



**MASSACHUSETTS**  
HEALTH POLICY COMMISSION

# **Health Policy Commission**

## **Cost and Market Impact Review**

**July 27, 2016**

# Overview of Cost and Market Impact Reviews

The HPC conducts **cost and market impact reviews (CMIRs)** of transactions anticipated to have a significant impact on health care costs or market functioning.

## CMIR INPUTS

- Publicly available data and documents
- Confidential data and documents from parties, payers and other providers
- Support from expert consultants, including actuaries, accountants, economists and care delivery experts
- Feedback from Commissioners

## CMIR OUTPUTS

- Preliminary report
- Feedback from parties and other market participants
- Final report; transaction may close 30 days later
- Potential referral to Massachusetts Attorney General's Office

## Overview of the transactions under review

---

1. **Contracting Affiliation** between Beth Israel Deaconess Care Organization (BIDCO) and New England Baptist Hospital (NEBH)
2. **Contracting Affiliation** between BIDCO and MetroWest Medical Center (MetroWest)
3. **Clinical Affiliation** between Beth Israel Deaconess Medical Center (BIDMC), Harvard Medical Faculty Physicians at BIDMC (HMFP), and MetroWest



Beth Israel Deaconess  
CARE ORGANIZATION



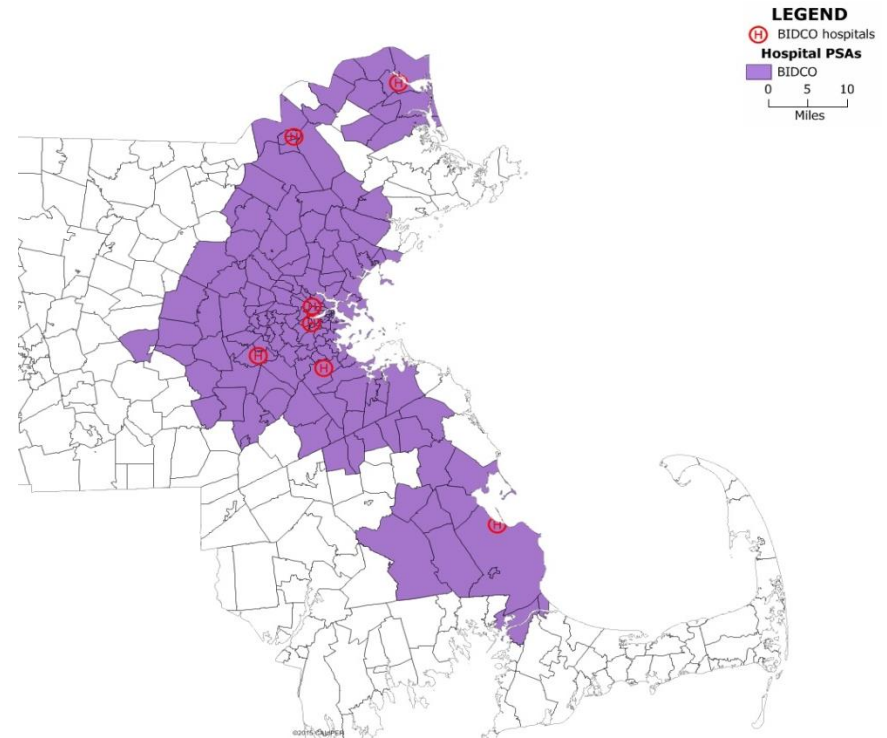
HARVARD MEDICAL FACULTY PHYSICIANS  
AT BETH ISRAEL DEACONESS MEDICAL CENTER, INC.

# Beth Israel Deaconess Care Organization (BIDCO)

## Beth Israel Deaconess CARE ORGANIZATION

- Membership-based contracting entity and accountable care organization (ACO)
- Contracts on behalf of 7 hospitals (4 owned by BIDMC) and ~2,500 physicians
- One of nine participants nationally in CMS's Pioneer ACO Program
- Operates care integration and patient management programs

### Inpatient Primary Service Areas



# Beth Israel Deaconess Medical Center (BIDMC) and Harvard Medical Faculty Physicians at BIDMC (HMFP)

---



Beth Israel Deaconess  
Medical Center

HARVARD MEDICAL FACULTY PHYSICIANS  
AT BETH ISRAEL DEACONESS MEDICAL CENTER, INC.

