteria*, *in* TEXTBOOK OF SUBSTANCE ABUSE TREATMENT Ch. 6, 82 (Galanter & Kleber eds., 4th ed. 2008); CENTER FOR SUBSTANCE ABUSE TREATMENT, SUBSTANCE ABUSE: CLINICAL ISSUES IN INTENSIVE OUTPATIENT TREATMENT Ch. 4 (2006), *available at* http://www.ncbi.nlm.nih.gov/books/NBK64094/.

[60] The parties' planned investments mirror a national trend of expanded capacity for specific specialty services such as cardiology, cancer, orthopedics, women's and children's services, and GI endoscopy. According to a survey of senior hospital executives across the country, one of the factors motivating this trend is service line profitability. For more on expansion of specialty service lines and the underlying factors, see Robert A. Berenson et al., *Specialty-Service Lines: Salvos in The New Medical Arms Race*, 25 HEALTH AFFAIRS, w337, (2006), *available at* http://content.healthaffairs.org/content/25/5/w337.

[61] Given the different margins associated with different service lines and payer populations, providers often rely on a balanced mix of services and payers to maintain financial viability and adequate access to all services. Thus, if the proposed investments drive changes in the service mix or payer mix of the parties or other area providers, these changes could have significant implications for how our health care system finances adequate access to all needed services, including low-margin services, for all populations.

III. ANALYSIS OF PARTIES' BASELINE PERFORMANCE (2010-2012)

To analyze the impact of a proposed transaction on costs, quality, and access, it is important to understand the parties' baseline performance in these areas, prior to the transaction. Part III examines the recent performances of Partners and Hallmark in each of these areas.

A. COST PROFILE

The law governing cost and market impact reviews directs the HPC to examine different measures of the parties' cost and financial performance, including their size, prices, health status adjusted TME, and market share. The HPC examined these measures over time and compared them 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 transactions and the parties' goals and plans to project the likely impacts of the transaction on health care costs.

Measures of financial condition and market share indicate the relative strength of a provider compared to competitors. Comparisons of provider health status adjusted TME and of relative prices (the relative amounts that payers pay providers for comparable services) show differences in provider efficiency and costs, both between the parties and compared to other area providers. In examining these elements of the parties' cost profile, the HPC found:

- Partners is in strong financial condition; Hallmark's financial position is positive and improving.
- Partners has the highest share of inpatient and primary care services in Hallmark's and NSMC's service areas.
- Partners' hospitals receive higher prices than Hallmark and other area hospitals.
- Partners' physician groups (excluding Hallmark) generally receive higher prices than Hallmark physicians and other area physician groups.
- Partners' physician groups (excluding Hallmark) generally have higher health status adjusted TME than Hallmark and other area physician groups.

1. Partners is in Strong Financial Condition; Hallmark's Financial Position is Positive and Improving.

The HPC reviewed financial statements from 2009 through 2012 for Partners and Hallmark, which showed that Partners is in strong financial condition, while Hallmark's financial position is positive and improving. Over the last four years, Partners' total operating revenue increased by nearly 20% from $7.5 billion in 2009 to nearly $9 billion in 2012. Over this same period, Partners' total net assets grew by 6.2% (over $300 million). The following table shows key financial metrics for Partners compared to the next five largest health care systems in Massachusetts, as measured by net patient service revenue (NPSR). As shown below, Partners' total net assets are more than double the combined assets of the next five largest systems in

Massachusetts, and Partners has invested substantially more in its facilities and equipment than other systems, as reflected in its lower average age of plant.[62]

Financial Performance of Six Largest Massachusetts Provider Systems by NPSR (FY2011-2012)[63]						
	Partners	UMass	Atrius	Steward	BIDMC	Lahey[64]
NPSR ($000)						
FY 2011	6,342,273	2,014,247	1,687,976	1,356,704	1,407,985	1,360,497
FY 2012	6,828,189	2,035,378	1,918,971	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%	1.6%	3.0%	-2.8%	2.3%	4.3%
FY 2012	2.1%	0.2%	1.1%	-1.1%	1.8%	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

[62] Within the Partners system, NSMC's financial performance is somewhat weaker than the other Partners hospitals. For example, although NSMC's patient service revenue exceeds that of most other area community hospitals, as shown in the second table in this section, its operating margin is low.

[63] *See* PricewaterhouseCoopers LLC, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 14, 2012; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 2, 2011; PricewaterhouseCoopers LLC, Consolidated Financial Statements with Supplemental Consolidating Information: UMass Memorial Health Care, Inc. and Affiliates: Dec. 21, 2012; PricewaterhouseCoopers LLC, Consolidated Financial Statements with Supplemental Consolidating Information: UMass Memorial Health Care, Inc. and Affiliates: Dec. 20, 2011; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Atrius Health, Inc. and Affiliates: Apr. 23, 2013; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Atrius Health, Inc. and Affiliates: May 11, 2012; Ernst & Young LLP, Consolidated Financial Statements: Steward Health Care System, LLC: April 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 LLC, Consolidated Financial Statements: Lahey Clinic Foundation, Inc. and Affiliates: Jan. 18, 2013; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Lahey Clinic Foundation, Inc. and Affiliates: Feb. 1, 2012; Deloitte & Touche, 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.

[64] Lahey merged with Northeast Health System (Northeast) in 2012; consistent with the financial assessment presented in our prior report involving Lahey, 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. *See* MASS. HEALTH POLICY COMM'N, REVIEW OF LAHEY HEALTH SYSTEM'S PROPOSED ACQUISITION OF WINCHESTER HOSPITAL (HPC-CMIR-2013-3), PURSUANT TO M.G.L. C. 6D § 13, FINAL REPORT 10, n.33 (Apr. 16, 2014), *available at* http://www.mass.gov/anf/docs/hpc/material-change-notices/20140522-final-cmir-report-lhs-wh.pdf [hereinafter LAHEY-WINCHESTER FINAL CMIR REPORT].

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	5,050,357	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

Notes

(1) Net Patient Service Revenue (NPSR) is the 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 average age of plant is not included because comparable data were not available.

Hallmark's financial position is positive and improving. Its operating margin and total margin have been consistently high compared with those of area community hospitals, as shown in the table below. Its cash reserves and current ratio are strong. Its NPSR grew from 2009 to 2012, but by a modest 4.7%. At the same time, Hallmark's higher average age of plant ratio indicates that continued investment is likely needed in its equipment and infrastructure, which could be supported through this transaction.[65] Overall, our review of Hallmark's financials does not indicate that financial distress is motivating its decision to affiliate with Partners.

[65] See *supra* Section II.C for a summary of investments contemplated by the parties.

Financial Performance of Hallmark Compared to Area Community Hospitals (FY2011-2012)[66]					
	North Shore MC	Mt. Auburn	Hallmark	Winchester	CHA
NPSR ($000)					
FY 2011	481,208	340,450	291,795	276,050	230,455
FY 2012	503,511	348,007	293,455	290,350	282,232
Total Operating Revenue ($000)					
FY 2011	503,343	355,956	311,989	292,640	1,333,065
FY 2012	528,418	363,485	319,745	310,093	780,346
Operating Margin					
FY 2011	-3.9%	3.9%	4.4%	1.9%	3.8%
FY 2012	-2.7%	3.1%	4.5%	2.0%	-1.4%
Total Net Assets ($000)					
FY 2011	2,097	219,316	152,672	173,063	264,526
FY 2012	-18,117	244,735	184,433	201,166	308,886
Current Ratio					
FY 2011	1.00	4.38	3.01	1.27	1.61
FY 2012	1.15	4.70	3.52	1.35	2.24
Days Cash on Hand					
FY 2011	33	125	230	145	88
FY 2012	52	146	259	170	121
Cash and Equivalents, and Readily Available Investments ($000)					
FY 2011	44,734	111,699	176,196	109,483	302,663
FY 2012	74,256	134,299	203,391	134,722	253,402
Average Age of Plant					
FY 2011	N/A	13.8	13.5	14.3	11.9
FY 2012	N/A	14.7	14.5	12.6	11.8

Notes: Because Partners' financial statements do not disaggregate accumulated depreciation for each of its campuses, we are unable to calculate an age of plant figure specifically for NSMC.

[66] 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; 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, Consolidated Financial Statements and Other Financial Information: Mount Auburn Hospital and Subsidiary: Dec. 19, 2012; KPMG LLP, Consolidated Financial Statements and Other Financial Information: Mount Auburn Hospital and Subsidiary: Jan. 9, 2012; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 14, 2012; PricewaterhouseCoopers LLC, Consolidated Financial Statements: Partners HealthCare System, Inc. and Affiliates: Dec. 2, 2011; PricewaterhouseCoopers LLC, Consolidated Financial Statements and Supplemental Schedules: Emerson Health System, Inc. and Affiliates: Dec. 20, 2012; PricewaterhouseCoopers LLC, Consolidated Financial Statements and Supplemental Schedules: Emerson Health System, Inc. and Affiliates: Dec. 20, 2011; PricewaterhouseCoopers LLC, Financial Statements and Supplemental Schedules: Cambridge Health Alliance: Nov. 20, 2012; PricewaterhouseCoopers LLC, Financial Statements and Supplemental Schedules: Cambridge Health Alliance: Nov. 14, 2011. The figures in this table reflect the performance of the entire corporate entity, not just its constituent hospital(s).

2. Partners Has the Highest Share of Inpatient and PCP Services in Hallmark's and NSMC's Service Areas.

A provider's market share is its share of patient volume in a particular geographic area. Here, we examined the parties' market share for both inpatient services and PCP services in the relevant hospital and primary care PSAs.[67]

a. Hospital Market Share

When we examined inpatient utilization in Hallmark's and NSMC's hospital PSAs, we found that Partners has, by a substantial margin, the highest commercial market share[68] in that region. In the table below, for systems with non-owned contracting affiliates (like Partners and its affiliate Hallmark and Beth Israel and its affiliate CHA), we report a range for the system's market share to reflect that the system's effective share likely falls between the ranges presented.[69] Partners, which contracts on behalf of two non-owned hospital systems, Hallmark and Emerson hospitals, currently captures between 32% and 48% of commercial discharges in Hallmark's PSA and between 59% and 61% of commercial discharges in NSMC's PSA.

Inpatient Market Shares in Hallmark's PSA – 2012 Discharges

Hospital System	Excluding Non-Owned Contracting Affiliates		Including All Contracting Affiliates	
	Commercial Discharges	Market Share	Commercial Discharges	Market Share
Partners	**4,478**	**32%**	**6,608**	**48%**[70]
Lahey	3,164	23%	3,164	23%
Hallmark	**2,103**	**15%**	**-**	**-**
Beth Israel	1,278	9%	1,786	13%
Tufts MC	736	5%	736	5%
Mt. Auburn	599	4%	599	4%
CHA	502	4%	-	-

[67] 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 PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 23 at 37, n.115 and 38, n.118.

[68] 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 infra* Section IV.A.1.

[69] Because Partners represents both its owned hospitals and its non-owned contracting affiliates when it negotiates with most commercial payers, Partners' commercial market share should reflect some of the discharges from Hallmark and Emerson. However, because it does not own Hallmark or Emerson, Partners' incentives to negotiate for these hospitals may be different than those for Partners' owned hospitals. Moreover, as described in note 32, *supra*, contracting affiliates like Hallmark may negotiate with some commercial payers directly (i.e., not through Partners). Thus, the market share that describes the competitive importance of Partners to payers likely does not reflect all discharges from these affiliated but non-owned hospitals.

[70] This number differs from the sum of the 32% and 15% market shares presented in the left-hand column of this table due to the inclusion of the 1% market share of Emerson Hospital, another non-owned contracting affiliate of Partners.

Inpatient Market Shares in NSMC's PSA – 2012 Discharges

Hospital System	Excluding Non-Owned Contracting Affiliates		Including All Contracting Affiliates	
	Commercial Discharges	Market Share	Commercial Discharges	Market Share
Partners	**5,040**	**59%**	**5,208**	**61%**
Lahey	2,470	29%	2,470	29%
Beth Israel	343	4%	383	4%
Boston Children's Hosp.	218	3%	218	3%
Hallmark	**160**	**2%**	**-**	**-**

b. Physician Market Share

We also examined PCHI's share of primary care physician (PCP) services in Hallmark's service area. Using claims-level data from the All Payer Claims Database (APCD) for the largest commercial payer in Massachusetts, we constructed a PSA for Hallmark's PCPs (hereinafter primary care PSA).[71] We found that PCHI physicians (including Hallmark) have an approximately 40% share of PCP services in this service area, as measured by revenue, and an approximately 35% share as measured by visits.[72] When a provider's share of revenue is above its share of visits in a given area, that provider's revenue per visit is above average relative to other providers in the same area.[73] Winchester Physician Associates,[74] New England Quality Care Alliance (NEQCA), and Atrius Health (Atrius) have the second, third, and fourth largest market shares in Hallmark's primary care PSA by both visits and revenue. However, their shares are tightly clustered and the ordering of their respective positions can shift with minor changes in methodology. These three groups each have between 7% and 13% of PCP visits and between 8% and 12% of PCP revenue in Hallmark's primary care PSA.

In addition to this strong market share in northeastern Massachusetts, as CHIA has previously reported, Partners is also the largest acute care hospital system and physician group statewide based on revenue reported from nine of the largest commercial payers in

[71] For the purposes of this report, we define a primary care PSA to be the area from which Hallmark PCPs collectively draw 75% of their primary care visits. 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.

[72] These are conservative figures because, in calculating PCHI's market share, we excluded certain PCHI specialists who may occasionally provide some primary care services, but were unable to exclude this type of specialist from other physician groups and independent PCPs. In order to ensure these findings are robust, we tested multiple market share sensitivities, including treating the Hallmark PCPs as separate Lawrence-Memorial and Melrose-Wakefield groups based on the location of each PCP, which all yielded results consistent with those reported here. Analyzed separately, Hallmark physicians have approximately 14% to 16% of primary care revenue and 13% to 15% of primary care visits in Hallmark's primary care PSA.

[73] Higher average revenue per visit reflects a combination of higher prices and/or higher patient acuity.

[74] Although we understand that Winchester Physician Associates (WPA) is being acquired by Lahey, it currently contracts through NEQCA, so for clarity we treat its market share here separately from either system.

Massachusetts. In 2011, Partners received nearly one-third of statewide commercial payments to acute hospitals and approximately one-quarter of statewide payments to physician groups.[75]

3. Partners' Hospitals Receive Higher Prices Than Hallmark and Other Area Hospitals

The HPC examined hospital relative price[76] data for the parties from 2010 to 2012, and found consistent trends for all three major commercial payers. In each region in which Partners operates, its hospitals were consistently high priced.[77] Partners' owned hospital in northeastern Massachusetts, North Shore Medical Center (NSMC), generally received the highest prices in the region,[78] while Hallmark's prices were near the middle. These data also show that Partners' community hospitals in the greater Boston area receive comparable prices[79] and that Hallmark hospitals, while contracting through Partners, generally receive lower prices (for the three largest commercial payers, Partners' community hospitals in the greater Boston area receive prices that are approximately 18%, 17%, and 6% higher than Hallmark's prices, depending on the payer). The following chart is an example of this pattern, showing relative prices for inpatient and outpatient services for one major payer.[80]

[75] CHIA ANNUAL REPORT AUG. 2013, *supra* note 16, at 33-34 (finding that Partners received 31% of acute hospital payments in 2012 and 25% of physician payments in 2011 from these commercial payers).

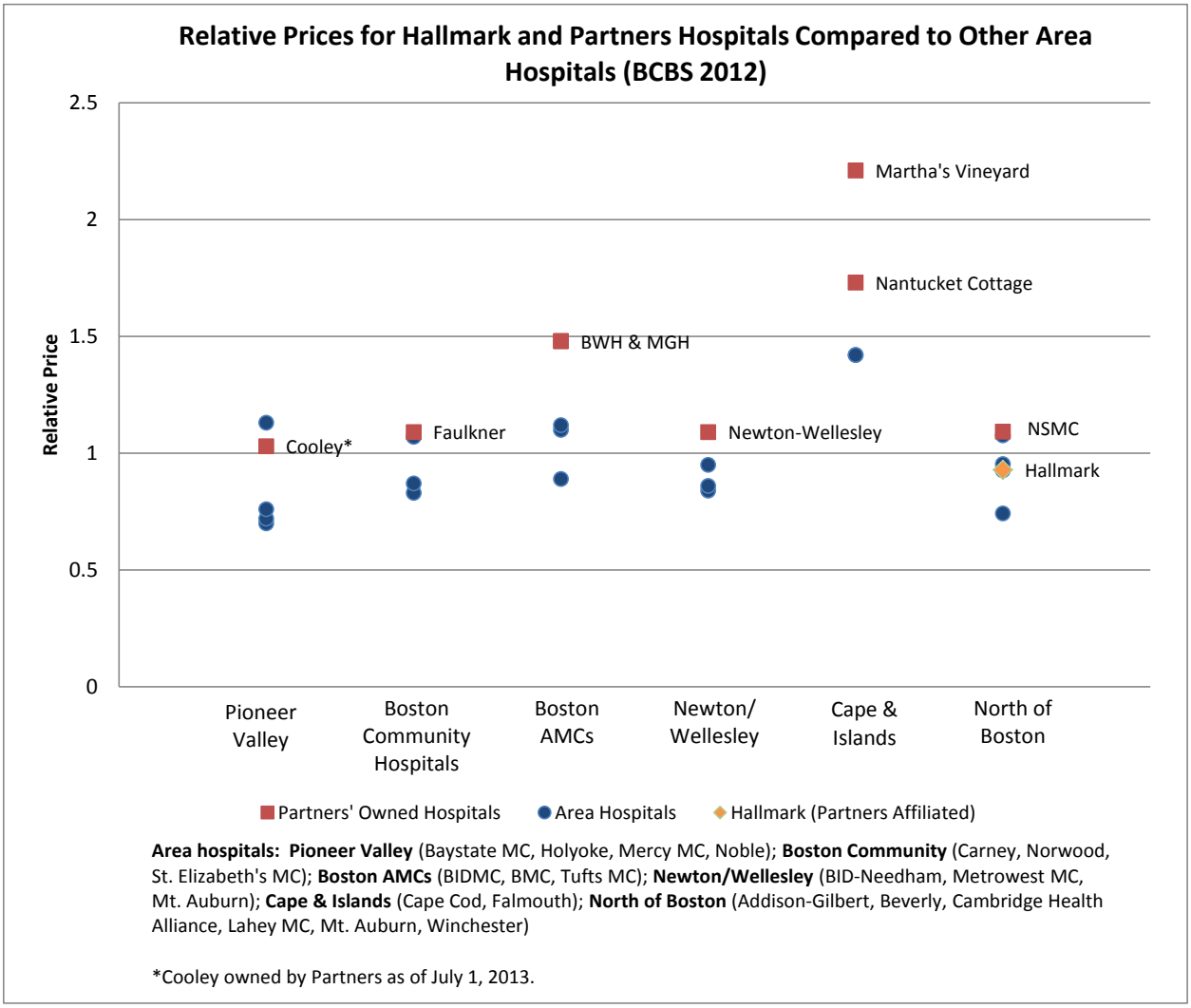
[76] Relative price is a standardized pricing measure that accounts for differences among provider service volume, service mix, patient acuity, and insurance product types in order to allow comparison of negotiated price levels. *Id.* at 35.

[77] From 2010 to 2012, each Partners hospital received the highest price among area hospitals from BCBS and THP, except for Cooley Dickinson (acquired by Partners in July 2013; received the second highest price from BCBS), Faulkner (received a lower price from THP), and Newton-Wellesley (received the second highest price from THP in 2010, but the highest in 2011 and 2012). HPHC's prices for all of the Partners hospitals except Martha's Vineyard and Nantucket Cottage were consistently either the highest or second highest among area hospitals. CHIA ANNUAL REPORT AUG. 2013, *supra* note 16, at 10; CTR. FOR HEALTH INFO. & ANALYSIS, *2012 Relative Prices, APMs, and TME by Payer Databook*, http://www.mass.gov/chia/docs/r/pubs/13/2013-annual-report-rp-apm-tme-data-book.xlsx [hereinafter CHIA *2012 Relative Prices, APMs, and TME by Payer Databook*]. *See also* PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 23, at 15 (showing relative prices for the Partners hospitals compared to other area hospitals).

[78] CHIA *2012 Relative Prices, APMs, and TME by Payer Databook*, *supra* note 77. From 2010-2012, NSMC received the second highest prices from HPHC and the highest prices from THP and BCBS among area hospitals, while Hallmark was in the lower to middle range among area hospitals.