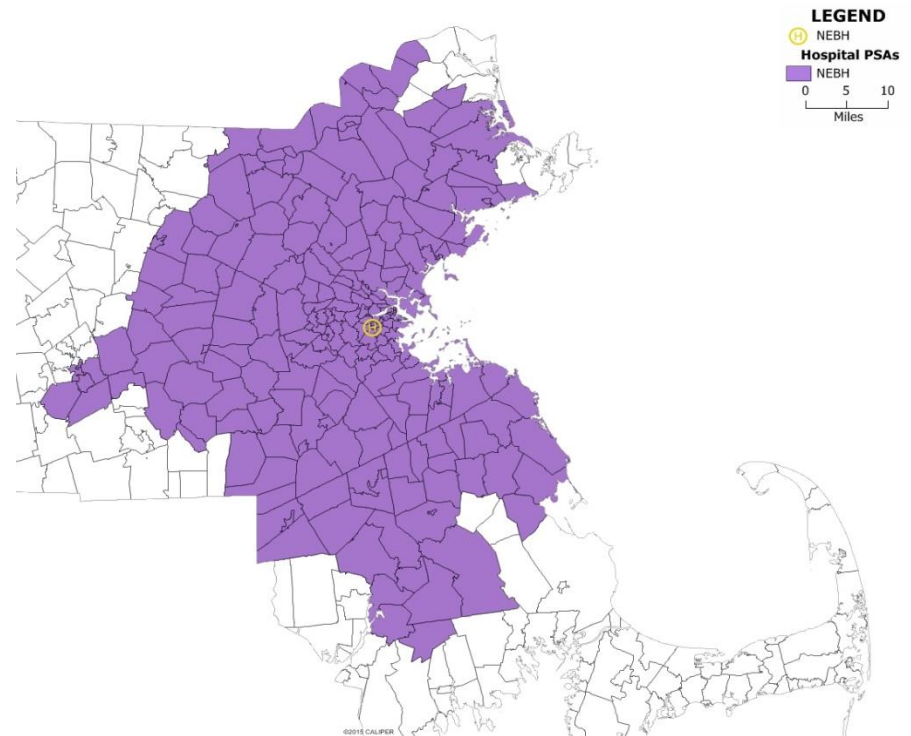
- 703-bed non-profit academic medical center and co-chair of the BIDCO board
- Owns three community hospitals totaling 261 beds: BID-Milton, BID-Needham, and BID-Plymouth, and two physician practices totaling ~417 physicians
- Preferred tertiary/quaternary referral partner for BIDCO hospitals, Atrius and others
- Strong financial performance
- Large physician group that employs physicians at BIDMC and its affiliates and co-chairs the BIDCO board
- ~700 specialists and ~100 PCPs
- Exclusive affiliation agreement with BIDMC for patient care, research, and teaching
- Comprises the majority of medical staff at BIDMC, and provides some specialty services to BIDMC clinical affiliates