[79] The three major commercial payers also confirmed that Partners seeks consistent pricing for these owned community hospitals in the greater Boston area: Faulkner, Newton-Wellesley, and NSMC.

[80] *See supra* note 78.



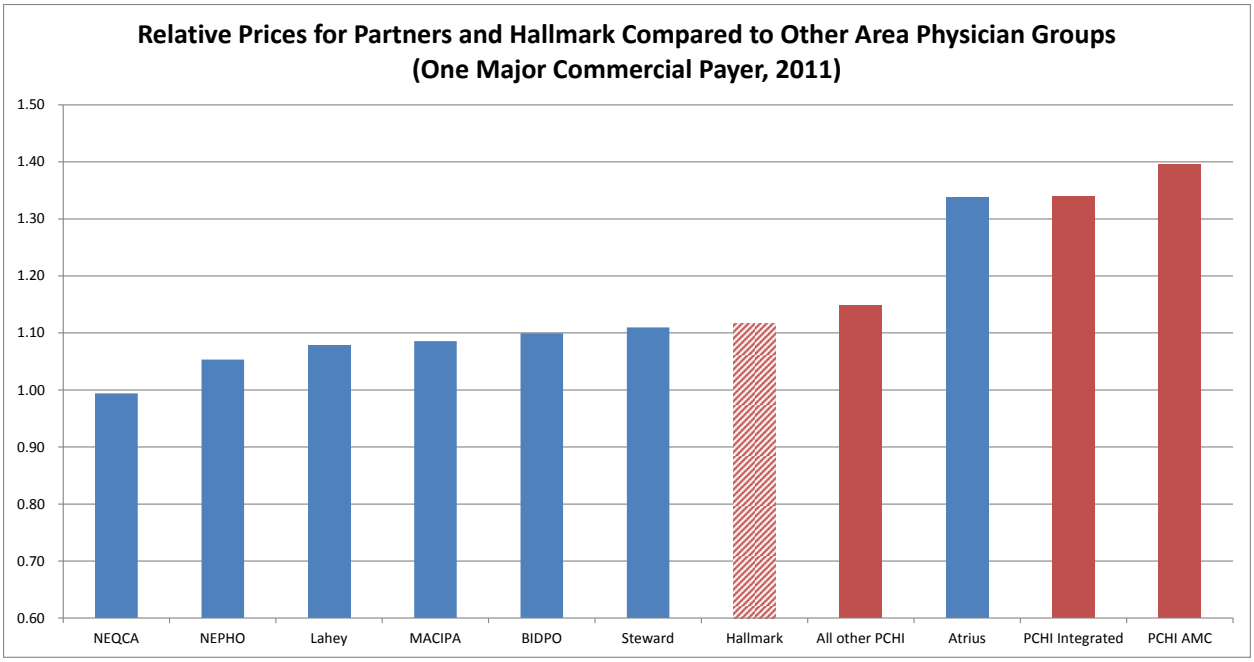
Source: CHIA 2012 *Relative Prices, APM, and TME by Payer Databook*, *supra* note 77.

4. Partners' Physician Groups (excluding Hallmark) Generally Receive Higher Prices than Hallmark Physicians and Other Area Physician Groups.

The HPC examined physician relative price data from 2009 to 2011 for the three major payers.[81] Over this period, Partners' physician groups received higher prices than nearly all other physician groups in northeastern Massachusetts.[82] Although Hallmark physicians contract through PCHI for both PPO and HMO/POS rates, overall, Hallmark's relative prices were also lower than those for Partners' other physician groups. As shown below for one major commercial payer, when Partners' rates are broken out by type of physician group, Partners' physicians associated with AMCs received the highest rates, followed by employed community

[81] 2012 physician relative price data will likely be available from CHIA in late 2014.
[82] For BCBS from 2009-2011, only Atrius and Mount Auburn Cambridge Independent Practice Association received higher relative prices than PCHI.

(or "integrated") physicians.[83] All other Partners physicians (excluding Hallmark), in the aggregate, also received higher rates than Hallmark.[84] Section IV.A.1 will project how total medical spending will be impacted if Hallmark physicians contract at Partners' generally higher rates upon contract renegotiation.



Source: CTR. FOR HEALTH INFO. & ANALYSIS, PHYSICIAN DATA, 2011 (HPC Analysis)

5. Partners' Physician Groups (Excluding Hallmark) Generally Have Higher Health Status Adjusted TME than Hallmark and Other Area Physician Groups.

The HPC also reviewed the parties' TME to examine the total cost of all health care services for HMO/POS patients cared for by the parties.[85] The TME we present is adjusted according to the health status of the provider's patient population.[86]

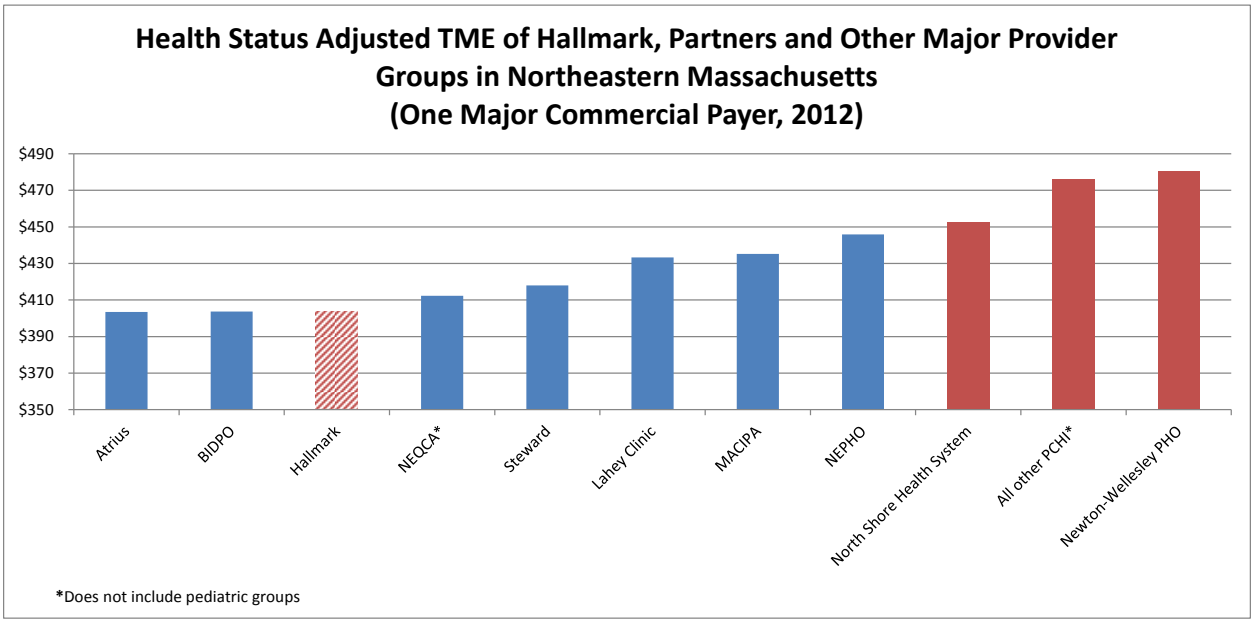
[83] PCHI's physician rates vary among type of RSO. Rates for PCHI academic medical center physicians (shown as "PCHI AMC" in the chart) are generally the highest, followed by rates for employed community physicians (shown as "PCHI integrated" in the chart). Other PCHI physicians, such as Hallmark, generally get lower "affiliated" rates. *See supra* note 20 (describing PCHI); *see infra* Section IV.A.2. Specifically, for the three major commercial payers, PCHI's AMC rates are up to 4.2% higher than integrated rates, and approximately 20-25% higher than Hallmark's current affiliated rates.

[84] Due to data limitations, we were unable to disaggregate rates for PCHI affiliated groups for one major commercial payer.

[85] 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). TME reflects both utilization and price; high TME can reflect high utilization of services, and it can also reflect high prices of the hospitals or physicians that patients use.

[86] 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.

The HPC reviewed the 2010 to 2012 health status adjusted TME for Hallmark, Partners' two RSOs that Hallmark would be most similar to post-transaction, and all other Partners physician groups. While Partners' other groups were consistently in the high range, as shown in red,[87] Hallmark's health status adjusted TME was generally in the low range among area providers. The following chart shows this TME pattern in 2012 for one of the major commercial payers.[88]



Source: CTR. FOR HEALTH INFO. & ANALYSIS, Physician Data on Total Medical Expenses, 2012 (HPC Analysis)

In sum, Partners' financial condition is strong and Hallmark's is positive and improving. Partners has the highest share of both inpatient and primary care services in Hallmark and NSMC's service areas. In general, Partners hospitals receive higher prices than Hallmark and other area hospitals, and its physician groups receive higher prices than Hallmark and other area groups. This is the case even though Hallmark currently contracts through Partners with most major payers for both HMO/POS and PPO rates. Similarly, Partners' physician groups have higher health status adjusted TME than Hallmark physicians and most other area providers, in part due to higher prices. It is important to keep in mind the parties' financial strength and cost performance to date in assessing the likely cost impact of the proposed transaction, as outlined in Section IV.A.1.

[87] As described in Section II, PCHI's 6,000 physicians are organized into regional service organizations (RSOs) of different types. North Shore Physician Group (NSPG) is the employed subgroup of North Shore Health System (NSHS). Newton-Wellesley Physician Hospital Organization (NWPHO) is a community hospital-affiliated Partners physician group. *See supra* notes 20-21 (describing the parties).

[88] Due to data limitations, we were unable to disaggregate PCHI rates in this manner for BCBS.

B. QUALITY PROFILE

The HPC examined the parties' quality performance[89] 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.[90] 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 115 nationally recognized measures[91] across these dimensions, we found:

- Hallmark hospitals[92] have slightly above-average inpatient quality when compared to state and national averages, but slightly lower performance than other area community hospitals.[93] Partners' hospitals generally have high quality performance compared to state and national averages.
- Hallmark's physician groups generally perform at or slightly below the state average among Massachusetts medical groups. PCHI (excluding Hallmark) consistently outperforms the state average.

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 generally perform well.[94] Hallmark-MWH met the 2013 state average

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[89] 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.

[90] 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.").

[91] 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 & ANALYSIS, MASS. STANDARD QUALITY MEASURE SET (2014), *available at* http://www.mass.gov/chia/docs/g/sqac/2013/2013-final-report-appendix-b-standard-quality-measure-set.pdf.

[92] In most cases, sources of inpatient quality data aggregated Hallmark-MWH and Hallmark-LMH.

[93] As noted in Section I.B, area community hospitals used as comparators for Hallmark include NSMC (Salem and Union), Winchester, Mount Auburn, and CHA.

[94] 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 Score℠ to each hospital. The Hallmark hospitals, BWH, Faulkner, and NSMC's-Union campus all received a score of "A," while MGH and NSMC-Salem each received a "B." The Hospital Safety Score℠ grades hospitals on data related to how safe they are for patients. *About the Score - Hospital Safety Score*, THE LEAPFROG GROUP, http://www.hospitalsafetyscore.org/about-the-score (last visited June 27, 2014).

rate of influenza vaccination for health care personnel[95] of 86%, and Hallmark-LMH achieved a vaccination rate of 90%; Partners' hospitals generally had lower rates of vaccination.[96] Partners has well-developed internal systems for tracking and benchmarking quality and incentivizing clinical improvement at its hospitals and individual PCHI physician groups, including Hallmark Health PHO (HHPHO), while Hallmark also has some internal quality tracking systems.[97]

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, and Heart Failure, and Surgical Care Improvement Project (SCIP) Measures.*[98] Hallmark[99] and NSMC perform lower than state and national averages on these measures, while BWH and other area providers—Lahey HMC, Beverly, and Mount Auburn—perform higher than the averages. This is, however, a small difference among high-performing institutions.[100] All hospitals demonstrate consistent improvement over the time period examined.

- *Behavioral Health Inpatient Process Measures*.[101] The HPC examined four measures of the quality of inpatient care for patients admitted for behavioral health treatment. On

[95] 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. DEP'T 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.

[96] Vaccination rates at Partners hospitals were: 73% at BWH, 78% at NSMC-Salem, 79% at NSMC-Union, 82% at Cooley Dickinson, 84% at MGH, 87% at Newton-Wellesley, 89% at Faulkner. *Id*.

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

[98] The HPC used CMS Hospital Compare data to create a singular weighted composite process measure of the parties' performance for each year 2011 through Q1 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 Mar. 26, 2014) (process measures for AMI, heart failure, pneumonia, and SCIP listed under the heading of "Timely and Effective Care").

[99] We refer to Hallmark as a system when discussing certain inpatient measures because CMS Hospital Compare aggregates data for Hallmark-LMH and Hallmark-MWH.

[100] In 2013, Hallmark achieved a 97.3% score in the CMS Hospital Compare Hospital Process Composite and NSMC scored a 97.8%, compared to the Massachusetts average score of 98.3% and national average score of 97.9%.

[101] The HPC examined four CMS measures of care for patients identified as psychiatric discharges: hours of physical restraint use (HBIPS-2), hours of seclusion (HBIPS-3), frequency of creation of a post-discharge continuing care plan (HBIPS-6), and frequency of transmission of a post-discharge continuing care plan to the next level of care provider upon discharge (HBIPS-7). These measures were recently published, and data are available only for the period from Oct. 2012 through Mar. 2013. *See Specifications Manual for Joint Commission National Quality Measures (v2013A1)*, THE JOINT COMM'N,

measures assessing the frequency of use of restraints or seclusion, the parties' hospitals perform well relative to state and national averages. On measures of the use of post-discharge care plans, MGH and McLean performed extremely well compared to state and national benchmarks, while Hallmark's performance was substantially lower.

- *Hospital Outpatient Imaging Measures*.[102] The HPC examined five measures of the frequency of use of certain imaging procedures for hospital outpatients. While the use of these procedures is necessary in some cases, particularly high rates of use may indicate inappropriate or inefficient use.[103] On a composite of these measures, Hallmark's rate of use was over 80% higher than the state average; Partners AMCs' use was less than half of the average, and NSMC's rate of use was also below average.

- *Ambulatory Care (HEDIS) Process Measures.*[104] The HPC analyzed 25 measures that show how primary care providers perform on preventative care services, including hypertension, cancer screening, heart failure, and diabetes. HHPHO[105] performed slightly below the state average in both years analyzed, while the weighted average performance of PCHI's physician groups (not including Hallmark) slightly exceeded the state average in both years; the variation between the parties was four percentage points.[106]

Overall, on these nationally accepted process measures, for both inpatient and outpatient quality Hallmark performs below the state and national averages, while most Partners hospitals and PCHI perform better compared to these averages.

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 Hallmark and all Partners

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https://manual.jointcommission.org/releases/TJC2013A/HospitalBasedInpatientPsychiatricServices.html (last visited May 9, 2014).

[102] The HPC examined CMS Hospital Compare measures of the use of medical imaging for Q1 2010 through Q4 2011. These measures were not case-mix adjusted. *Outpatient Imaging Efficiency Data*, CTR. FOR MEDICARE & MEDICAID SERVS., http://www.medicare.gov/hospitalcompare/Data/Outpatient-Measures.html (last visited June 29, 2014).

[103] *Id*.

[104] The HPC obtained data for years 2009 and 2010 from Massachusetts Health Quality Partners (MHQP) and used measures derived from the Healthcare Effectiveness Data Information Set (HEDIS) to measure the quality of 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, pediatric medications and testing, and women's health. *HEDIS ® and Quality Compass ®*, NAT'L COMM. FOR QUALITY ASSURANCE, http://www.ncqa.org/HEDISQualityMeasurement/WhatisHEDIS.aspx (last visited Mar. 26, 2014).

[105] Because the physician data used predates the formation of HHPHO, the data presented here is the average performance of the two physician groups which later became HHPHO, Melrose-Wakefield/Metro North Healthcare Alliance and The Lawrence Organization, weighted by number of patients.

[106] HHPHO performed roughly 2% below the state average in both 2009 and 2010, while PCHI performed approximately 2% higher than the state average in the same time period.

hospitals was better than state and national averages.[107] On a composite measure of readmissions, Hallmark performs slightly better than the state average, but not as well as the national average. NSMC outperforms state and national averages, while MGH and BWH perform below both benchmarks.[108] The performance of the parties' hospitals on Massachusetts Data Analysis Center (Mass-DAC) measures of mortality after percutaneous coronary interventions were not statistically significantly different from the state average.[109] On a composite of AHRQ Patient Safety Indicators, which measures the frequency of preventable harm in the hospital setting,[110] NSMC-Salem outperformed Hallmark-MWH, while both hospitals performed better than the state average; Hallmark-LMH, NSMC-Union, MGH, and BWH all performed below the state average in 2012. On another composite measure of the frequency of hospital acquired conditions, Hallmark performed in line with the state average, while NSMC and the Partners AMCs performed below average over a one-year period.[111] There was no statistical difference between the rate of health care associated infections at the parties' hospitals and the national average, except that MGH experienced a lower incidence of central line associated blood stream infections (CLABSI) related to surgeries in 2012, NSMC-Salem

[107] These findings are based on a composite of CMS Hospital Compare mortality rates among heart attack, heart failure, and pneumonia patients from Q3 2009 through Q2 2012. Although lower scores on these outcome measures indicate better performance, we use the term "below average" to mean lower performance. Performance on outcome measures is adjusted for differences in patient acuity. Compared to national averages, NSMC's performance was statistically significantly better for heart failure and pneumonia mortality in 2012, while the performance of the other Partners hospitals and Hallmark was not statistically higher or lower than the national averages. *See Outcome Measures*, CTR. FOR MEDICARE & MEDICAID SERVS., http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/OutcomeMeasures.html.

[108] This statistic is based on a composite of CMS Hospital Compare readmission rates within 30 days among heart attack, heart failure, and pneumonia patients from Q3 2009 through Q2 2012. NSMC was statistically better than the national average on heart failure readmissions in 2012. All other hospitals were not statistically different from the national average in 2012 for each of the three readmission rates.

[109] Although Mass-DAC also measures mortality after coronary artery bypass graft (CABG) surgery, Hallmark-MWH performed no CABG procedures during the time period examined; therefore, we evaluated only measures for elective and emergency percutaneous coronary interventions. Hallmark-LMH does not perform any of 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).

[110] The HPC computed Patient Safety Indicators (PSI) and Inpatient Quality Indicators (IQI) from Massachusetts Health Data Consortium (MHDC) hospital discharge data for 2010 through 2012 using code available from AHRQ. *See Patient Safety Indicators Overview*, AGENCY FOR HEALTHCARE RESEARCH & 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 & QUALITY, PATIENT SAFETY FOR SELECTED INDICATORS, TECHNICAL SPECIFICATIONS, PATIENT SAFETY INDICATORS #90 (2013), *available at* 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).

[111] This statistic is based on a composite of CMS Hospital Compare measures of the frequency of hospital acquired conditions occurring in Q4 2010 through Q4 of 2011 (the most recently available data). *Conditions - Hospital Acquired Conditions (HACs)*, QUALITYNET, http://qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier4&cid=1228759483171 (last visited June 29, 2014).

experienced a higher incidence of CLABSI in 2012, and Hallmark-MWH experienced a higher incidence of surgical site infections associated with hysterectomies in 2010 and 2012.[112]

d. Patient Experience of Care Measures

We assessed the parties' performance on ten hospital experience measures[113] and six ambulatory adult and five pediatric patient experience measures.[114] On a composite measure of hospital patient experience, Hallmark's hospitals, MGH, and BWH performed better than both state and national averages, while NSMC performed below the state and national averages.

On the adult ambulatory care experience composite, PCHI on average (not including Hallmark) performed approximately 1% better than the state average for both 2009 and 2011, while HHPHO performed equal to the state average in 2009, but fell 2% below the state average in 2011. On the pediatric ambulatory care experience composite, both HHPHO and PCHI trended upward from 2009 to 2011, with HHPHO meeting and PCHI exceeding the state average in 2011.[115]

In summary, Hallmark hospitals performed equal to or above the state average on 55% of the inpatient quality measures we examined, while HHPHO performed equal to or above average on 38% of ambulatory measures examined.[116] All of Partners' hospitals and physician groups met or exceeded average performance on more measures than Hallmark; NSMC met or exceeded the average on 66% of inpatient measures and NSHS met or exceeded the average on 78% of ambulatory measures, while MGH met or exceeded the average on 59% of inpatient measures and MGPO met or exceeded the average on 69% of ambulatory measures.

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[112] These statistics are based on DPH data on health care associated infections for 2010 through 2012. *See* MASS. DEPT. OF PUBLIC HEALTH, MASS. 2012 HAI DATA UPDATE (2013), *available at* http://www.mass.gov/eohhs/docs/dph/quality/healthcare/hai/hai-hospital-data-2012.xls.

[113] We obtained Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) data from CMS for years 2011 through Q1 2013 and analyzed to produce our findings, 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 Mar. 26, 2014) (explaining HCAHPS survey criteria); *Summary Analyses*, CTR. FOR MEDICARE & MEDICAID SERVS., http://www.hcahpsonline.org/SummaryAnalyses.aspx (last visited Mar. 18, 2014) (explaining HCAHPS "top box" methodology).

[114] We obtained Adult and Pediatric Ambulatory Care Patient Experience Surveys for 2009 and 2011 from the Massachusetts Health Quality Partners (MHQP) and analyzed to produce our findings. *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 Mar. 26, 2014) (explaining the Adult and Pediatric Ambulatory Care Patient Experience Survey).

[115] Hallmark improved two percentage points from 2009 to 2011 and was equal to the state average in 2011.

[116] The percentages in this summary assess performance on individual measures, including those which comprise the composites discussed in the preceding subsections. Those measures for which no data was available for a particular hospital or local practice group were excluded from that entity's total count. Performance within 0.1% of average was considered average for the purpose of these summary counts. On inpatient measures for which disaggregated data were available for the Hallmark hospitals and NSMC, data for Hallmark-MWH and NSMC-Salem were used, respectively.

C. ACCESS PROFILE

Pursuant to MASS. GEN. LAWS ch. 6D, § 13, the HPC monitors factors relating to health care access in its review of provider material changes (e.g., "availability and accessibility of services," "the role of the provider in serving at-risk, underserved, and government payer patient populations, including those with behavioral, substance use disorder and mental health conditions," "[the provision of] low margin or negative margin services," and "consumer concerns").[117] The HPC recognizes that "access" is a broad term encompassing a spectrum of interrelated factors that measure and monitor how patients access and engage with the health care system.[118,119] Given that the proposed transaction contemplates significant changes in service offerings and service locations, including a net consolidation of inpatient beds and expansion of certain outpatient services like cardiology, oncology, and orthopedics, it is important to understand the baseline profile of the parties' current service offerings and the patients they serve. We evaluated the following measures of access in our review of this transaction:

1. **Service capacity, utilization, and community need**: Where possible, we examined the scope of provider service offerings and the volume of services delivered in different service lines, including lower margin service lines. To explore service need, we examined emergency department (ED) wait times and community health assessments.[120]
2. **Payer mix:** We examined the proportion of care delivered to patients covered by different forms of insurance, including government payer patients.[121]

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[117] MASS. GEN. LAWS ch. 6D, § 13(d)(vi, ix-xii) (2012).

[118] 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).

[119] *See* LAHEY-WINCHESTER FINAL CMIR REPORT, *supra* note 64, at 25 (various agencies in Massachusetts are responsible for monitoring access, including CHIA, DOI, and the AGO, for example).

[120] There is currently limited data on behavioral health services rendered at specialty psychiatric hospitals and in outpatient sites of care. For example, specialty psychiatric hospitals are not included in CHIA's Hospital Discharge Database. As a result, many of our analyses focus on behavioral health discharges at general acute care hospitals. Given the importance of specialty hospitals in providing behavioral health and other services, the HPC strongly encourages collection of discharge data from these hospitals. Efforts to ensure high quality behavioral health data are included for all government payers and major commercial payers in the All Payer Claims Database will further support meaningful ambulatory care analyses.

[121] Differences in payer mix can have significant financial implications for how our health care system sustainably apportions care for the neediest populations. 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. *See* INSTITUTE OF MEDICINE, *supra* note 118, 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." *Id*.

From these, we found:

- The parties are important providers of inpatient services to their local communities, including behavioral health services.
- While northeastern Massachusetts appears to have some excess inpatient bed capacity, evidence indicates there is likely a need for additional behavioral health capacity. There are inadequate data to allow us to evaluate need for other outpatient services proposed in this transaction.
- In contrast to other Partners hospitals, NSMC has a higher government payer mix and lower commercial mix compared to area hospitals. Hallmark also has a higher mix of government payers, including the highest Medicare mix among area hospitals, with Hallmark-LMH having a particularly high Medicare mix among behavioral health discharges.

1. Hallmark and NSMC are Important Providers of Inpatient Services, Including Behavioral Health Services, to Their Local Communities.

To understand the scope of services provided by the parties, the HPC examined inpatient services provided by Hallmark, NSMC, and other area community hospitals, the mix of beds[122] at these hospitals, and the geographic areas from which Hallmark and NSMC draw their patients.[123] We found that the Hallmark and NSMC hospitals provide a range of medical, surgical, and behavioral health services, with services for deliveries and newborns offered at NSMC-Salem and Hallmark-MWH.[124] The parties are significant providers of inpatient behavioral health services, with behavioral health diagnoses representing between seven and seventeen percent of discharges at the Hallmark and NSMC hospitals in 2012. When we examined the mix of beds at area hospitals, we found that the parties represent approximately 36% of all inpatient behavioral health capacity in the region (NSMC and Hallmark provide 116 of 249 staffed behavioral health beds among area general acute care hospitals and McLean provides 177 of 570 staffed behavioral health beds among area specialty psychiatric hospitals).[125,126] The below table shows the mix of bed capacity across the region.

[122] In general, we use the word "bed" in this report to refer exclusively to inpatient beds.
[123] The hospital's mix of outpatient services may be different than the mix of inpatient services described in this section.
[124] Specifically, using the MHDC hospital discharge database, we found that in 2012, Hallmark-LMH's discharges were 75% medical, 13% surgical, 11% behavioral health, and 0% deliveries; Hallmark-MWH's discharges were 60% medical, 15% surgical, 10% behavioral health, and 14% deliveries; NSMC-Salem's discharges were 56% medical, 22% surgical, 7% behavioral health, and 15% deliveries; and NSMC-Union's discharges were 66% medical, 16% surgical, 17% behavioral health, and 0% deliveries. These categories are based on the Health Care Cost Institute's methodology. HEALTH CARE COST INST., HEALTH CARE COST AND UTILIZATION REPORT: 2011, ANALYTIC METHODOLOGY (Sept. 2012), *available at* http://www.healthcostinstitute.org/files/HCCI_HCCUR2011_Methodology.pdf.
[125] Of the parties' licensed, as opposed to staffed, psychiatric beds, NSMC-Salem has 26 adult beds, NSMC-Union has 20 adult and 18 child/adolescent beds, Hallmark-LMH has 18 geriatric beds, and Hallmark-MWH has 22 adult beds. Mass. Dep't of Mental Health, Staffed and Licensed Beds (2014) (on file with HPC).
[126] Throughout this report, references to "specialty psychiatric hospitals" refer to private specialty psychiatric hospitals rather than facilities operated by the Commonwealth. We do not include, for example, Department of

Staffed Beds at Area General Acute Care Hospitals and Specialty Psychiatric Hospitals

	Med/Surg.	ICU[127]	Ped.	Newborn[128]	Psych.	Total[129]
Area General Acute Care Hospitals[130]						
Cambridge Health Alliance	106	12	0	14	88	**234**
Hallmark-LMH and **Hallmark-MWH**	129	15	0	10	52	**216**
Lahey HMC	287	54	0	0	0	**341**
Mount Auburn Hospital	141	20	0	29	15	**228**
Northeast Health System (Addison Gilbert and Beverly Hospitals)	219	34	0	28	30	**342**
NSMC-Salem and **NSMC-Union**	247	40	24	37	64	**436**
Winchester Hospital	147	10	12	40	0	**229**
Area Specialty Psychiatric Hospitals[131]						
Arbour Hospital	-	-	-	-	130	**130**
Arbour-HRI Hospital	-	-	-	-	66	**66**
Bayridge Hospital (Lahey)					62	**62**
Bournewood Hospital	-	-	-	-	90	**90**
McLean Hospital	-	-	-	-	177	**177**
Walden Behavioral Care[132]	-	-	-	-	45	**45**

Source: 2012 Hospital 403 Reports (CHIA) and Hospital Profile Reports (CHIA)

To understand the behavioral health populations served by the NSMC and Hallmark hospitals, we constructed separate service areas for mental health and substance abuse discharges

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Mental Health or Bureau of Substance Abuse Services facilities in these analyses due to differences in both the services provided and the populations served.

[127] Reflects total medical/surgical, coronary, and neonatal staffed ICU bed counts. CTR. FOR HEALTH INFO. & ANALYSIS, *Massachusetts Hospital Profiles, March, 2014: Acute Hospital Data Appendix* (FY2012 Staffed Beds) (last visited June 27, 2014), http://www.mass.gov/chia/researcher/hcf-data-resources/massachusetts-hospital-profiles/overiew-and-current-reports.html (scroll to bottom of page and click "Acute Hospital" Excel document under "Databooks") [hereinafter CHIA 2012 Acute Hospital Profiles Databook].

[128] Reflects total newborn nursery and special care nursery staffed beds. *Id.*

[129] This column includes certain bed types not listed separately in the table (e.g. obstetrics).

[130] CHIA 2012 Acute Hospital Profiles Databook, *supra* note 127.

[131] CTR. FOR HEALTH INFO. & ANALYSIS, *Massachusetts Hospital Profiles, March, 2014: Non-Acute Hospital Data Appendix* (FY2012 Staffed Beds) (last visited June 27, 2014), http://www.mass.gov/chia/researcher/hcf-data-resources/massachusetts-hospital-profiles/overiew-and-current-reports.html (scroll to bottom of page and click "Non-Acute Hospital" Excel document under "Databooks"). Area psychiatric hospitals were selected by focusing on facilities within a 10-mile radius of the party community hospitals.

[132] We understand that Walden Behavioral Health focuses on a subset of the services provided by the other psychiatric hospitals listed (primarily treatment for eating disorders and related disorders).

at each hospital.[133] This analysis shows that a significant proportion of Hallmark and NSMC's behavioral health discharges come from a relatively compact area around each hospital campus. Among general acute care hospitals, each hospital usually provides one of the three largest shares of mental health and/or substance abuse discharges in its service areas. This analysis indicates that notwithstanding the presence of other area behavioral health providers, the NSMC and Hallmark hospitals are important providers of behavioral health services to their local communities.

2. <u>While Northeastern Massachusetts Appears to Have Some Excess Inpatient Bed Capacity, Evidence Indicates There Is Likely a Need for Additional Behavioral Health Capacity. There are Inadequate Data to Allow Us to Evaluate Need for Other Outpatient Services Proposed in this Transaction.</u>

To determine the extent to which existing capacity meets community need, we examined inpatient occupancy rates of hospitals in the region and evidence of outpatient need. As shown below, we found that general acute care hospitals in northeastern Massachusetts appear to have overall capacity that likely exceeds community need. However, behavioral health occupancy rates are significantly higher than the average occupancy rate across all inpatient beds, indicating that additional behavioral health capacity is likely needed. Notably, the highest occupancy rate overall and for behavioral health services was the combined rate at the Hallmark hospitals (87% overall and 98.25% for behavioral health).

Staffed Bed Occupancy Rates at Area General Acute Care Hospitals and Specialty Psychiatric Hospitals[134]

Hospital	Occupancy Rate Across All Inpatient Beds	Occupancy Rate for Behavioral Health Beds
Area General Acute Care Hospitals		
Cambridge Health Alliance	72%	81.94%
Hallmark-LMH and Hallmark-MWH	87%	98.25%
Lahey HMC	81%	N/A; 0 beds
Mount Auburn Hospital	66%	89.4%
Northeast Health System (Addison Gilbert, Beverly and Bayridge Hospitals)	63%	93.32%
NSMC-Salem and NSMC-Union	59%	83.53%
Winchester Hospital	63%	N/A; 0 beds

[133] We defined these service areas by examining the zip code of origin for discharges constituting 75% of commercial and non-commercial substance abuse and mental illness discharges at the focal hospital.

[134] To further understand statewide health resource allocation, Chapter 224 tasks the Executive Office of Health and Human Services with convening a Health Resource Planning Council to examine current capacity, need, and future demand. The HPC is a statutory member of the Council, which has first examined allocation of and need for behavioral health resources in the Commonwealth. MASS. GEN. LAWS ch. 6A, § 16T (2012).

Area Specialty Psychiatric Hospitals		
Arbour Hospital	-	85.58%
Arbour-HRI Hospital	-	95.94%
Bournewood Hospital	-	84.77%
McLean Hospital	-	89.51%
Walden Behavioral Care[135]	-	93.36%

Source: 2012 and 2011 Hospital 403 Reports (CHIA) and Hospital Profile Reports (CHIA)
Notes: Occupancy rates are estimates and may vary due to admission of select medically-complex behavioral health patients to medical-surgical units

To further examine area service capacity and need, the HPC studied boarding of patients in emergency departments (EDs) in the region.[136] Specifically, the HPC examined the number of patients who visited regional emergency departments with a behavioral health need and had to wait over 12 hours for an inpatient admission. This showed that although only about 5.9%[137] of emergency department patients have diagnosed behavioral health-related conditions, these patients are disproportionately represented among ED boarders; over half of patients who boarded at area hospitals had a behavioral health diagnosis.[138] This data suggests that additional inpatient and outpatient behavioral health capacity is likely necessary in the region. While these data relate specifically to individuals awaiting an inpatient admission, the boarding problem also suggests there may be insufficient outpatient behavioral health resources that would forestall the need for a patient to go to an ED for behavioral health treatment.[139]

[135] We understand that Walden Behavioral Health focuses on a subset of the services provided by the other psychiatric hospitals listed (primarily treatment for eating disorders and related disorders).

[136] There are few publicly available indicia of barriers to behavioral health access. Emergency department boarding is a widely reported phenomenon with complex root causes, including limitation in access to certain types of inpatient beds (most commonly pediatric and adolescent beds) as well as outpatient service limitations which result in use of emergency departments as a routine site of care. ED boarding is routinely tracked by the Department of Public Health. A boarding patient is defined as any individual in an ED for 12 or more hours after a decision is made to admit or transfer the patient. *See generally* EXEC. OFFICE OF HEALTH & HUMAN SERVS., *ED Length of Stay Issues for Behavioral Health Patients* (Jan. 2013), http://www.mass.gov/eohhs/docs/eohhs/behavioral-health/bh-discussion-01022013.pdf; Elaine Rabin et al., *Solutions To Emergency Department 'Boarding' And Crowding Are Underused and May Need To Be Legislated*, 31 HEALTH AFFAIRS 1757 (2012), *available at* http://content.healthaffairs.org/content/31/8/1757.

[137] Because of data limitations, the proportion of behavioral health-related ED visits at area hospitals is unknown. However, among ED visits at all Massachusetts hospitals, 5.9% are behavioral health-related. *See* CTR. FOR HEALTH INFO. & ANALYSIS, MASSACHUSETTS HEALTH CARE COST TRENDS: EFFICIENCY OF EMERGENCY DEPARTMENT UTILIZATION IN MASSACHUSETTS (2012), *available at* http://www.mass.gov/chia/docs/cost-trend-docs/cost-trends-docs-2012/emergency-department-utilization.pdf.

[138] The HPC examined emergency department boarding data collected by the Department of Public Health (hospital self-report) and emergency department wait-times reported by CMS. In addition to Hallmark and NSMC hospitals, area hospitals for this analysis included Addison Gilbert, Beverly, Cambridge Health Alliance, Mount Auburn, and Winchester Hospitals.

[139] *See, e.g.*, DAVID BENDER, NALINI PANDE AND MICHAEL LUDWIG, A LITERATURE REVIEW: PSYCHIATRIC BOARDING (2008), *available at* http://aspe.hhs.gov/daltcp/reports/2008/psybdlr.htm (describing lack of inpatient capacity as a direct cause of psychiatric ED boarding, but also describing the rise in emergency visits by psychiatric patients as a proxy measure for failure of the outpatient mental health system); Vidhya Alakeson, Nalini Pande and Michael Ludwig, *A Plan to Reduce Emergency Room 'Boarding' of Psychiatric Patients*, 29 HEALTH AFFAIRS 1637

While outpatient service capacity and need – particularly for behavioral health patients – remain a central priority for the Commonwealth and the HPC,[140] data on outpatient service capacity and need remains limited. Thus, aside from the ED boarding data discussed above, the HPC is unable to determine the full extent to which the parties' current outpatient service offerings align with community need. The parties commissioned a June 2012 community assessment[141] which provides some evidence regarding the general health concerns and prevalence of certain conditions in Hallmark's service area. That assessment highlights community concerns about access to care and services for vulnerable populations (e.g., elders, families with young children, immigrants, low-income residents, women and children), and for behavioral health services. The assessment also identifies physical health conditions prevalent in the community, including cancer, cardiovascular disease, diabetes, and obesity.[142] However, as the assessment does not include any analysis of existing capacity to address these conditions, we are unable to evaluate the scope of any additional needed capacity.

3. Unlike Other Partners Hospitals, NSMC Has a Higher Government Payer Mix than Most Area Hospitals; Hallmark Also Has a High Government Payer Mix With Hallmark-LMH Serving a Substantial Proportion of Medicare Behavioral Health Patients.

The HPC examined the payer mix of Partners' general acute care hospitals and Hallmark, as measured by revenue and discharges.[143] As reported in the PHS-SSH-HARBOR FINAL CMIR REPORT, from 2010 to 2012, each Partners hospital, with the notable exception of NSMC, had the highest commercial payer mix and/or lowest Medicaid/Children's Health Insurance Program (CHIP) mix of any area hospital, based on revenue.[144] By contrast, NSMC had a lower commercial payer mix (28%) and higher combined Medicare and Medicaid/CHIP payer mix (66%) than most area hospitals.

(2010) (stating that ED boarding of psychiatric patients is often the result of an inability to gain timely access to community-based care).

[140] The Health Planning Council convened pursuant to Mass. Gen. Laws ch. 6A, §16T has focused its first year of planning activity solely on behavioral health services, including a substantial focus on outpatient service use and availability. The HPC is a statutory member of the Health Planning Council.

[141] Hallmark Determination of Need, *supra* note 28, at Exh. 7.

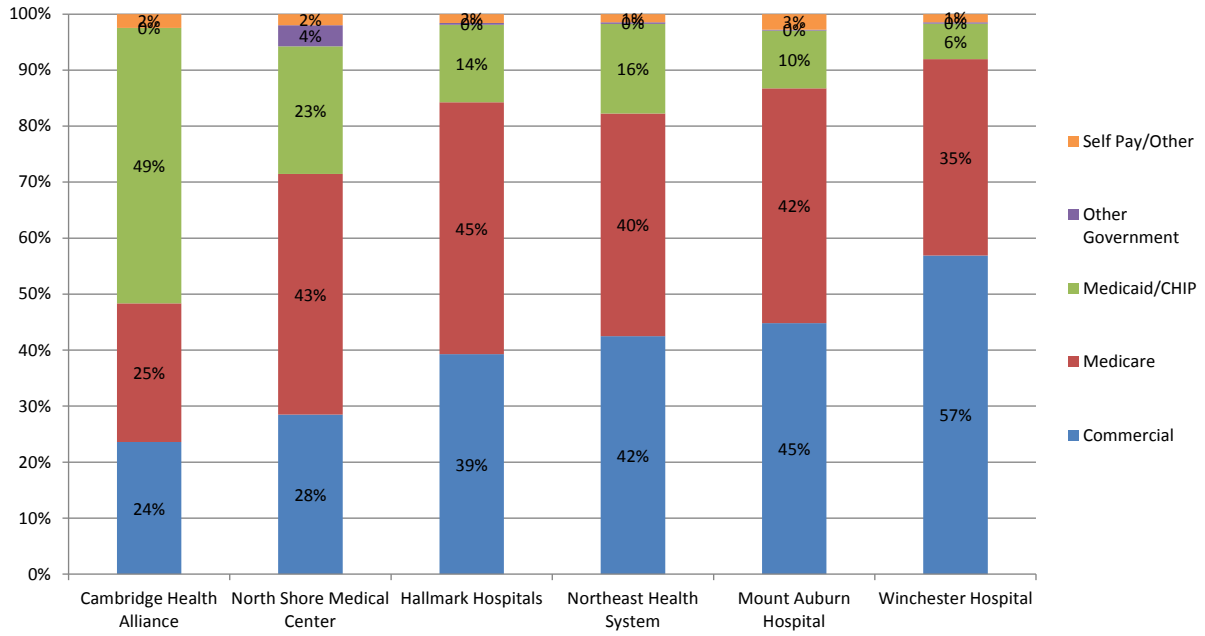
[142] The assessment consisted of interviews with key community leaders and stakeholders across the catchment area (n = 18) about top health concerns and vulnerable populations; community assets and resources. Online and in-person community surveys (n = 387) were conducted by Hallmark among catchment area residents. Information about health concerns, behaviors and needs was collected. "Vulnerable populations" included elders, families with young children, immigrant groups, low-income residents, women, and children/youth. The assessment does not provide analysis of current service availability, barriers to access, or quantitative data on new service needs.