# New England Baptist Hospital (NEBH)



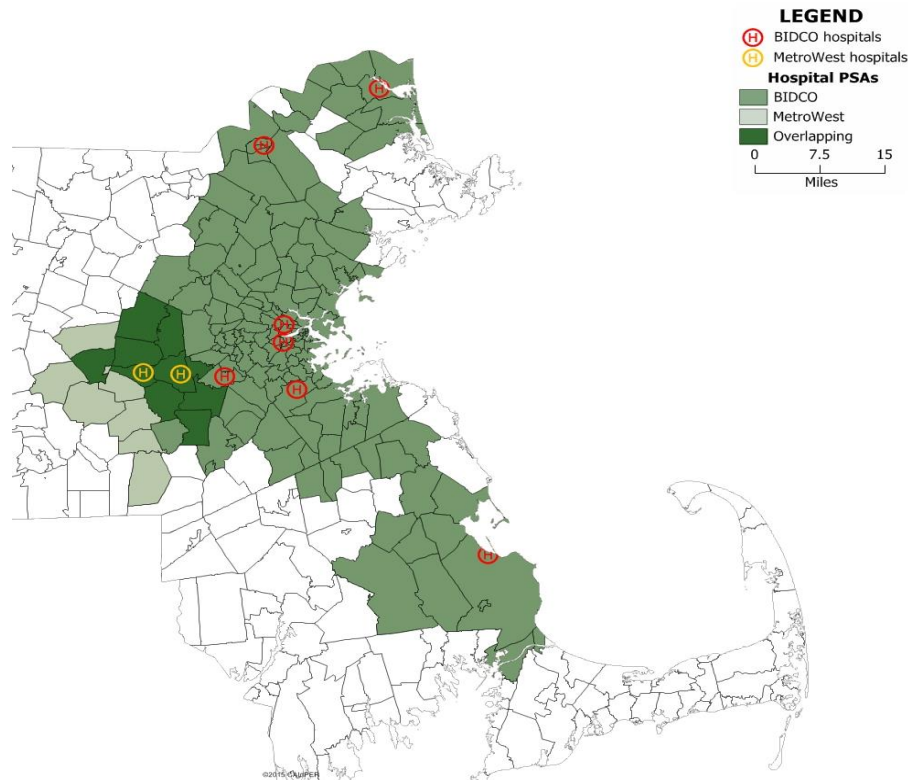
## Inpatient Primary Service Area - Orthopedics & Musculoskeletal Services

- Only specialty orthopedic hospital in Massachusetts
- Non-profit, 95-bed orthopedic hospital in Boston
- Licensed outpatient orthopedic facilities in Brookline, Chestnut Hill, and Dedham
- Relatively strong financial position
- ~106 physicians (14 PCPs) in NEBH's owned physician group, New England Baptist Clinical Integration Organization (NEBCIO)



# MetroWest Medical Center

## Inpatient Primary Service Areas (MetroWest + BIDCO)



**METROWEST  
MEDICAL CENTER**  
Framingham Union Hospital • Leonard Morse Hospital

- 284 staffed beds on two campuses:  
Framingham Union Hospital (Framingham)  
and Leonard Morse Hospital (Natick)
- Subsidiary of Tenet Healthcare Corporation
- Clinical affiliation with Tufts Medical Center
- Owns MetroWest Physicians Services (MWPS) with 29 physicians, part of MetroWest Accountable Healthcare Organization (MWAHO), a 238-physician practice that contracts through NEQCA
- Relatively weak financial performance from 2012 through 2014; improving in 2015