[143] The HPC examined the payer mix at general acute care hospitals using (1) data gathered by CHIA on inpatient and outpatient revenue by payer and (2) MHDC data on discharges by payer. The HPC examined payer mix at specialty psychiatric hospitals using data gathered by CHIA on gross inpatient and outpatient service revenue.

[144] Where we examined two Partners hospitals together (MGH and BWH among Boston AMCs and Martha's Vineyard and Nantucket Cottage among the four Cape and Island hospitals), the two Partners hospitals were the two highest commercial payer mix and/or lowest Medicaid/CHIP mix compared to other area hospitals. *See* PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 23, at 24-25.

When measured by revenue, Hallmark-LMH and Hallmark-MWH also had a higher government payer mix (59%) and a lower commercial mix (39%) than most area hospitals, as shown in the chart below. Among area community hospitals, Hallmark had the highest Medicare mix (45%).

Inpatient and Outpatient Payer Mix for All Area Community Hospitals – 2012



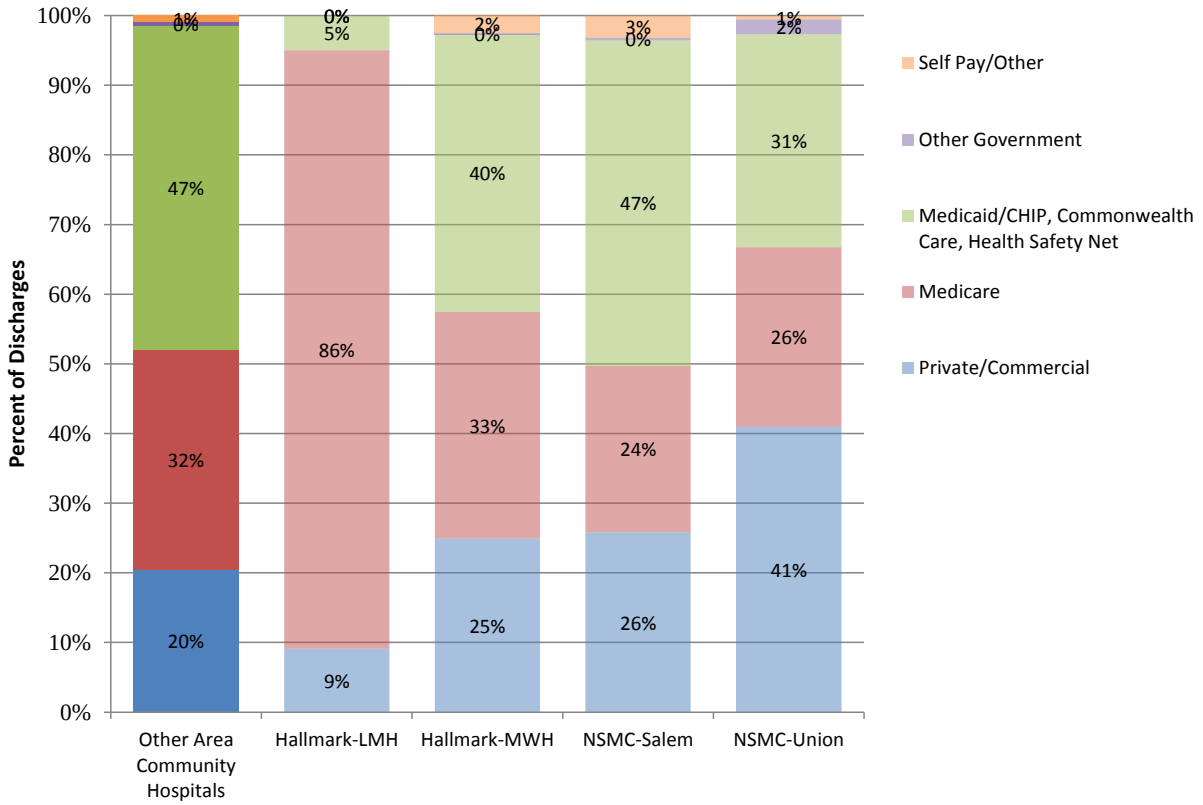
Source: CTR. FOR HEALTH INFO. & ANALYSIS, HOSPITAL DATA ON GROSS PATIENT SERVICE REVENUE, FY10-FY12 (HPC Analysis).

When the HPC examined payer mix by PSA, similar patterns emerged.[145] In Hallmark's PSA, both Hallmark-LMH and Hallmark-MWH had larger shares of government payer discharges (84% and 73%, respectively) and lower shares of commercial payer discharges (13% and 25%, respectively) than area community hospitals (68% government payer, and 31% commercial). Similarly, in NSMC's PSA, both NSMC hospitals had higher government and lower private payer mixes than area community hospitals (NSMC-Salem and NSMC-Union had 72% and 76% government payer discharges and 27% and 19% commercial discharges, respectively. Other local community hospitals averaged approximately 70% government payer discharges and 28% commercial discharges).

[145] As mentioned previously, 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 161. 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, in Hallmark's PSA, residents "used" or "needed" 48,269 discharges in 2012. We then analyze the payer mix of the share (or cross-section) of those total PSA discharges provided by different categories of hospitals that serve residents of the PSA: Hallmark hospitals (LMH and MWH); NSMC hospitals (Salem and Union); other area community hospitals (Cambridge Health Alliance, Mount Auburn, and Winchester); and tertiary hospitals (those with a case mix index of 1.1 or more). In the NSMC PSA, residents used 32,047 discharges in 2012. The hospitals serving residents of the NSMC PSA include NSMC hospitals (Salem and Union); Hallmark hospitals; other area community hospitals (Northeast hospitals); and tertiary hospitals.

The HPC also reviewed the mix of behavioral health discharges by payer at area general acute care community hospitals in 2012.[146] As shown in the chart below, Medicare patients were a substantial proportion of the behavioral health discharges at Hallmark-LMH (86%). This is higher than the combined percentage of Medicare and Medicaid/CHIP behavioral health discharges at other local community hospitals (79%), and is likely related to Hallmark-LMH psychiatric beds being principally designated for geriatric-psychiatry patients. Both Hallmark hospitals also had a lower mix of commercial behavioral health discharges than either of the NSMC hospitals.

Inpatient Behavioral Health Payer Mix for Area Community Hospitals – 2012 Discharges



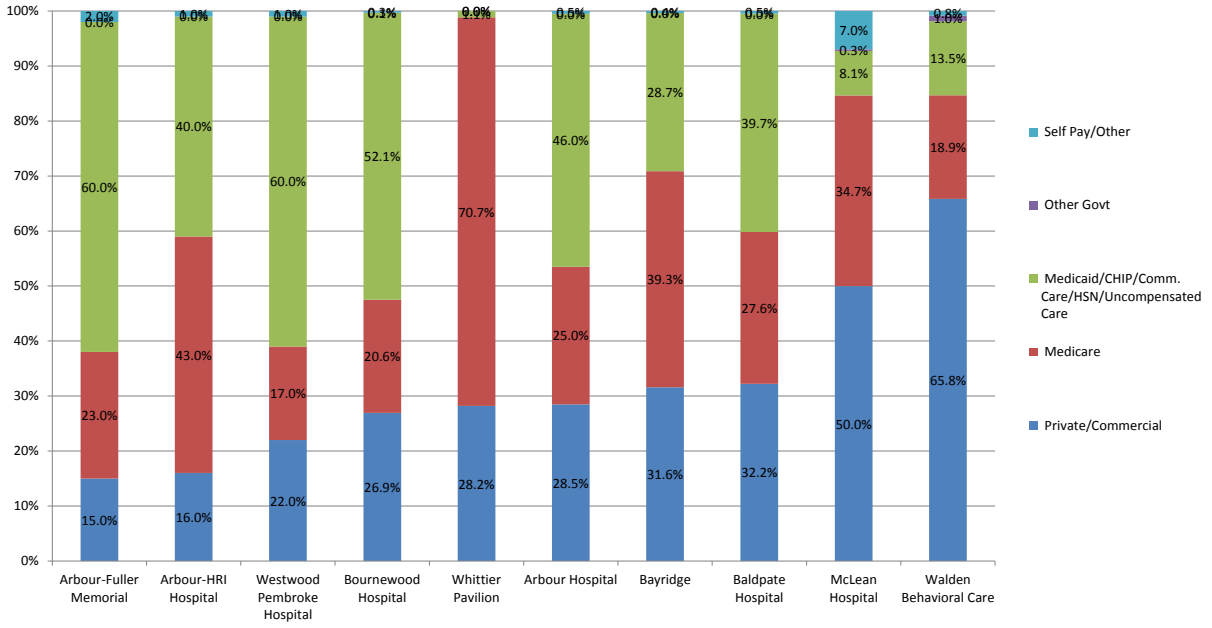
Source: 2012 MHDC DISCHARGE DATA, BEHAVIORAL HEALTH DISCHARGES (ALL HOSPITALS, COMMERCIAL AND NON-COMMERCIAL PAYERS)

As shown above, NSMC-Union – where the parties propose to consolidate all inpatient behavioral health services – had the highest mix (41%) of commercial behavioral health discharges of any area hospital. The HPC also reviewed the payer mix of all Partners general acute care hospitals compared to the average payer mix across all general acute care hospitals in Massachusetts, and found that NSMC-Union has a significantly higher mix of commercial behavioral health discharges than the statewide average of 31%.

[146] To allow for direct comparison between similar area community hospitals, this analysis was not restricted to a PSA region, *see supra* note 123. Other community hospitals examined in this analysis were Mount Auburn, CHA, Addison-Gilbert, Beverly, and Winchester.

Lastly, since the proposed change in services at NSMC-Union involves creating a specialty psychiatric facility, the HPC reviewed the payer mix (by revenue) of all specialty psychiatric facilities in the state. This showed that, consistent with findings for Partners' general acute care facilities, Partners' specialty psychiatric facility, McLean Hospital, has a lower mix of Medicaid revenue (8%) and higher mix of commercial revenue (50%) than other specialty psychiatric facilities in Massachusetts.[147]

Inpatient and Outpatient Payer Mix for Specialty Psychiatric Facilities – 2012



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

In sum, based upon available measures, the parties are important providers of inpatient services, including behavioral health. In general, general acute care bed capacity in the region may exceed need. However, evidence indicates there is likely a need for enhanced inpatient and outpatient behavioral health capacity. There are inadequate data to allow us to evaluate need for other outpatient services proposed in this transaction. Compared to other Partners hospitals and to area hospitals, the NSMC and Hallmark hospitals tend to have a higher government payer mix and lower commercial mix, with Hallmark-LMH serving a particularly high mix of Medicare behavioral health discharges. Other Partners hospitals, including McLean, tend to have a higher commercial mix.

[147] We understand that Walden Behavioral Health focuses on a subset of the services provided by the other psychiatric hospitals listed (primarily treatment for eating disorders and related disorders).

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[148] As discussed in the Introduction, the purpose of this report is to fulfill this important transparency function, by advancing an evidentiary record that can inform and complement other work being done in the Commonwealth to monitor and oversee our health care market. For example, the recent proposed consent judgment filed by the AGO, Partners, and related health care providers concerning Partners' market conduct and expansion plans explicitly requires the AGO and Partners to confer on mitigating any material price impacts identified by the HPC in this CMIR.

We understand the AGO Settlement limits average price growth across all Partners providers to no more than the rate of general inflation for the next 6.5 years, and separately holds the South Shore providers, as an individual group, to this same cap. Since the current agreement does not separately cap the prices of the Hallmark providers, we understand that Hallmark's prices could grow in excess of general inflation, so long as the impact of that increase was allocated across the rest of Partners' community network. The findings of this report thus bear on the need for mitigation of Hallmark-specific price impacts. While price increases resulting from this transaction would not necessarily result in a net increase in average price growth across the Partners network, they would be anticipated to set a new, permanent baseline upon which future price increases would be negotiated, including prices negotiated after the expiration of the settlement, and would similarly contribute to an increased total medical spending baseline in northeastern Massachusetts.

Similarly, we understand that other material price effects, such as changes in site of patient care across differently priced providers – especially for patients in PPO and non-risk HMO/POS insurance products – are not fully encompassed by the current agreement. Over time, the increased spending baseline from such site of care effects will impact consumers and payers in this region, as well as providers who refer their patients to Hallmark facilities and are increasingly at risk for these patients' total medical expenses. Other providers will also have to compete with the effect of any additional spending Hallmark is able to do as a result of increased revenue and/or capital resources from the proposed transaction, such as increased spending on physician recruitment. The remainder of this report examines the anticipated cost, quality, and access impacts of this proposed transaction.

[148] *See generally* PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 23; *ProMedica Health System, Inc. v. FTC*, No. 12-3583, 2014 U.S. App. LEXIS 7500 (6th Cir. Apr. 22, 2014); *FTC v. St. Luke's Health Sys. Ltd.*, No. 1:13-CV-00116-BLW (D. Id. Jan. 24, 2014).

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.[149] Growth in total medical spending is driven by four principal factors: unit price, utilization, provider mix, and service mix. Provider consolidations or alignments can affect all of these factors, resulting in:

- Increased bargaining leverage, or shifts in incentives to use existing bargaining leverage, which allow providers to negotiate higher commercial prices and other favorable contract terms;
- Changes in physician, hospital, or other facility prices as consolidations or alignments change the affiliations of provider groups;
- Changes in site of care, or use of differently priced providers, as physicians shift utilization in response to consolidations or alignments; and
- Changes in the nature or amount of services patient populations utilize as a result of proposed care delivery changes.

Provider consolidations and alignments can also result in changes which have the potential to impact total medical spending indirectly, such as increased investments in services and facilities or operational efficiencies that decrease overhead costs. These changes will impact total medical spending only insofar as the provider chooses to pass on its costs or savings to payers and consumers when negotiating future reimbursement rates.

We examined each of these mechanisms for its potential cost impact[150] and found:

Market Structure

- This transaction will reinforce Partners' position as the provider with the highest share of inpatient and PCP services in its northeastern Massachusetts service areas and will strengthen Partners' ability and incentives to negotiate price increases and other favorable contract terms for Hallmark.

Unit Price

- As the Hallmark physicians become more tightly integrated with Partners,[151] changes in physician prices are anticipated to increase total medical spending in northeastern Massachusetts.

[149] 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).

[150] 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.

[151] *See* Affiliation Agreement, *supra* note 7, at Art. 5.6.1. After the effective date of the transaction, Hallmark medical staff physicians who are "interested in a more integrated relationship" will be given a choice of being

- If Partners seeks parity between Hallmark's prices and those at its owned community hospitals, these changes in hospital prices will increase total medical spending in northeastern Massachusetts.
- Services at the facilities the parties propose will be licensed and operated by MGH are expected to be billed at higher rates as a result of this transaction, increasing total medical spending in northeastern Massachusetts.

Over the life of any Partners-wide price cap, that cap should successfully constrain the net impact of increases in the prices of Hallmark providers, requiring that such increases do not result in average price growth across Partners' community network that exceeds general inflation. At the same time, without an individual price cap for Hallmark providers, those providers, as shown below, will likely experience price growth much faster than the rate of general inflation as a result of this transaction, with significant consequences for total medical spending in this region, particularly following expiration of the AGO Settlement.[152] We anticipate such price increases would set a permanently increased baseline upon which future price increases would be negotiated, and also permanently increase total medical spending in northeastern Massachusetts.

Provider Mix

- Changes in site of care/referral patterns are unlikely to result in significant savings. If Partners seeks rate increases for Hallmark providers, anticipated changes in referral patterns to higher priced providers will increase total medical spending.

Utilization

- The parties have outlined a set of PHM strategies that have the potential to reduce unnecessary utilization and wasteful spending. However, the scope of potential savings from these initiatives is likely smaller than projected by the parties and is not expected to offset anticipated increases in total medical spending.

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directly employed by either Hallmark Health Medical Associates (HHMA), Partners' community physician organization (newly created), or the Massachusetts General Physicians Organization (MGPO) on an exception basis. *Id.*

[152] Without lasting change to the market structures that underlie bargaining leverage, price caps on their own may not be effective in keeping costs down. In other circumstances where providers have been subject to a price cap, prices have risen after the cap's expiration. *See, e.g.*, Jeff Engel, *Spectrum Health, Metro Health, and St. Mary's Are Charging More for Hospital Services*, GRAND RAPIDS PRESS, July 3, 2010, *available at* http://www.mlive.com/business/west-michigan/index.ssf/2010/07/spectrum_health_metro_health_a.html (describing 8% price increases at Spectrum Health after the expiration of a seven year price cap set forth in *FTC v. Butterworth Health Corp.*, 946 F. Supp. 1285 (W.D. Mich. 1996)).

1. This Transaction will Reinforce Partners' Position as the Provider with the Highest Share of Inpatient and PCP Services in its Northeastern Massachusetts Service Areas and Will Strengthen Partners' Ability and Incentives to Negotiate Price Increases and Other Favorable Contract Terms.

The HPC examined whether the proposed transaction will enhance the parties' ability to charge supracompetitive rates by studying market shares and anticipated changes in market concentration.[153, 154] As noted in Part II, Partners and Hallmark are already contracting affiliates and Partners already negotiates rates with most of the major payers in Massachusetts for Hallmark's hospitals and physicians. Thus, whether the proposed transaction is likely to create upward pressure on rates will depend on both the structural changes associated with the transaction – as measured by the market share and concentration analyses below – and the extent to which Partners already has incentives to negotiate for Hallmark's rates as if the two were fully financially integrated.

Joint contracting and full financial integration embody different structures and bargaining incentives. For example, Partners does not currently "own" Hallmark's revenue, and as such does not directly profit if Hallmark's margins or volume increase. Thus, Partners' current incentives to negotiate Hallmark's rates are likely different from Partners' incentives to negotiate rates for entities with which Partners is fully financially integrated (e.g., hospitals that it owns), where Partners would directly profit from increased volume or margins. Upon full financial ownership of Hallmark, Partners would likely have increased alignment of both ability and incentives to command higher rates for Hallmark.[155] At the same time, given that the parties have a preexisting joint contracting relationship, we would not expect the changes in leverage and incentives here to be as great as a situation in which the parties had no preexisting relationship. Our structural analysis therefore assesses the range of impact the proposed transaction is likely to have on negotiating leverage and incentives.[156]

a. Market Shares

As described in the PHS-SSH-Harbor Final CMIR Report and the Lahey-Winchester Final CMIR Report, commercial prices for health care services are established through contract negotiations between payers and providers. The results of these negotiations – prices that payers will pay for services as well as other contractual terms – are influenced by the bargaining

[153] We also examined anticipated changes in patient flow patterns if the Hallmark hospitals were to become unavailable to consumers (diversion analysis), which provided results consistent with our concentration analysis.
[154] To provide a public analysis of the likely nature of a transaction's competitive effects, our analysis mirrors many of the initial steps that would likely be included in an antitrust investigation, without repeating all of the econometric modeling of changes in competition (e.g., "willingness-to-pay" analysis) that might be pursued in a law enforcement context.
[155] Hallmark's revenue does not currently directly impact Partners' revenue, and Hallmark's HMO/POS and PPO rates are below Partners' community hospital HMO/POS and PPO rates. *See supra* Sections III.A.3 and III.A.4.
[156] Although additional review might be able to more precisely estimate the degree to which the parties' existing joint contracting relationship differs from full financial integration, that analysis and thus the exact change in pricing incentives is beyond the scope of this time-limited review.

leverage of the negotiating parties. A transaction may have competitive effects if it changes the bargaining leverage or incentives of the negotiating parties.

An analysis of competitive effects often begins with an assessment of relevant markets:[157]

Product Market: Based on the services offered by Partners and Hallmark and the availability of robust data, we evaluated potential competitive effects on general acute care inpatient services and primary care services for patients living in Hallmark's primary service area.[158,159] To provide a more detailed analysis, we also reviewed the market for general acute care inpatient services subdivided into tertiary/quaternary acute care inpatient services (tertiary services) and non-tertiary/non-quaternary acute care inpatient services (non-tertiary services).[160]

Geographic Market: Our analysis focuses on the likely impact of the proposed transaction on consumers living in the Hallmark and NSMC hospital Primary Service Areas (PSAs),[161] using information on patient-based market shares. This information shows the hospitals that patients in each of the Hallmark and NSMC PSAs choose for certain general acute inpatient hospital care. We also study inpatient market shares in the primary and secondary service areas defined by the parties.[162] In addition, we studied market shares in the primary care service area of Hallmark.

As described in Section III.A.2, Partners and Hallmark respectively have the largest (32.3%) and third largest (15.2%) shares of commercial discharges in Hallmark's hospital PSA. Combined, they capture approximately 48% of the commercial discharges in the PSA. As noted in Part II, the parties contract jointly with most major payers for the majority of Hallmark's business. However, the parties do not share common financial ownership (e.g., Partners does not own Hallmark's revenue, and as such does not directly profit if Hallmark's margins or volume increase), and Hallmark negotiates with some commercial payers separately from Partners. Thus, although Partners and Hallmark are financially and contractually related, their financial interests are not entirely aligned. For that reason, it is likely that Partners' current competitive significance in the marketplace is reflected in an effective market share that is between these

[157] A relevant market includes the narrowest set of products (or hospitals) and the narrowest geography in which a hypothetical monopolist over all hospitals could sustain a small but significant increase in price, or "SSNIP."
[158] 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.
[159] 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.
[160] For the purposes of these analyses, tertiary care is defined as the set of DRGs that are primarily performed at facilities with a case mix index of 1.0 or more.
[161] 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 PHS-SSH-HARBOR FINAL REPORT, *supra* note 23, at 37, n.115 and 38, n.118.
[162] The parties have provided the HPC with the list of zip codes they have identified to be in each of their primary and secondary service areas. We understand the primary service area to be defined as the zip codes from which the hospital draws 75% of all of its discharges, and the secondary service area to be defined as the zip codes from which the hospital draws 90% of all of its discharges.

lower and upper market share estimates (i.e., between 32.3% and 48%). As a result of the transaction, Partners' market share will shift entirely to the upper bound (48%), which would reinforce Partners' position as the provider with the largest share of inpatient services in this PSA and would align Partners' and Hallmark's incentives such that Partners would have both the ability *and* incentives to command higher rates for Hallmark. The next closest competitors for commercial inpatient services in Hallmark's PSA are Lahey with 22.8% of commercial discharges, followed by Beth Israel with 9.2% of commercial discharges.[163]

As also shown in Section III.A.2, in NSMC's PSA, Partners and Hallmark respectively have the largest (58.9%) and fifth largest (1.9%) shares of commercial discharges, or approximately 61% combined. Lahey has the second largest market share in this PSA, with 28.9% of commercial discharges, and Beth Israel has the third largest share, with 4.0% of commercial discharges.[164]

The HPC also analyzed share of PCP services in Hallmark's primary care PSA, using APCD data. As discussed in Section III.A.2, we found that Partners physicians, including Hallmark, have the largest share of PCP services in Hallmark's primary care PSA, as measured by either revenue (approximately 40%) or visits (approximately 35%).[165] The parties have described plans to recruit 25 net new PCPs to Hallmark, who could further increase PCHI's share of PCP services in Hallmark's primary care PSA.

b. Market Concentration for Inpatient Services

We calculated market concentration before and after the proposed transaction in the Hallmark and NSMC hospital PSAs using the Herfindahl–Hirschman Index (HHI).[166, 167] The change in concentration associated with a transaction is probative of the likely impact of the

[163] These results are somewhat more pronounced in the Hallmark PSA as defined by the parties. Using their definition, Partners and Hallmark respectively have the largest (28.7%) and second largest (26.0%) shares of all discharges. Combined, they would capture nearly 55% of all discharges in the PSA. The next closest competitor in terms of inpatient share would be Lahey, with 15.3% of all discharges, followed by Beth Israel Deaconess Care Organization (BIDCO), with 9.1% of all discharges.

[164] The results are also more pronounced in the NSMC PSA as defined by the parties. Using their primary service area definition, Partners and Hallmark respectively have the largest (70.8%) and fourth largest (1.7%) shares of all discharges. Combined, they would capture about 73% of all discharges in the PSA. The next closest competitor in terms of inpatient market share in NSMC's PSA would be Lahey, with 19.4% of all discharges, followed by Beth Israel, with 2.3% of all discharges. Using their secondary service areas, Partners and Hallmark respectively have the largest (35.6%) and third largest (9.8%) shares of all discharges.

[165] Analyzed separately, Hallmark physicians have approximately 14% to 16% of primary care revenue and 13% to 15% of primary care visits in Hallmark's primary care PSA.

[166] The HHI is a commonly used measure of market concentration and an indicator of the amount of competition among systems. 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.

[167] We did not include a similar calculation of market concentration for primary care due to data limitations. In particular, system affiliations are unconfirmed for a number of primary care physicians in that service area.

transaction on market power and the ability of the parties to negotiate higher prices.[168] The Department of Justice (DOJ) and the Federal Trade Commission (FTC) use market shares within PSAs and HHIs as initial screens for determining whether a given transaction raises competitive concerns and warrants further scrutiny.[169]

DOJ/FTC Horizontal Merger Guideline HHI Thresholds[170]

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**

Below, we summarize the pre-merger and post-merger inpatient HHIs in the Hallmark and NSMC service areas under both the HPC definition of PSAs and the parties' definition of PSAs. We present a lower and upper bound calculation of these HHIs. In the "lower bound" scenario, the HHIs presented do not include non-owned hospital contracting affiliates of a provider system in that system's market share. In the "upper bound" scenario, such non-owned contracting affiliates are included in the affiliated system's market share.[171]

[168] 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. DEP'T OF JUSTICE, IMPROVING HEALTHCARE: A DOSE OF COMPETITION 1, 15 (July 2004), *available at* http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf.

[169] *See, e.g.*, FED. TRADE COMM'N & U.S. DEP'T 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. *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.

[170] *See* U.S. DEP'T OF JUSTICE. & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (2010), *available at* http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf.

[171] The HHI calculations are a function of the merging parties' shares; thus, there is a single pre- and post-merger HHI in the upper bound analysis because the Hallmark and Partners shares are considered to be combined regardless of whether the merger has occurred. Note that because Emerson Hospital is also included in the Partners share in the upper bound analysis, the post-transaction HHI in the lower bound and upper bound scenarios are not identical.

Inpatient HHI Calculations: Hallmark and NSMC PSAs

	LOWER BOUND ANALYSIS			UPPER BOUND ANALYSIS		
	Pre-Merger HHI	Post-Merger HHI	Δ HHI	Pre-Merger HHI	Post-Merger HHI	Δ HHI
Hallmark PSA (HPC Defined)	1,952	2,930	+978	3,017	3,017	+0
Hallmark PSA (Party Defined)	1,898	3,389	+1,490	3,504	3,504	+0
NSMC PSA (HPC Defined)	4,328	4,548	+220	4,563	4,563	+0
NSMC PSA (Party Defined)	5,407	5,652	+245	5,663	5,663	+0

These analyses indicate that the proposed transaction is anticipated to have a significant market impact – either (1) because it substantially increases the resulting system's market power or (2) because it reinforces the system's existing market power and strengthens its incentives to use that market power to increase prices at Hallmark. If the bargaining leverage under the parties' current joint contracting relationship differs significantly from that under full financial integration, the increases in concentration of inpatient services resulting from this transaction, which range from an increase of 978 to 1,490 points in Hallmark's PSA and 220 to 245 in NSMC's PSA, indicate that the transaction would be ***presumed likely to enhance market power*** under the DOJ/FTC guidelines.[172, 173] Alternatively, if the bargaining leverage under the parties' current joint contracting relationship is substantially similar to that under full financial integration, both the Hallmark and NSMC PSAs are exceptionally concentrated markets in which Partners already has the highest market share by a substantial margin, ranging from 48% to 61%

[172] 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 PROJECT REPORT NO. 9 (2006), *available at* http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2006/rwjf12056/subassets/rwjf12056_1.

[173] The potential competitive impact of the transaction is reinforced by our results from a "diversion" analysis. A regression analysis of "diversion" is another way to measure anticipated competitive effects of a hospital merger. Diversion analyses predict where people would go for inpatient care if a hospital were no longer an option for its patients; a high rate of diversion from one hospital to another identifies them as close substitutes. This analysis can be probative of competitive effects because mergers between close substitutes effectively remove a competitor from the marketplace that could otherwise have acted as a constraint on price increases. In examining where Hallmark's discharges would shift if Hallmark were no longer an option for consumers, we found that Partners hospitals are Hallmark's closest substitute: About 44.5% of Hallmark's discharges would shift to a Partners hospital. Winchester Hospital is Hallmark's second closest substitute, receiving 15.3% of the diverted discharges. Hallmark's third and fourth closest substitutes are Lahey and BIDMC, respectively. U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES, *supra* note 170, at § 6.1.

of commercial discharges across the two PSAs. This degree of existing market power raises its own set of concerns that Partners could use its existing market power to seek price increases once Partners owns Hallmark and profits directly from increased Hallmark revenue.

In the next section, we model the impact of this market power on total medical spending in northeastern Massachusetts as a result of anticipated changes in physician, hospital, and ambulatory facility prices.[174] We understand that the proposed consent judgment would allow payers to negotiate for all or only certain components of the Partners network (AMCs, community hospitals and their physicians, South Shore Hospital and related physicians, and the Hallmark hospitals and their physicians), which is designed to mitigate Partners' bargaining leverage. We are hopeful that this constraint of Partners' current contracting practices will promote a more competitive market and lead to lower health care costs, but we recognize the impact of the constraint will depend, among other considerations, on whether and to what extent payers vigorously pursue it, and on how the market responds.

As noted in the introduction to Section IV.A, the AGO Settlement proposes a price cap that should successfully constrain the net impact of growth in Hallmark's prices for the next 6.5 years by requiring that such increases do not result in average price growth across Partners' network that exceeds general inflation. At the same time, without an individual price cap for Hallmark providers, those providers, as shown below, will likely experience price growth much faster than the rate of general inflation as a result of this transaction, with significant consequences for total medical spending in this region, particularly following expiration of the AGO Settlement. We anticipate such price increases would set a permanently increased baseline upon which future price increases would be negotiated, and also permanently increase total medical spending in northeastern Massachusetts.

2. <u>As the Hallmark Physicians Become More Tightly Integrated with Partners, There Will Likely Be Changes in Prices that Set an Increased Baseline Upon Which Future Price Increases Would Be Negotiated, and that Increase Baseline Total Medical Spending in Northeastern Massachusetts.</u>

As described above in Section III.A.III.4, Partners' physician groups have some of the highest prices in northeastern Massachusetts. Although they contract through PCHI, Hallmark physicians do not currently receive prices as high as many Partners groups, including its employed or "integrated" groups. As a key element of the proposed transaction is the "tighter integration" of Hallmark and Partners physicians,[175] one mechanism by which we anticipate this

[174] In these sections, we do 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 to assess the magnitude of the price increase that could be sought by the parties as result of increased bargaining leverage. Rather, we model only the likely and potentially conservative scenario if Partners were to seek parity in the rates for Hallmark physicians and hospitals consistent with the rates of its currently owned physicians and hospitals.

[175] *See* Affiliation Agreement, *supra* note 7, at Art. 5.6.1. After the effective date of the transaction, Hallmark medical staff physicians who are "interested in a more integrated relationship" will be given a choice of being directly employed by either Hallmark Health Medical Associates (HHMA), Partners community physician organization (newly created), or the Massachusetts General Physicians Organization (MGPO) on an exception basis.

transaction will increase total medical spending in northeastern Massachusetts is through increases in Hallmark physicians' prices to these higher "integrated" PCHI prices.

The HPC interviewed four major commercial payers to develop a deeper understanding of their contracts with PCHI. In Partners' contracts with the three largest commercial payers, there is a tiered price structure depending on the type of physician and the classification of the physician's RSO. Academic rates (for physicians in the Brigham and Women's Physician Organization and Massachusetts General Physician Organization) are the highest, followed very closely by integrated rates (generally, for PCHI's employed physicians in the community). Non-employed PCHI community physicians receive lower rates – sometimes substantially lower – known generally as "affiliated" rates.[176] Because Hallmark is an affiliated RSO, all HHPHO physicians currently receive affiliated rates, the lowest rate tier in the PCHI network.

The three major payers noted there is a modest variation in the potential timing for Hallmark's physicians to move to higher "integrated" rates, so we focused on the conservative scenario where HHPHO physicians would only receive the higher, integrated rates upon renegotiation of current contracts (anticipated as soon as late 2014 for one payer and about a year thereafter for the other two payers). Accordingly, we report on our results separately for two periods: 2015, when the anticipated increase in rates would only apply to one major payer, and 2016 onward, when the anticipated increase in rates would apply to all three major payers.

We also modeled a range of cost impact based on the number of HHPHO physicians that would increase to PCHI's higher, integrated rates. Under a conservative scenario, we model only the physicians currently employed by Hallmark increasing to PCHI's integrated rates.[177] Under a moderate scenario, we adopt the parties' position that, post-acquisition, PCHI will more tightly integrate with Hallmark physicians, ultimately employing a greater proportion of these physicians. We model the impact if PCHI were to employ and receive higher rates for a similar proportion of Hallmark physicians as the proportion of physicians currently employed and receiving higher rates in Partners' existing community hospital RSOs, North Shore Health System and Newton-Wellesley. The third scenario posits that all of Hallmark's physicians would receive integrated rates.[178] The chart below shows the range of cost impact for the three largest commercial payers. A major national payer that negotiates rates directly with Hallmark has confirmed the impact could be far greater for payers who likewise currently negotiate with Hallmark independently of Partners.[179]

[176] PCHI's AMC rates are up to 4.2% higher than the community "integrated" rates for the three major commercial payers, and approximately 20-25% higher than Hallmark's current "affiliated" rates for these payers.
[177] This scenario is unrealistically low given the parties' stated intention to offer employment to a significant proportion of Hallmark physicians who are not currently employed.
[178] This scenario is possible given that the parties intend to offer employment to all Hallmark medical staff physicians who are "interested in a more integrated relationship." *See* Affiliation Agreement, *supra* note 7, at Art. 5.6.1. A major payer also confirmed they believe this is a realistic scenario given Hallmark's contracting history with Partners and Partners' current approach to physician integration.
[179] This payer indicated that its prices for any employed Hallmark physicians would increase by an estimated 200%.

Cost Impact of Anticipated Changes to Physician Prices[180]

	Average $ Increase in Revenue (2015)	Average Annual $ Increase in Revenue (2016 onward)	Approximate % Impact to Regional Total Medical Spending (2016 onward)
Conservative estimate	$1.3 million dollars	$2.3 million dollars	0.3%
Moderate estimate	$4.0 million dollars	$6.8 million dollars	0.9%
Higher estimate	$8.7 million dollars	$14.6 million dollars	1.8%

3. If Partners Seeks Parity Between the Rates at Hallmark's Hospitals and Those of Its Owned Community Hospitals, These Changes in Hospital Prices Will Set an Increased Baseline Upon Which Future Price Increases Would Be Negotiated, and Will Similarly Increase Baseline Total Medical Spending in Northeastern Massachusetts.

As described above in Section III.A.3, Partners hospitals receive higher prices than other area hospitals, and Partners receives comparable rates for its three greater Boston area community hospitals. As also discussed in Section IV.A.1.b, regardless of whether the transaction confers additional market power, market concentration and market shares indicate that Partners has existing market power to leverage rate increases.

As with changes in physician prices, the HPC interviewed the major commercial payers to develop a deeper understanding of the hospital rates in their contracts with Partners. The three largest commercial payers confirmed that Partners seeks consistent rates for its owned community hospitals in the greater Boston area. Over time, we find it likely that Partners will seek parity between the rates at Hallmark and those at these other area community hospitals.[181] If Partners were to seek such rate parity, the price impact for the top three commercial payers

[180] The anticipated increases in Hallmark physician revenue shown in this table correspond to effective rate increases of about 3% to 20%. If price growth for Hallmark physicians were capped at general inflation, that would better constrain, for the life of the cap, how much prices in this region would grow a result of this transaction. For example, if Hallmark physician rates were capped at 1.5%, the annual impact to the major three commercial payers would only be about $1.1 million, contributing to a smaller permanent increase to baseline total medical spending in this region.

[181] This is consistent with payers' expectations that Partners will seek parity between Hallmark's rates and those of its other owned community hospitals in the greater Boston area, especially if it continues its current practices. This is also consistent with the parties' public statements that community hospital rates will apply. *See* PARTNERS HEALTHCARE, PARTNERS HEALTHCARE/HALLMARK HEALTH: A REGIONAL APPROACH TO IMPROVE HEALTH CARE - FACT SHEET, *available at* http://www.hallmarkhealth.org/doc_download/465-partners-healthcare-affiliation-fact-sheet.

would be approximately $9.3 million dollars annually, which equates to a permanent increase in baseline total medical spending in the region of approximately 1.2%.[182]

Cost Impact of Anticipated Changes to Hospital Prices[183]

	Average Annual $ Increase in Revenue (Over time)	Approximate % Impact to Regional Total Medical Spending
Inpatient estimate	$5.2 million dollars	0.7%
Outpatient estimate	$4.1 million dollars	0.5%
Total	**$9.3 million dollars**	**1.2%**

4. Services at the Facilities the Parties Propose Will Be Licensed and Operated by MGH are Expected to be Billed at Higher Rates as a Result of This Transaction, Setting an Increased Baseline Upon Which Future Price Increases Will Be Negotiated, and Similarly Increasing Baseline Total Medical Spending in Northeastern Massachusetts.

As discussed in Section II.C, Partners proposes repurposing Hallmark-LMH as a short-stay mixed use facility that will be operated by, and licensed under, MGH. Similarly, Partners proposes that an MGH-licensed and operated outpatient cancer center will replace Hallmark's Stoneham outpatient cancer facilities. While Partners has stated that the services rendered at these facilities will be "community priced," licensure under MGH and potential operation and staffing by MGH raise the likelihood that rates for these services will nonetheless increase.

For services rendered at these facilities, both a "professional fee"[184] and a "facility fee"[185] may apply. Because MGH-affiliated physicians are expected to deliver some proportion of services at these facilities, we anticipate that Partners' AMC physician rates would apply to the professional fees for services rendered by those physicians. These prices are significantly higher than both Hallmark's current physician prices, and the anticipated increased prices discussed in

[182] Both the physician price impacts reported in the previous section and the hospital price impacts reported here are based on Partners' current rates. However, hospital and physician prices may be renegotiated when Partners' contracts are up for renewal in late 2014 and 2015. Any increase in those rates resulting from those negotiations would contribute to a further increased level of baseline total medical spending in northeastern Massachusetts.
[183] The anticipated increase in hospital revenue shown in this table corresponds to an effective price increase of about 12%. If Hallmark's price growth were capped at general inflation, that would better constrain, for the life of the cap, how much prices in this region would grow a result of this transaction. For example, if Hallmark's rates were capped at 1.5%, the annual impact to the major three commercial payers would only be about $1.2 million, contributing to a smaller permanent increase to baseline total medical spending in this region.
[184] Professional fees are payments assessed to cover the cost of the health care provider rendering the services.
[185] 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.

Section IV.A.2 above,[186] and would thus increase total medical spending in northeastern Massachusetts.

The applicable facility fee will also likely increase. First, Partners could seek higher facility fees—even potentially the fees applicable to the main MGH campus—since these sites will be licensed through MGH.[187] Even if Partners seeks only to apply the level of facility fees that often apply to its community hospitals and MGH outpatient facilities, for most payers, those rates are still higher than the facility rates that currently apply to Hallmark-LMH and Hallmark Stoneham.[188] Second, some of the major payers have raised concerns that, where there is a change in licensure as proposed here, they would not necessarily be able to identify the location at which services are rendered if the licensed entity bills for services at multiple sites, making monitoring of any change in facility fees challenging.[189] Finally, the contract terms governing the rates applicable to Partners' outpatient sites are up for renegotiation in late 2014 and 2015 for the three major payers. Any change to the contract terms allowing services rendered at these facilities to be reimbursed under higher fee schedules, whether achieved through increased bargaining leverage or the exercise of existing bargaining leverage as discussed in Section IV.A.1, would further increase the level of total medical spending in northeastern Massachusetts that would likely become the new baseline level of spending in this region.

5. <u>At Current Prices, Anticipated Changes in Referral Patterns are Unlikely to Result in Significant Savings; if Partners Seeks Rate Increases for Hallmark, Changes in Referral Patterns will Likely Increase Total Medical Spending.</u>

In addition to changes in rates of reimbursement (unit price), changes in care referral patterns or use of differently priced providers (provider mix) also impact total medical spending. The parties have estimated cost savings of between $11.8 million and $24.7 million per year from intended changes in referral patterns ($1.9 to $4.7 million for inpatient care and $9.9 to $20 million for outpatient care). The parties base this estimate on the assumption that 10% to 25% of inpatient volume and 25% to 50% of outpatient volume from patients living in Hallmark's service area, but who were treated at MGH for given services, would be redirected from MGH to Hallmark as a result of the transaction.[190] This section examines changes in care referral patterns

[186] *See supra* note 83, describing the differences in "AMC" versus community "integrated" and "affiliated" rates. Because we do not know the proportion of services that would be rendered by MGH-affiliated physicians, we are unable to estimate an impact on total medical spending. However, we note that the AMC rates are up to 4.2% higher than the community "integrated" rates for the top three commercial payers, and 20-25% higher than Hallmark's current "affiliated" rates for these payers.

[187] A major payer has confirmed that the main MGH campus rates currently apply to at least one MGH-licensed facility outside of Boston.

[188] For one major payer, it appears that Hallmark's current rates at its Stoneham facilities are slightly higher than rates at some of the MGH outpatient facilities outside of Boston. Overall, however, we anticipate that changes in facility fees will be cost increasing as outpatient services generally move from being billed at lower Hallmark rates to higher Partners rates. *See supra* Section III.A.3.

[189] We note that effective payer monitoring of billing practices, including developing the capacity to identify location of service delivery, is critical to ensure that changes in billing practices do not inappropriately increase total medical spending for consumers.

[190] Specifically, Partners expects redirection of secondary cases in the following service lines: obstetrics and gynecology, orthopedics, cardiology, oncology, and digestive health. The parties have confirmed that their

and finds that, contrary to the parties' claims, overall redirection of care to Hallmark following the transaction is much more likely to come from lower-priced competitors than from other Partners providers.[191]

a. *Inpatient Services*

We applied econometric modeling to hospital discharge data to empirically examine the parties' claim that Partners' acquisition of Hallmark will lower spending by leading to a net decrease in inpatient care at MGH, which is redirected back to the community.[192] Focusing on those cases that could feasibly and appropriately be redirected to community hospitals (i.e., secondary, non-emergency cases), we measured how often patients receive such care at Partners and non-Partners hospitals, controlling for distance and demographics. This allowed us to measure any differences in the care referral patterns associated with Partners versus non-Partners hospitals (a so-called "Partners effect").[193]

We found consistent and statistically significant results indicating that changes in referral patterns will be more complex than a one-way redirection of care from Partners AMCs to its community hospitals. Instead of care redirection exclusively from higher-priced Partners AMCs, community hospitals owned by Partners receive volume from lower-priced competitors as well,

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redirection estimates are goals identified by their clinicians, and do not reflect data from Partners' experience acquiring or establishing community-based provider sites. The parties also plan to direct some lower acuity patients currently seen in the MGH emergency department to new urgent care centers the parties will develop in their joint service area. Though the parties' projected savings from this effort is only a small portion of their estimated care redirection savings, we recognize the potential for urgent care centers to reduce unnecessary emergency department use and to promote delivery of non-emergent care in more cost-effective settings.

[191] This finding is consistent with payer observations that notwithstanding Partners' claims of lowered spending from redirecting care from MGH and BWH to Mass General/North Shore Center for Outpatient Care, the Mass General Cancer Center at Emerson Hospital, and the Vernon Cancer Center at Newton-Wellesley Hospital, they have not seen net reductions in volume at MGH and BWH or shifts in utilization to Partners community sites that resulted in lowered spending.

[192] We used discharge data and a logit share model to study the determinants of the odds that commercially insured patients in individual eastern Massachusetts zip codes, for which the closest hospital is not an AMC, choose to go to their closest hospital, instead of another community hospital, a non-Boston AMC, or a Boston AMC, for their secondary non-emergency room care. The model controls for zip code fixed effects to account for all zip code-specific factors that can affect patient choice, including demographics, distance from hospitals, and access to public transportation. The model also controls for whether the chosen hospital is a Partners hospital and the impact of distance, in drive time, between the patient zip code and the closest hospital, the closest Partners hospital, the closest Boston AMC, and the five closest other community hospitals, on the odds that the patients choose the different types of hospitals, relative to their closest hospital. This econometric model estimates the impact of being a "Partners" hospital on the odds that patients from individual zip codes chose different types of hospitals (e.g., a Boston AMC) relative to their closest hospital. Using these estimates, we analyze whether and from where inpatient care would be redirected to Hallmark if Partners were to acquire Hallmark and operate it like it does its other community hospitals. We also calculated confidence intervals around our predictions.

[193] This model is consistent with the parties' claims that patient preferences inform care referral patterns and that Partners' investments in community hospitals, sharing of programs with those institutions, and enhancement of those institutions' offerings, as Partners has done with its community hospitals, will cause patients to more frequently choose their local hospitals over Partners' downtown AMCs. By analyzing use patterns around existing Partners community hospitals like Faulkner, Newton-Wellesley, and NSMC, this model takes into account all of the reasons why a patient might choose a Partners hospital over a non-Partners hospital or vice versa (e.g., brand, quality, investments, service offerings).

such as other community hospitals and non-Partners AMCs. Our analysis shows that Hallmark is likely to increase its inpatient volume as a Partners hospital,[194] but that this new volume is more likely to come from net volume reductions at non-Partners hospitals than from any net change in volume at the Partners AMCs.[195] Specifically, we estimate that of the net volume increase at Hallmark, about 60% will likely derive from net volume reductions at non-Partners community hospitals and about 40% from net volume reductions at non-Partners AMCs, with no statistically significant change in net volume of patients using Partners AMCs and community hospitals.

Hospital Category	Where Additional Hallmark Discharges Are Likely to Come From (Net Contribution by Hospital Category)
Partners AMCs	0%[196]
Non-Partners AMCs	41%
Partners Community Hospitals	0%[197]
Non-Partners Community Hospitals	59%

By failing to take into account any volume shifts to Hallmark from non-Partners competitors as a result of this transaction, the parties significantly overstate the potential for savings as a result of changes in site of care. Instead, because of the net volume of care anticipated to shift away from lower-priced competitors, we expect that, overall, changes in inpatient site of care are much more likely to be cost neutral. Moreover, if Hallmark's prices increase to those of Partners' owned community hospitals, as discussed in the previous section, overall changes in site of care are anticipated to *increase* spending for the three major payers by approximately $4 million per year.

In addition to focusing exclusively on redirection from MGH to Hallmark, as opposed to all likely shifts in site of care as a result of this transaction, another questionable assumption underlying the parties' estimates of potential care referral savings is the scope of the population at question in this transaction. The parties posit that this transaction will result in 10% to 25% of all Hallmark service area patients who receive care at MGH being redirected to Hallmark, regardless of whether such patients are seen by Hallmark PCPs or other practitioners who could effectuate the care redirection. Thus, even if we accept the parties' assumption that patients would only shift from MGH to Hallmark, in applying the parties' estimated levels of care redirection to the more realistic population of patients of HHPHO PCPs, we find the scope of

[194] We estimate that Hallmark will receive an additional 500 to 1,400 secondary, non-emergency discharges as a Partners hospital. This model treats the Hallmark hospitals consistent with the parties' claims that patients who would have received services at Hallmark-LMH will now receive such services at Hallmark-MWH, and thus models a net change to Hallmark as a whole.
[195] This model accounts for the fact that the parties may redirect cases from MGH and other Partners hospitals to Hallmark. However, it indicates that any such redirection is likely to be offset by other changes in site of care (e.g., new volume at MGH from competitors) that would negate any net savings from care redirection.
[196] We found no statistically significant *net* change in volume at Partners hospitals. As noted above, Partners hospitals could redirect care to Hallmark; however, we found that any such redirection is likely to be offset by other changes in site of care (e.g., new volume at MGH from competitors). *See supra* note 195.
[197] *See supra* notes 195 and 196.

potential savings for the three major payers would be on the order of $280K to $700K – significantly less than the parties' projections of $1.9 million to $4.7 million.[198] The difference in this HPC savings estimate and the parties' estimates is driven by three principal factors. First, we modeled shifts in inpatient care for a somewhat smaller population – patients of HHPHO physicians, rather than all patients living in Hallmark's service area, as we believe the patients associated with Hallmark physicians are those the parties can most realistically be expected to influence. Second, we focused on commercial patients. The parties posit that comparable levels of savings would be achieved for every redirected patient; however, given that significant price variation is principally a feature of the commercial market, we do not anticipate that shifts in the site of care for government payer patients will result in the same degree of savings as shifts for commercially insured patients. Third, we gave the parties credit for potential redirection of all inpatient service lines, rather than the subset of service lines focused upon by the parties. However, as discussed above, we find that even these more limited savings would likely not be realized when all shifts in inpatient site of care, including shifts from non-Partners hospitals to Hallmark, are appropriately taken into account.

b. Outpatient Services

The parties state that this transaction will result in redirection of outpatient services from MGH to Hallmark amounting to approximately $9.9 million to $20 million in annual savings. We have concerns about the reliability of this estimate, both because the parties only consider service shifts in one direction (from MGH to Hallmark), and because the parties' similar approach to estimating inpatient savings is not substantiated by empirical analysis of Partners' hospitals and referral practices. While we do not have detailed outpatient data on which to conduct econometric modeling of shifts in outpatient care, if patients exhibit similar preferences for hospitals for outpatient care as they do for inpatient care, we found that any savings from net changes in outpatient site of care would be modest.

The parties' estimate of outpatient savings is also questionable in light of HHPHO's current care referral patterns compared to those of the Newton-Wellesley and North Shore physicians. We reviewed site of care data from the three largest commercial payers to examine the care referral patterns associated with HHPHO, Newton-Wellesley, and North Shore physicians. We examined how often HHPHO patients receive outpatient care at Hallmark hospitals versus other area hospitals and how often they receive care at BWH and MGH versus the other general acute care AMCs in Boston (Beth Israel Deaconess Medical Center, Boston Medical Center, and Tufts MC). For Newton-Wellesley and NSMC patients, we examined how often they use Newton-Wellesley Hospital and NSMC versus other area hospitals, and how often they use BWH and MGH versus competitor AMCs.

We found that HHPHO's existing care referral patterns look very similar to those of the PCHI physicians at Newton-Wellesley and NSMC. Indeed, these data show that HHPHO patients use Hallmark hospitals for outpatient care more frequently than the patients of Newton-Wellesley and North Shore physicians use Newton-Wellesley Hospital and NSMC. These data

[198] Moreover, as discussed in the previous section, if Hallmark's rates were to increase to those of NSMC, the scope of such savings would further decrease to $184K to $459K for the three major payers.

also show that HHPHO patients use the Partners AMCs no more frequently than Newton-Wellesley and NSMC patients. The fact that HHPHO physicians already refer to their "home" hospital more frequently than other Partners physicians refer to their "home" hospitals, and refer to Partners AMCs no more frequently than the physicians at Newton-Wellesley and North Shore, calls into question the parties claim that a substantial net shift in site of care from Partners AMCs to Hallmark is likely to occur as a result of this transaction.

As with inpatient services, we also modeled the parties' claim that 25% to 50% of MGH's outpatient volume from the Hallmark service area would shift to Hallmark, but that no other care delivery patterns would change (i.e., the parties would not experience any shifts in care vis-à-vis non-Partners hospitals). As with inpatient services, we applied the parties' assumptions to a more realistic population, the patients of Hallmark PCPs, since those are the patients the parties are most likely able to impact. We found that if the parties redirected 25% to 50% of outpatient care for this population from MGH to Hallmark, the savings for the three major payers would be on the order of $900K to $1.8 million.[199] If, as discussed in the previous section, Hallmark's rates were to increase to those of NSMC, potential savings would decrease to $870K to $1.7 million.

Finally, a significant proportion of the savings claimed by the parties is based on redirection of outpatient oncology services ($7.4 million to $14.9 million per year). If, as discussed above, the parties bill the services of the Stoneham Cancer Center at increased facility prices, or if a significant proportion of these services are provided by MGH physicians at higher academic physician rates, even a substantial redirection of outpatient cancer care to the community would not necessarily result in significant cost savings.[200]

c. New Physicians the Parties Seek to Recruit

As discussed in Section II.C, the proposed transaction includes plans to recruit 17 replacement and 25 net new physicians to Hallmark to support PHM. Consistent with information provided by the parties, we expect that a number of patients currently receiving care from other local providers will become patients of these new PCHI/Hallmark PCPs. We also expect the care referral patterns of these PCHI/Hallmark PCPs to be in line with current PCHI/Hallmark practices (higher use of Hallmark and Partners hospitals).

The table below shows, for one major payer, the average price of hospital services for patients of HHPHO compared to the patients of other large physician groups serving the northeastern Massachusetts region.[201] The table shows how the prices for hospital services vary significantly based on the system with which the patient's PCP is affiliated. Among these

[199] *See supra* Section IV.A.5.a regarding the reasons why this HPC estimate differs from the parties' estimate.
[200] Whether there will be net changes in site of cancer care that drive overall savings also depends on whether Partners intends a net reduction of cancer volume and capacity at MGH, or if freed capacity from redirection of care to Hallmark is likely to be filled with patients from lower-priced competitors. The probability that the Partners system will not experience a net reduction in volume vis-à-vis competitors is consistent with our modeling of inpatient site of care patterns, as well as the observations of some payers as referenced in note 191, *supra.*
[201] We excluded other PCHI groups for this analysis as it appears unlikely that Partners would consider recruitment of other PCHI PCPs as "net new" physician recruitment.

groups, HHPHO doctors refer their patients to one of the most expensive mixes of hospitals for inpatient and outpatient care.

Hospital Referral Prices for Area Physician Groups (One Major Commercial Payer)

	Group 1	Group 2	Group 3	Group 4	Group 5	Hallmark	North Shore
Average Price of IP Referral Hospitals	1.094	1.095	1.096	1.173	1.200	**1.181**	**1.191**
Average Price of OP Referral Hospitals	1.048	0.913	1.006	1.067	1.093	**1.086**	**1.160**

If the patients cared for by the parties' newly recruited PCPs come from area physician groups, listed above, then a shift in their care to use of HHPHO's generally higher priced mix of providers will increase total medical spending.[202] For patients associated with 25 new PCPs, the three largest payers would pay an additional approximately $1.3M dollars each year. If Hallmark's prices increased to the level of NSMC's, and the new physicians adopted referral patterns more in line with those of North Shore physicians (i.e., the new physicians referred to a mix of hospitals priced as shown in the "North Shore" column in the chart above), the three largest payers would pay an additional $3.8M dollars each year. Given that Partners has stated they will recruit these PCPs over several years, the cost impact of this anticipated shift in provider mix will be experienced over time.

6. <u>The Parties' PHM Strategies Have the Potential to Reduce Unnecessary Utilization and Wasteful Spending; However, the Scope of Potential Savings Is Likely Smaller than Projected by the Parties.</u>

The parties have provided information on several initiatives intended to "improve the availability and accessibility of care, enhance community-based clinical offerings, and yield economic and operational efficiencies."[203] These include:

- The enhancement, reconfiguration, and expansion of PCP services contemplated in the parties' PCP Initiative;[204]

[202] Note, however, that Group 5 in this chart currently refers to a higher priced mix of hospitals than Hallmark. Shifts in care referral patterns for the patients of this group to the care referral patterns of Hallmark physicians would be anticipated to decrease total medical spending. Our projected dollar impact to total medical spending due to shifts in care referral patterns takes into account anticipated shifts both from groups with a lower priced mix of referral hospitals and from groups with a higher priced mix of referral hospitals.
[203] *See* Affiliation Agreement, *supra* note 7, at Art. 1.
[204] *See id*. at Exh. 4.4.1-B.

- Directing appropriate patient care to urgent care centers as opposed to hospital emergency departments, and expanding urgent care availability at Hallmark-LMH, in Reading, and in the Burlington/Lexington area;
- Expanding the use of remote care services, including telehealth tools, virtual visits, and patient portals, as alternatives to office or hospital visits; and
- Expanding outpatient availability of preventive health programs and support for patients with a variety of chronic conditions, centered at the reorganized LMH campus.[205]

The parties have projected that, taken together, these strategies will decrease inpatient utilization, resulting in average gross savings of about $10.9 million per year over five years.

The HPC is committed to advancing the benefits of care delivery transformation in the Commonwealth, and recognizes the potential for PHM to drive efficiencies and facilitate high-quality care delivery. One way we are committed to advancing this transformative potential is by requiring that providers proposing to undertake significant changes provide measurable indicators of how those changes are likely to result in improved performance. Successful care delivery improvement initiatives, including those implemented by Partners in the past, have been based on data-driven interventions targeting well-defined populations.[206] While the parties have provided additional information about their proposed PHM approaches in connection with this transaction, we have several methodological and substantive questions:

- Novel care delivery models are most likely to be successful where such programs are based on concrete implementation plans that include measurable goals and other evidence-based benchmarks. Here, the parties' proposals are overly general and lack the quantifiable implementation and measurement plans that would better support projections of success.
- Projected savings should also be based on reasonable assumptions. Here, the parties rely on some questionable assumptions in projecting savings; by adjusting these assumptions using more relevant data, we find a smaller scale of potential savings.
- Where novel programs are proposed, examining performance in similar programs can be instructive in assessing the scope of potential savings. Here, consistent with the result when we adjust the parties' questionable assumptions, the parties' projections are also high when compared to their performance in recent care delivery initiatives.

The remainder of this section addresses these questions in turn.

[205] *See id*. at Exh. 4.4.1-A, § 2(a).
[206] *See, e.g.*, Douglas McCarthy et al., *Geisinger Health System: Achieving the Potential of System Integration Through Innovation, Leadership, Measurement, and Incentives*, COMMONWEALTH FUND 9 (June 2009), *available at* http://www.commonwealthfund.org/~/media/Files/Publications/Case%20Study/2009/Jun/McCarthy_Geisinger_case_study_624_update.pdf (discussing the successful care model redesign process at Geisinger Health System as being based on identifying best practices, setting specific targets for improvement, defining methods to measure and support progress, and proving new models in smaller pilot populations before expanding them).

a. Novel care delivery models are most likely to be successful where such programs are based on concrete implementation plans that include measurable goals and other evidence-based benchmarks. Here, the parties' proposals are overly general and lack the quantifiable implementation and measurement plans that would better support projections of success.

The parties have identified several potential PHM strategies they plan to implement. The parties have provided some details about these plans: they identify the number of doctors they plan to recruit through the PCP Initiative, as well as those communities in which these doctors would practice.[207] They also identify certain chronic disease populations and outline some possible interventions to meet community needs. However, the parties' plans do not include certain elements that we would expect to see when reviewing a proposed care delivery initiative. For example, while we would expect a projection of how many clinical and non-clinical staff would be needed to support each proposed intervention, the parties have provided no estimates beyond the number of overall PCPs they plan to recruit. While we would expect a projection of the impact of each intervention on volume and costs, the parties have not provided these detailed projections.[208] They provide few or no details concerning the expected scope or target population for a number of programs, such as their proposed remote care services. The parties have stated that in many cases, plans for interventions will develop as the programs are deployed and community needs are assessed. We agree that careful planning is necessary, and that modifying new care delivery models as they progress is often advisable. Here, however, the absence of key elements in the parties' plans, coupled with lack of detail as to how effective modifications to these plans would be achieved, raise questions as to the reliability of the parties' current savings estimates.

b. Projected savings must also be based on reasonable assumptions. Here, the parties rely on some questionable assumptions in projecting savings; by adjusting these assumptions using more relevant data, we find a smaller scale of potential savings.

We attempted to verify the parties' aggregate savings estimate[209] by comparing the assumptions underlying the parties' estimate to the best available data. The parties support their projected savings with estimates of the population they expect the PHM initiatives to serve in the aggregate, the reduction in admissions they expect to achieve, the amount they expect each avoided admission would have cost, and the amount they expect to spend on implementing and maintaining the programs.[210] However, several of the assumptions underlying these projections

[207] *See* Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-B.

[208] The parties have provided only total figures for anticipated reductions in admissions and resulting savings, rather than projections specific to individual interventions. They have also indicated that some investments would support the proposed reforms, but it is unclear how much funding would be necessary to implement any given initiative. *See* Affiliation Agreement, *supra* note 7, at Exh. 4.4.3.

[209] As discussed in note 208, *supra*, the parties' model does not build up a total savings estimate by adding the potential savings from individual interventions, but instead estimates an aggregate savings across all of the parties' contemplated PHM strategies.

[210] Although the parties' model provides these projections as lump sums, it does provide separate projections for reductions in admissions and costs for Hallmark's commercial and Medicare populations.

raise methodological concerns, and correcting for these flaws shows a significantly smaller potential for savings:

i. Population Served by Hallmark

The parties estimate that Hallmark will serve 50% of all people with commercial insurance or Medicare in its service area.[211] However, PCHI physicians, including Hallmark, serve an estimated 35% of commercial discharges in the relevant service area.[212] We use this lower percentage as our estimate of the commercial population the PHM initiatives will reach, since the parties can reasonably reduce admissions only among patients they serve.[213]

ii. Benchmark Rates of Admissions

The parties estimate admissions reductions by comparing the current admission rates in Hallmark's service area to the national rate of admission among Medicare patients and to the rate of admission among the commercially insured population served by a leader in care delivery redesign located in another state. They assume that their PHM initiatives will reduce the rate of admissions in Hallmark's service area over five years by half of the difference between the current admissions rates and these benchmark rates.[214] We apply the rate of admissions for Medicare beneficiaries in an area more closely-linked to the parties' own geography, eastern Massachusetts, as a more relevant benchmark for admissions reduction.[215]

iii. Program Costs

We appreciate that the parties estimate the costs of implementing and maintaining the proposed PHM initiatives, acknowledging that these costs may erode net program savings.

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[211] The parties based their population and admissions projections on their definition of Hallmark's combined PSA and SSA. *See supra* note 162.

[212] The 35% figure presented here is the parties' share of the market for PCP services in those zip codes from which HHPHO draws 90% of its primary care visits for the largest commercial payer. *See supra* note 71. The parties also use a service area that accounts for 90% of their volume in projecting the impacts of their PHM programs; the 75% area used in Section III.A.2.b, *supra*, is more appropriate when examining market share for the purpose of assessing potential market leverage.

[213] As noted in Section IV.A.1.b, the addition of 25 new PCPs through the PCP initiative could increase PCHI's market share in its service area. However, it is unclear what the scope of this increase would be, or to what extent it would alter the scope of Hallmark's service area. We therefore are unable to model the impact of these additional physicians on the population served by the parties.

[214] Reducing the rate of admissions by 50% of the difference between actual and benchmark rates, as defined by the parties, would result in a reduction of 3.8% of commercial admissions and 8.8% of Medicare admissions, for an overall reduction of 6.4% of admissions in Hallmark's service area. The parties do not provide any methodological support for their projected rate of reduction and do not clarify how many admissions they expect to avoid for any specific intervention or patient group. We adopt the parties' assumed rate of admissions reduction in our own projection, but note that there is no evidence from past programs that supports this assumption, as explained in Section IV.A.6.c, *infra*.

[215] *See Hospital Discharges per 1,000 Medicare Enrollees*, DARTMOUTH ATLAS OF HEALTH CARE, http://www.dartmouthatlas.org/data/table.aspx?ind=66&tf=23&ch=35,125&loc=23,85,316,355&loct=3&fmt=91 (last visited May 11, 2014) (showing a rate of Medicare admissions per thousand beneficiaries in eastern Massachusetts of 336.8).

However, without information to evaluate the basis for the parties' estimate (e.g., the estimate is not based on actual costs of implementing similar PHM initiatives, or on intervention-specific projections[216]), we focus on presenting gross savings figures in our analysis.[217]

iv. HPC's Estimate

Using the parties' estimates as a baseline, we adjusted the foregoing assumptions to reflect the best available data. For other assumptions where supporting data were unavailable, such as the potential rate of admissions reduction, we retained the parties' assumptions. With the limited adjustments outlined above, we estimate a potential for gross annual savings of up to $5.4 million. While we cannot correct for all of the methodological concerns we have identified in the parties' projections, we find that savings from the PHM proposals are likely no more than half of what the parties have projected, and are unlikely to outweigh the anticipated costs of the transaction.

c. Where novel programs are proposed, examining performance in similar programs can be instructive in assessing the scope of potential savings. Here, consistent with the result when we adjust the parties' questionable assumptions, the parties' projections are also high when compared to their performance in recent care delivery initiatives.

In light of the unresolved methodological concerns identified above, we compared the parties' projected reductions in costs and utilization to recent successful care delivery improvement programs. The impact of innovative care delivery strategies may exceed that of past programs; however, when the methodology for projecting the impact of a novel program raises questions, examples of actual performance may provide insight into the scope of potential success. We therefore analyze the parties' projections for utilization and cost reductions in light of recent initiatives undertaken by Partners and other providers.

The parties project the most significant reductions in cost and utilization from the proposed care delivery reforms will be among Medicare beneficiaries in Hallmark's service area. Partners has participated in several pilot programs involving Medicare patients that could serve as models for care management in Hallmark's service area. In the CMS Care Management for High Cost Beneficiaries (CMHCB) demonstration, Partners providers (first MGH, followed by BWH and NSMC) intensively managed the care of certain high-risk Medicare beneficiaries with the goal of reducing care costs (primarily by preventing admissions and readmissions) while improving clinical outcomes. For most cohorts, Partners achieved some meaningful level of net savings, particularly at MGH, though spending on the program outpaced savings at NSMC.[218] If

[216] The parties estimate their costs as a percentage of projected savings. This method of estimating costs will always produce net savings, an approach that is inconsistent with known PHM experience, discussed in Section IV.A.6.c, *infra*, in which program costs can equal or exceed any savings.

[217] Investments in PHM initiatives can be valuable even if they do not produce net savings if, for example, they increase quality of care for patients or access to services. These topics are addressed in Sections IV.B and IV.C, *infra*.

[218] See PHS-SSH-HARBOR CMIR FINAL REPORT, *supra* note 23, at Section IV.B.1.

we assume that Hallmark has a similar high-risk beneficiary population as MGH,[219] and that Hallmark would be able to manage that population as effectively as the highest-performing MGH cohort, annual net savings of up to $4.4 million could be possible.[220] Alternatively, if Hallmark performed like NSMC in managing its cohort, annual spending could *increase* by as much as $1.1 million.[221] Yet, these savings levels assume that the parties could achieve an equivalent rate of success as interventions focused on smaller populations of high-risk Medicare beneficiaries,[222] which were selected for intensive management because they are relatively sick and therefore costly.[223] It is unlikely that the rate of success achieved in these focused populations would translate into the general population the parties plan to serve with their PHM initiatives.[224] The alternate analysis we present here,[225] which examines a population of patients with the greatest potential for care management savings, is consistent with our above findings that the parties' projections are likely overstated.

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[219] This assumption that Hallmark, a community hospital, draws as large a high-risk beneficiary population as MGH, a tertiary/quaternary teaching hospital, is questionable. *See id.* at Exh. B-1, Section I.B.2.b.

[220] This figure nets out the estimated costs of operating the programs (see note 218, *supra*), but not the costs of initial infrastructure investments. Partners invested significantly in the CMHCB demonstration, including a pilot study, several years of planning, personnel, and logistics. We cannot account for the cost of these supporting investments because they are not known.

[221] CMS paid Partners certain care management fees to help offset the operating costs of managing the demonstration cohorts. Where the medical spend of the intervention cohort combined with the care management fees exceeded the medical spend of the control groups, the intervention was characterized as resulting in a net increase in spending, or a "loss." Although CMS would not be providing management fees in support of the PHM initiatives proposed in this transaction, the experience of NSMC in the CMHCB demonstration indicates that it is possible that Partners' costs of operating the new programs could outweigh any savings.

[222] The three MGH refresh cohorts included a total of approximately 2,300 beneficiaries. *See* Jerry Cromwell & Nancy McCall et al., RTI INTERNATIONAL, *Evaluation of Medicare Care Management for High-Cost Beneficiaries (CMHCB) Demonstration: Final Reconciliation Draft Report*, CTR. FOR MEDICARE & MEDICAID SERVS. 8 (June 4, 2013).

[223] Partners successfully reduced inpatient utilization among its high cost beneficiary demonstration population, with the most successful cohort achieving a reduction of approximately 24% in the "refresh" cohort at MGH. *See* Nancy McCall et al., RTI INTERNATIONAL, *Evaluation of Medicare Care Management for High-Cost Beneficiaries (CMHCB) Demonstration: Massachusetts General Hospital and Massachusetts General Physician Organization (MGH)*, CTR. FOR MEDICARE & MEDICAID SERVS. 2 (Sept. 2010). A few other providers have also achieved large utilization reductions by focusing on high-risk Medicare beneficiaries. For example, Mercy Medical Center North Iowa, the highest performer in a group of providers participating in a coordinated care management demonstration, reduced annualized hospitalizations by 11.8% in 2007 in its demonstration cohort. This reduction did not result in statistically significant savings, after accounting for program fees. *See* JENNIFER SCHORE, ET AL., MATHEMATICA POLICY RESEARCH, INC., FOURTH REPORT TO CONGRESS ON THE EVALUATION OF THE MEDICARE COORDINATED CARE DEMONSTRATION 7 – 8 (Mar. 2011).

[224] Partners' performance in its first year of performance in CMS's Pioneer ACO program, which encompassed 52,000 Medicare beneficiaries, is encouraging, but data are incomplete. In its first year, 2012, Partners reported early returns for the management of 52,000 Medicare patients, decreasing the rate of growth of their health care costs by approximately 2.4% as compared to the Medicare reference trend. Utilization data for 2012 are not yet available, but it is the HPC's understanding that none of the providers participating in the Pioneer ACO has yet achieved the level of reduction in admissions projected by the parties. For the commercially-insured population, utilization rates for PCHI's risk populations under BCBS' Alternative Quality Contract are lower for other PCHI groups than for HHPHO; this may indicate the potential for improvement if HHPHO adopts similar care management approaches, or may simply reflect confounding factors like differences in population demographics.

[225] This alternate analysis does not raise any new sources of savings not captured in our previous analysis. The gross savings estimates presented in Section IV.A.6.b include consideration of any savings from Hallmark's Medicare population.

In sum, the parties have proposed a series of PHM initiatives that they project will reduce inpatient utilization and result in significant cost savings. We recognize the potential for PHM initiatives to drive efficiencies and facilitate high-quality care delivery, and we commend the parties for pursuing these approaches. We similarly recognize that novel care delivery models such as those proposed here should include measurable goals and other evidence-based benchmarks specific to each intervention, to maximize the likelihood that significant investments in these models will result in improved performance. Here, the absence of key elements in the parties' plans, coupled with lack of detail as to how effective modifications to these plans would be achieved, raise questions as to the reliability of the parties' current projections. We find that potential gross savings from the proposed PHM interventions would likely be no more than half of what the parties project, and are unlikely to offset the projected costs of this transaction.

7. The Proposed Consolidations May Yield Operating Efficiencies for the Parties, but the Scope of Potential Efficiencies is Uncertain and Is Likely Outweighed by the Parties' Proposed Investments.

As detailed in Section II, the parties expect to consolidate services provided by Hallmark and NSMC. In this section, we assess the parties' anticipated operating efficiencies and investments:

- The parties claim that consolidation of certain business administrative activities will result in annual overhead savings of $1 - $2 million.
- The parties claim that conversion of Hallmark-LMH to a short-stay facility and NSMC-Union into a behavioral health and primary care center will result in annual overhead savings totaling about $24 to $28 million.
- The parties have proposed approximately $595 million in investments in their facilities, technology, and programs pursuant to the proposed transaction.

a. Administrative efficiencies

The parties have provided the HPC with an assessment of administrative and business efficiencies they expect to realize as a result of the transaction. These include reductions in duplicative administrative staff, as well as joint contracting and purchasing efficiencies. While the HPC cannot substantiate the exact amount of savings, the details provided suggest the parties could reasonably meet their estimate of reducing operating expenses by about $1 – $2 million per year.

b. Conversion of Hallmark-LMH and NSMC-Union

The parties have provided the HPC with projections of operating costs and avoidable expenses associated with the proposed conversions of Hallmark-LMH and NSMC-Union. The parties project that converting Hallmark-LMH into a short stay facility will reduce overhead expenses by about $11 - $15 million annually, and converting NSMC-Salem into a center for behavioral health and primary care will reduce overhead expenses by approximately $13 million annually. While the parties have not provided detailed information to support these projections

(and the figures may be overstated[226]), it is generally reasonable that the parties would realize some efficiencies by consolidating their hospital capacity.

The projected operating efficiencies discussed in this section would not have a direct impact on total medical spending in northeastern Massachusetts since they would accrue directly to the parties. The same is true of the costs of the investments contemplated as part of the transaction.[227] The parties state that it may be possible to forego future rate increases as a result of the projected efficiencies; however, their proposed capital spending is approximately twenty times larger than the efficiencies.[228] Some payers have also observed that any operating efficiencies achieved by Partners in the past have not translated into lower rate increases as compared to other providers. We therefore do not attribute an impact to total medical spending from either these projected efficiencies or the proposed investments.

In sum, we found that this transaction will reinforce Partners' position as the provider with the highest share of inpatient and PCP services in its northeastern Massachusetts service areas, and will strengthen the resulting system's ability and incentives to negotiate price increases and other favorable contract terms for Hallmark. As the Hallmark physicians become more tightly integrated with Partners, anticipated changes in physician prices will increase total medical spending in northeastern Massachusetts by about $6.8 million for the three largest commercial payers. If Partners seeks parity between Hallmark's rates and those at its other greater Boston community hospitals, these changes in hospital rates will increase total medical spending in northeastern Massachusetts by an additional $9.3 million for these payers. Facility price changes and staffing by MGH physicians at the facilities proposed to be licensed under MGH are likely to further increase total medical spending in northeastern Massachusetts, with changes in site of care anticipated to be cost neutral or cost increasing rather than cost saving (up to $4 million in increased spending for existing patients, and up to $3.8 million in increased spending for anticipated new patients). While the parties have outlined a set of PHM initiatives that have the potential to reduce total medical spending, the scope of those potential savings is unlikely to offset the increased costs described above.

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[226] For instance, it is not clear whether the parties' projections account for the operating costs of new facilities and services at the campuses. As one example, the parties contemplate building a new medical office building and garage at Hallmark LMH, and expect to spend $30 - $40 million on refitting NSMC-Union to become a behavioral health and primary care center. Affiliation Agreement, *supra* note 7, at Exh. 4.4.3.

[227] *See* Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-A, Exh. 4.4.3 ($370 million for the PCP Initiative, the IT Initiative, improvements at Hallmark's facilities, and investments in the MGH Cancer Center, plus $30 - $40 million to convert NSMC-Union and $190 million to renovate and expand NSMC-Salem).

[228] The parties claim that the amount of investment contemplated in the transaction is only a small amount more than what the parties would spend independently to maintain their existing campuses absent the transaction. Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-A, p. 2. They claim that certain improvements, including new Health Information Technology (HIT) systems, would still be necessary, and would cost as much or significantly more for Hallmark to implement independently. While some improvements at Hallmark would still be necessary absent the transaction, the HPC cannot verify whether Hallmark's independent investments would be similar to those proposed in the transaction. However, even assuming that Hallmark would make independent investments similar to those contemplated, Partners has not indicated that it would reorganize the NSMC campuses absent the transaction. The projected cost of reorganization and rationalization of services at these facilities is $220 - $230 million. *See supra*, note 227. This figure is significant, and far exceeds the parties' projected overhead efficiencies.

While we anticipate that this transaction will increase health care spending and premiums for employers and consumers, the parties have consistently advocated for the transaction on the basis that it will lower total medical spending. Given this perspective, the parties should be prepared to commit to a lower level of total medical spending across all books of business for the operations and providers described in their transaction materials, whom they state will achieve this lowered spending. The Commonwealth and other stakeholders should consider how such commitments, including concrete benchmarks and penalties for failure to meet targets, might appropriately be monitored and enforced through oversight responsibilities envisioned in Chapter 224, or other mechanisms.

B. QUALITY IMPACT

The parties have stated that the proposed transaction will improve the quality of patient care and that one of their goals is enhancing opportunities for jointly monitoring and improving care quality.[229] They describe that they intend to "determine how best to assist each other in implementing systems for measuring and improving the quality and value of health care services to be delivered by the parties in their reconfigured inpatient, outpatient and community settings."[230] We examined whether the parties' historic performance on quality measures suggests areas in which one party has knowledge and experience that could drive improvements by the other, and the parties' plans to facilitate this exchange of best practices.[231]

As discussed in Section III.B.1, differences in the parties' performance across quality measures indicate there should be opportunities for Hallmark to improve its quality through the adoption of some Partners quality monitoring and improvement approaches. The parties have outlined some plans that should facilitate this process. For example, the Rationalization Initiative includes plans for MGH and Hallmark to form joint teams that will manage and collaborate on certain service lines at the reorganized Hallmark and NSMC facilities.[232] This includes clinical integration of behavioral health services at MGH with those at the reorganized NSMC-Union facility, which has the potential to increase the quality of those services. While the parties have not specified how this joint management structure will result in quality improvement, it is reasonable to expect it will facilitate the sharing of quality-improving best practices, particularly in areas in which Partners excels.[233]

The parties have also described PHM initiatives they intend to deploy to serve residents in their joint service areas in northeastern Massachusetts. As discussed in Section IV.A.6, these

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[229] PARTNERS HEALTHCARE SYSTEM, NOTICE OF MATERIAL CHANGE TO THE HEALTH POLICY COMM'N (Nov. 8, 2013), AS REQUIRED UNDER MASS. GEN. LAWS ch. 6D, § 13 (2012).

[230] Affiliation Agreement, *supra* note 7, at Section 4.6.3.

[231] 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 90.

[232] *See* Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-A. These service lines include obstetrics/gynecology, pediatrics, orthopedics, cardiology, oncology, digestive health, and psychiatry.

[233] For example, as noted in Section III.B.1.b, Partners hospitals have a strong record of providing post-discharge care planning for psychiatric inpatients, and it would be reasonable to expect the parties to promote similar practices at the reorganized hospitals.

plans are founded on increasing primary care availability through the PCP Initiative, integrating behavioral health services into primary care sites, expanding urgent care centers, providing more remote care services, and developing outpatient services tailored to patients with specific chronic conditions.[234] Although the parties did not provide specific quality goals for these initiatives, we recognize the potential for PHM initiatives to facilitate high quality care delivery and commend the parties for pursuing these approaches.

At the same time, the potential positive quality impact of the transaction is colored by the fact that Hallmark has a longstanding clinical and contracting relationship with Partners. Through this relationship, Hallmark has been part of Partners' internal quality tracking programs, pay for performance incentives, and joint risk contracts. Consistent with models in use in other systems, we would expect such programs to have encouraged the sharing of quality and efficiency practices to the mutual benefit of both parties.[235] It is unclear how corporate ownership is instrumental to improving clinical quality in ways the parties' longstanding affiliation has not.[236]

C. ACCESS IMPACT

The proposed transaction includes an array of care delivery reforms, including a significant reconfiguration of service offerings across the regions served by Hallmark and NSMC. The parties have stated that the changes underlying the Program and Facilities Rationalization and Primary Care Initiatives, described in detail in Section II.C, and their expansion of PHM initiatives as discussed in Section IV.A.6 will "evolve current integrated delivery care systems to promote [the] goals . . . of bending the cost curve while improving quality and outcomes."[237] The parties also state that these care delivery reforms will improve access to primary care and other health care services in northeastern Massachusetts.

As Partners and Hallmark seek to rationalize and improve care delivery structures and direct resources to community-based facilities, there is significant potential to improve patient

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[234] *See* Affiliation Agreement, *supra* note 7, at Art. 1, Exh. 4.4.1-A, and Exh. 4.4.1-B.

[235] There are a number of provider models in the Commonwealth that successfully coordinate care delivery and improve quality without corporate ownership. *See* PHS-SSH-HARBOR FINAL CMIR REPORT, *supra* note 23, at Section IV.B.2.b. As an example of an approach that does not require corporate integration, Hallmark's joint risk contracting arrangement with Partners means that Hallmark's quality and efficiency performance impact the payments that Partners receives. We expect this would incentivize Partners to work with Hallmark to improve its quality and efficiency even absent the transaction.

[236] The parties have suggested that the proposed IT Initiative may improve quality, and that these investments would be impossible without corporate integration. However, 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 (2013), *available at* http://www.nejm.org/doi/pdf/10.1056/NEJMp1306268. The Epic IT system used by Partners may be highly interoperable within the Partners system, but it may also create barriers for patients and providers outside of the Partners system who rely on different HIT platforms.

[237] Affiliation Agreement, *supra* note 7, at Art. 1.

access to and engagement with the health care system.[238] In Massachusetts and elsewhere, system reconfigurations such as those contemplated in this transaction may allow community hospitals to better meet the challenges of the evolving health care system. The parties' plan to shift appropriate care from emergency departments to urgent care centers, for example, has the potential to reduce unnecessary emergency department use and to ensure that non-emergent care is delivered in a more appropriate setting.[239]

The structure of any transaction that aims to transform care delivery should reflect consideration of the scope and mix of services currently available, the allocation of resources necessary to support both existing and new proposed services, and the alignment of services with community need. Significant shifts in the location and types of services provided, as proposed here, can raise access concerns, particularly for vulnerable populations. As discussed in Section III.C.3, Hallmark and NSMC hospitals have higher government payer mix than other area community hospitals and provide a significant share of behavioral health services to their local communities; it is important to consider any adverse impact to these vulnerable populations.

We evaluated the parties' plans to improve access to certain services, as well as their potential impact on the vulnerable patient populations that Hallmark and NSMC serve, and found:

- There is significant potential for the parties' plans to improve access to primary care and other services. However, the current plans lack sufficient detail for the HPC to determine the extent to which such potential will be realized;
- Relocating inpatient general acute care services is unlikely to impair regional access to these services; and
- Relocating inpatient behavioral health services may have an adverse impact on access to those services for vulnerable populations.

1. <u>There is Significant Potential for the Parties' Plans to Improve Access to Primary Care and Other Services. However, the Current Plans Lack Sufficient Detail for the HPC to Determine the Extent to which Such Potential Will Be Realized.</u>

The parties' plans include reconfiguration of a range of inpatient and outpatient service lines. Among other plans, the parties propose to "expan[d] and enhance[] all inpatient and outpatient behavioral health," develop population health programs for chronic conditions, expand urgent care facilities, recruit 25 net new primary care physicians around Hallmark, and enhance access to primary care services by expanding remote care services.

[238] HALLMARK NOTICE OF MATERIAL CHANGE, *supra* note 27, at Section 14. A central purpose of the parties' shared vision to transform the way health care is implemented in the area is to "rationalize the overcapacity and overlap of certain facilities and service lines." Affiliation Agreement, *supra* note 7, at Exh. 4.4.1-A. There is an emphasis on expansion of services lines, including the establishment of joint service lines, and the parties expect to generate savings for consumers and payers through decreases in operating costs from the reduction of full-scale inpatient facilities in the area.

[239] *See supra* note 190.

These plans have significant potential to improve access to services. In particular, we commend Partners for its longstanding commitment to behavioral health care, and for raising the importance of expanding behavioral health services.[240] To the extent the parties realize their goal of expanding and enhancing such services, this change could meaningfully impact access to behavioral health services in northeastern Massachusetts. Expanding primary care capacity also has meaningful potential to improve care coordination,[241] with remote care services and expanded urgent care facilities shown in some instances to improve care delivery and the likelihood of patients receiving appropriate, timely care.[242] Primary care delivery for certain populations has also been positively impacted by medical home models for physician group practices, and by population health management programs similar to the diabetes and heart failure programs described by the parties.[243] Finally, integrating primary care and behavioral health services has been shown to improve care delivery and similarly has the potential to improve access to care for vulnerable patients.[244]

At the same time, the extent to which the parties can realize such potential will be driven by the details of implementation, many of which were not available for the HPC's review.[245] For example, the parties have not specified whether they will recruit the 25 net new primary care physicians from existing practices; recruiting these physicians from other area medical groups will not improve overall patient access. Similarly, while the parties have indicated their commitment to enhancing behavioral health services in line with community need, they have not

[240] *See, e.g.,* Liz Kowalczyk, *MGH to Screen All Patients for Substance Abuse*, BOSTON GLOBE, (June 30, 2014), *available at* http://www.bostonglobe.com/lifestyle/health-wellness/2014/06/29/mass-general-hospital-plans-screen-all-patients-for-alcohol-and-illegal-drug-use/RmDqYAUpFuQql1e1LLicKI/story.html (reporting on Partners investments in screening all patients at MGH for substance use disorders as part of a suite of activities to enhance access to addiction treatment).

[241] Thomas Bodenheimer & Hoangmai Pham, *Primary Care: Current Problems and Proposed Solutions*, 29 HEALTH AFFAIRS 799 (2010), *available at* http://content.healthaffairs.org/content/29/5/799.full.

[242] Alan Snell, *The Role of Remote Care Management in Population Health*, HEALTH AFFAIRS BLOG (Apr. 4, 2014), http://healthaffairs.org/blog/2014/04/04/the-role-of-remote-care-management-in-population-health/.

[243] While evidence is mixed, one review found a moderate positive effect on delivery of preventive care services, among other findings. George Jackson et al., *The Patient-Centered Medical Home: A Systematic Review*, 158 ANNALS OF INTERNAL MED. 169 (Nov. 2012), *available at* http://annals.org/article.aspx?doi=10.7326/0003-4819-158-3-201302050-00579&an_fo_ed.

[244] One review showed that integrated care has been effective in treating depression, anxiety, at-risk alcohol, and ADHD in primary care settings. Mary Butler, et al., AGENCY FOR HEALTH CARE RESEARCH & QUALITY, INTEGRATION OF MENTAL HEALTH/SUBSTANCE ABUSE AND PRIMARY CARE (2008), *available at* http://www.ahrq.gov/research/findings/evidence-based-reports/mhsapc-evidence-report.pdf. Another found that collaborative care models provide effective treatment for comorbid physical and mental health conditions. Benjamin Druss & Elizabeth Walker, *Mental Disorders and Medical Comorbidity*, ROBERT WOOD JOHNSON FOUND., SYNTHESIS PROJECT REPORT No. 21 (2011), *available at* http://www.rwjf.org/content/dam/farm/legacy-parents/mental-disorders-and-medical-comorbidity.

[245] As discussed in Section IV.A.6, the parties have stated that in many cases, their plans will develop as programs are deployed and community needs are assessed. We agree that careful planning is necessary, and that modifying new care delivery models as they progress is often advisable. Here, however, the absence of key elements in the parties' plans, coupled with lack of detail as to how effective modifications to these plans would be achieved, prevent the HPC from fully evaluating how the proposed care delivery changes will impact access.

yet made decisions regarding any increase in inpatient behavioral health beds,[246] any minimum number of new behavioral health clinicians, or any expansion in outpatient, intensive outpatient, or partial hospitalization behavioral health services. Likewise, many differing medical home models and behavioral health-primary care integration approaches exist. The effectiveness of these models varies and the HPC does not have sufficient information to evaluate how the parties will choose to implement their initiatives.

The risk of potential access concerns may also turn on details of implementation which are not yet known. For example, the impact of the parties' plans for emergency care services will depend on details regarding underlying access to such services in Lynn and Medford that are not yet known. While sufficient emergency services capacity may exist at other facilities in the region, the parties have not yet specified how they will monitor and evaluate need for such services following the parties' two to three year commitment to maintain emergency services in these communities. The parties have similarly not yet detailed plans to ensure continuity of care for those patients whose site of care will be moved (e.g., approximately 61% of current discharges at Hallmark-LMH and all patients receiving medical-surgical care at NSMC-Union). Such plans are necessary to protect ongoing access for these patients, many of whom, based on the payer mix of these facilities, are likely to be low-income individuals, elders, or individuals with disabilities. Finally, while the short-stay inpatient model proposed at Hallmark-LMH presents opportunities for reframing the role of a small suburban community hospital, the retention and expansion of primarily high-margin services[247] such as gastroenterology, cardiology, and orthopedics raises questions about whether these service expansions reflect alignment with unmet community need.

As discussed in Section IV.B, it is also unclear whether corporate consolidation is necessary to achieve the parties' desired quality improvements and access gains. For example, as described in Section III.C.2, NSMC had the lowest occupancy rate (59%) of area community hospitals, suggesting that Partners could elect to reduce its capacity to achieve rationalization in the absence of an acquisition of Hallmark. While we understand that the specifics of a given plan for care rationalization may differ depending on whether a corporate acquisition versus other form of affiliation is contemplated, it is worth asking whether the quality and access gains desired are only or best achievable through this most permanent form of affiliation, a corporate acquisition.

In sum, while there is significant opportunity for the parties' proposed care delivery changes to improve patient access to the health care system, limited data and detail in the parties' plans prevents us from drawing many conclusions regarding the likelihood that the parties will realize this potential. Similarly, lack of data and detail prevents us from drawing many conclusions regarding the extent to which the parties will successfully mitigate potential access

[246] The parties are considering up to 25 additional behavioral health beds at Hallmark-MWH for addiction services and short stay admissions, but have not committed to any specific increase in beds to address evidence that there is likely insufficient behavioral health capacity in the region. *See* Section III.C.2.

[247] The parties' planned investments mirror a national trend of expanded capacity for specific specialty services such as cardiology, cancer, orthopedics, women's and children's services, and GI endoscopy. According to a survey of senior hospital executives across the country, one of the factors motivating this trend is service line profitability. For more on expansion of specialty service lines and underlying factors, see Berenson, *supra* note 60.

concerns related to the proposed restructuring and relocation of services for vulnerable populations. At the close of this section, we highlight examples of such data and programmatic details that would help the HPC better assess how the proposed care delivery changes will impact access. Before turning to those examples, and inviting the parties to provide additional detail in their response to this Preliminary Report, we discuss below two topics for which we have sufficient information about the parties' plans to make specific access findings.

2. Relocating Inpatient General Acute Care Services Is Unlikely to Impair Regional Access to These Services

As described in Section II.C, the parties plan to convert Hallmark-LMH to an outpatient and short-stay inpatient facility and reduce its bed count from 132 to approximately 30 to 40. The parties also plan to convert NSMC-Union into a behavioral health center of excellence, closing its 88 non-behavioral health beds. Hallmark-MWH and NSMC-Salem will remain general acute care hospitals, with significant investments planned to expand inpatient capacity in light of the Hallmark-LMH and NSMC-Union conversions.[248] The parties anticipate that patients who would have received general acute care services at Hallmark-LMH will receive care at Hallmark-MWH and patients who would have received general acute care services at NSMC-Union will receive care at NSMC-Salem. Across the four facilities, these changes would decrease the net number of beds by up to 110.

Although these changes may have implications for local access to general acute care services in and around Lynn and Medford, the net decrease in inpatient medical and surgical capacity will likely not compromise overall access to these services in the region. As described in Section III.C.2, a survey of general acute care capacity in the region suggests that sufficient inpatient beds exist. Even after the parties' planned conversions, we project that a sufficient number of staffed, unoccupied beds will remain available for patient care, and that other area hospitals with underutilized capacity will likely be able to accommodate the patients diverted from Hallmark-LMH and NSMC-Union.

3. Relocating Inpatient Behavioral Health Services May Have an Adverse Impact on Access to these Services for Vulnerable Populations

As described in Section II.C, the parties propose to relocate all behavioral health beds at Hallmark-LMH and NSMC-Salem, and "non-medical/psychiatry cases" at Hallmark-MWH,[249] to NSMC-Union, which will become a dedicated behavioral health center of excellence. NSMC-Union's behavioral health beds would thus increase from 38 to 140, and the behavioral health patients who would have received care at Hallmark-LMH and NSMC-Salem would be expected to receive care at NSMC-Union. Given that Hallmark and NSMC serve a relatively high mix of government payer patients, who tend to be low-income, elderly, and/or disabled, and given the

[248] See Section II.C describing Partners' investment of approximately $190 million at NSMC-Salem and $152 million at Hallmark-MWH.

[249] The parties indicate that Hallmark-MWH will retain "a yet-to-be determined number of medical/psychiatric beds" Affiliation Agreement, *supra* note 7, at Exh. 4.4.1, and that up to 25 additional behavioral health beds may be available for addiction treatment and short stay admissions.

unique vulnerabilities of behavioral health patients, we sought to assess potential risks associated with a change in location of services for these vulnerable populations.

To provide a directional sense of potential impacts of relocating inpatient behavioral health services for these populations, the HPC analyzed changes in commute times that would result if patients currently receiving these services at Hallmark-LMH, Hallmark-MWH, and NSMC-Salem sought services at NSMC-Union. We found that drive times would generally increase by 50 percent or more.[250] This impact would be more pronounced for patients who rely on public transportation, as there are few public transportation options from the areas near Hallmark-LMH and Hallmark-MWH to NSMC-Union.[251] These increased travel times may have an adverse impact on elders, individuals with disabilities, and individuals with limited income, who may have more limited access to transportation services.[252] While the parties have stated they are exploring transportation options to mitigate these burdens, the extent to which this burden will be mitigated will turn on details which have not yet been finalized.[253]

In sum, the parties have proposed significant changes to care delivery that have the opportunity to expand access to a range of services in northeastern Massachusetts and reshape the structure of care delivery in the region. However, the parties' current plans lack the detail necessary to evaluate the extent to which such opportunity will be realized. Given Hallmark and NSMC's higher government payer mix and the significant behavioral health services they

[250] For patients who would have received mental health services at NSMC-Salem, there will only be a minor increase in average drive times of a few minutes. For patients of Hallmark-LMH and Hallmark-MWH, average drive times will increase by 50 percent or more (from an average of seven to 13 minutes, to over 17 minutes, for patients of Hallmark-LMH, and from eight to 11 minutes, to over 16 minutes, for patients of Hallmark-MWH). These drive time increases may be significantly greater during peak travel times.

[251] Specifically, behavioral health patients in the Hallmark PSA currently using public transportation to seek care at Hallmark-LMH will have an approximately 90-minute transit time if they seek those services at NSMC-Union post-transaction, behavioral health patients in the NSMC PSA currently using public transportation to seek care at NSMC-Salem will have approximately a 37-minute transit time if they seek those services at NSMC-Union post transaction, and behavioral health patients in the Hallmark PSA currently using public transportation to seek care at Hallmark-MWH will have approximately an 84-minute transit time if they seek those services at NSMC-Union post transaction.

[252] For more on how behavioral health service delivery can depend on transportation systems, see Grazia Zulian et al., *How are Caseload and Service Utilisation of Psychiatric Services Influenced by Distance? A Geographical Approach to the Study of Community-Based Mental Health Services*, 46 SOC. PSYCHIATRY & PSYCHIATRIC EPIDEMIOLOGY 881 (2011), *available at* http://link.springer.com/article/10.1007/s00127-010-0257-4; British Psychological Soc'y, *Common Mental Health Disorders: Identification and Pathways to Care* (2011), *available at* https://www.ncbi.nlm.nih.gov/books/NBK92265/.

[253] The conversion of NSMC-Union into a specialized psychiatric facility may also have implications for the mix of patients served. As described in Section III.C, while NSMC and Hallmark have a higher mix of government payer patients, Partners' specialty psychiatry facility, McLean Hospital, has a high commercial payer mix compared to similar hospitals in the Commonwealth. NSMC-Union also has a higher mix of commercial behavioral health patients and the highest mix of commercial patients among the Hallmark and NSMC hospitals. Given these patterns, there is the potential that the conversion of NSMC-Union into a specialty psychiatry facility and the elimination of behavioral health beds at NSMC-Salem and Hallmark-LMH may shift the overall payer mix of behavioral health services provided by the parties in this region. This shift could occur due to any number of reasons. As Partners does not participate in certain MassHealth programs for dual-eligible patients (the Integrated Care Organization and Senior Care Options programs), these patients would likely need to seek care elsewhere. Additionally, depending on licensure models, CMS's Institutions for Mental Diseases (IMD) restrictions may limit the use of the NSMC-Union facility for government payer patients.

provide to their local communities, the proposed reconfiguration and relocation of services may adversely impact vulnerable populations as they seek to access services at more distant locations. Understanding that the parties have not yet made a number of decisions necessary to implement their plans, we invite them to make specific commitments to ongoing, transparent engagement with the relevant communities and stakeholders to ensure that final care delivery decisions align with community needs. Specifically, the HPC invites the parties to provide the following detail in their response to this Preliminary Report:

Transportation and Continuity of Care

- A description of plans to ensure continuity of care for patients whose care location is anticipated to change, including plans to ensure that behavioral health patients presenting at emergency departments or urgent care centers receive prompt and appropriate treatment, and plans to ensure that patients who rely on public transit or otherwise lack sufficient access to transportation can continue to access services after reconfiguration (e.g., non-mobile, elderly, and/or complex psychiatric patients who previously received services at Hallmark-LMH and are diverted to the more distant NSMC-Union).

Behavioral Health Services

- A detailed description of plans for enhancing access to behavioral health services, including any plans to expand inpatient behavioral health capacity, to retain and/or expand existing outpatient behavioral health capacity (e.g., intensive outpatient, partial hospitalization, and nursing home psychiatric consultation services currently offered by Hallmark), to allocate behavioral health services toward specific populations (e.g., whether the current mix of behavioral health beds for children, adolescents, adults, and geriatric patients is anticipated to change), to integrate behavioral health with primary care and other medical care, to hire additional behavioral health clinicians, and to clinically integrate behavioral health services in the region with those provided at McLean/MGH and/or other Partners providers (e.g., any plans for shared staffing, referrals, exchange of best practices).

Community Need and Stakeholder Engagement

- A detailed description of methods to assess, with diverse stakeholder input, community need for emergency services in Lynn and Medford beyond the parties' two to three year commitment to maintain such services, need for and impact of plans to shift volume from emergency departments to urgent care centers, unmet community need for services the parties propose to expand (such as orthopedics and gastroenterology), community need for services the parties propose to redirect (e.g., services that require inpatient stays of longer than three days redirected from Hallmark-LMH), and community need for services tailored to vulnerable populations (e.g., services for patients with language and cultural barriers to care).

V. CONCLUSION

As described in Part IV, the HPC found:

1. **Cost Impact:** This transaction will reinforce Partners' position as the provider with the highest share of inpatient and primary care services in its northeastern Massachusetts service areas. Over time, this transaction is anticipated to increase spending in northeastern Massachusetts by an estimated $15.5 million to $23 million per year for the three major commercial payers due to material price effects, which are not expected to be offset by commensurate savings from decreased utilization through population health management (PHM).

2. **Quality Impact:** The differences in Partners and Hallmark's historic quality performance indicate potential for the transaction to drive quality improvement. However, Partners and Hallmark have already been affiliated for nearly 20 years, including joint clinical and contracting efforts, and it is unclear how this merger is necessary to improve clinical quality in ways the parties' longstanding affiliation has not.

3. **Access Impact:** The parties have proposed significant changes to care delivery that have the potential to expand access to a number of services in northeastern Massachusetts. However, the parties' current plans lack the detail necessary to evaluate the extent to which such potential will be realized. Given Hallmark and NSMC's high government payer mix, the proposed reconfiguration and relocation of services is anticipated to impact especially vulnerable populations as they seek to access services at new, more distant locations.

In summary, based on our review, we find that the proposed transaction between Partners and Hallmark is likely to increase health care spending in northeastern Massachusetts, reinforce Partners' market power, and, over time, increase premiums for employers and consumers. While the parties have described PHM initiatives that have the potential to reduce total medical spending, those potential savings are unlikely to offset the projected increases to health care spending. At the same time, this transaction has the potential to improve quality and increase access to certain health care services. The parties' current plans lack sufficient detail to enable us to assess the likelihood that this potential will be realized, or confirm that potential adverse impacts to vulnerable populations will be sufficiently mitigated. We invite the parties to address these concerns in their written response, including how they would demonstrate any commitments in this regard.

Based on these findings, this transaction may warrant further review and referral to the AGO pursuant to MASS. GEN. LAWS ch. 6D, § 13. These findings suggest, consistent with the terms of the proposed consent judgment, that further consideration of mitigation of transaction-specific impacts is likely warranted. Following the period for written response, we look forward to publishing our Final Report, including any referral to the Massachusetts Attorney General's Office.

COMMONWEALTH OF MASSACHUSETTS

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