## Review structure

---

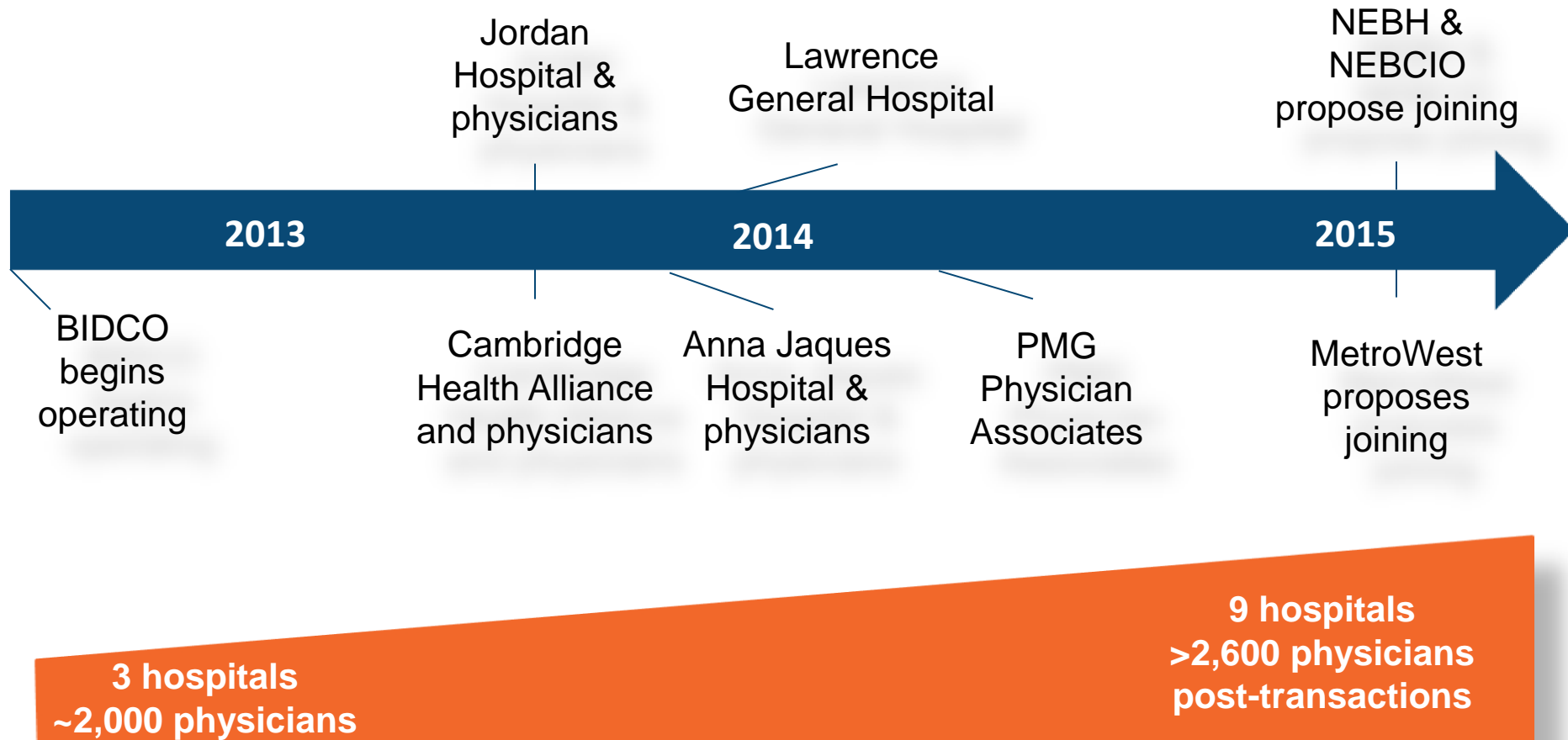


Evaluated the **Baseline Performance** and current trends for each of the parties across these areas

Then, evaluated the **Impact of the Transactions** across these areas



## BIDCO Has Had Significant Growth Since 2013



## BIDCO is now the second largest hospital contracting network in the state

### Commercial inpatient market share statewide

2010, 2013, and 2015 CHIA hospital discharge data

Hospital System	Statewide Share of All Discharges (2010)	Statewide Share of All Discharges (2013)	Statewide Share of All Discharges (2015)
Partners	27.8%	29.8%	28.6%
<b>BIDCO</b>	<b>6.8%</b>	<b>7.4%</b>	<b>10.5%</b>
Lahey	2.3%	4.7%	7.6%
UMass	7.0%	6.7%	6.8%
Steward	5.3%	6.6%	6.1%
All Other Combined	50.8%	44.8%	40.5%

## BIDCO is also one of the largest physician networks in the state

### Commercial adult primary care market share statewide

Current affiliations and 2013 APCD data

System	Statewide Share of Primary Care Visits
Partners	17.3%
Atrius	14.8%
Steward	12.1%
<b>BIDCO</b>	<b>10.4%</b>
NEQCA	8.7%
All Other Combined	36.7%

## NEBH has a very high share of orthopedic and musculoskeletal services

**Commercial inpatient orthopedic and musculoskeletal market share in NEBH's PSA**  
2010 and 2015 CHIA hospital discharge data

Hospital System	Share of Ortho/ MSK Discharges (2010)	Share of Ortho/ MSK Discharges (2015)
Partners	32.5%	30.5%
<b>NEBH</b>	<b>25.6%</b>	<b>27.9%</b>
Lahey	3.7%	9.5%
<b>BIDCO</b>	<b>5.4%</b>	<b>7.3%</b>
Wellforce	1.8% (Tufts); 1.9% (Lowell)	6.2%
All Other Combined	29.1%	17.4%

## NEBH has a very high share of orthopedic and musculoskeletal services

### Commercial outpatient orthopedic surgery market share in NEBH's PSA

2013 CHIA APCD claims data

Hospital System	Share of OP Ortho Surgery Visits (2013)
Partners	34.7%
<b>NEBH</b>	<b>12.1%</b>
<b>BIDCO</b>	<b>11.5%</b>
Lahey	8.1%
South Shore Hospital	5.4%
All Other Combined	28.2%

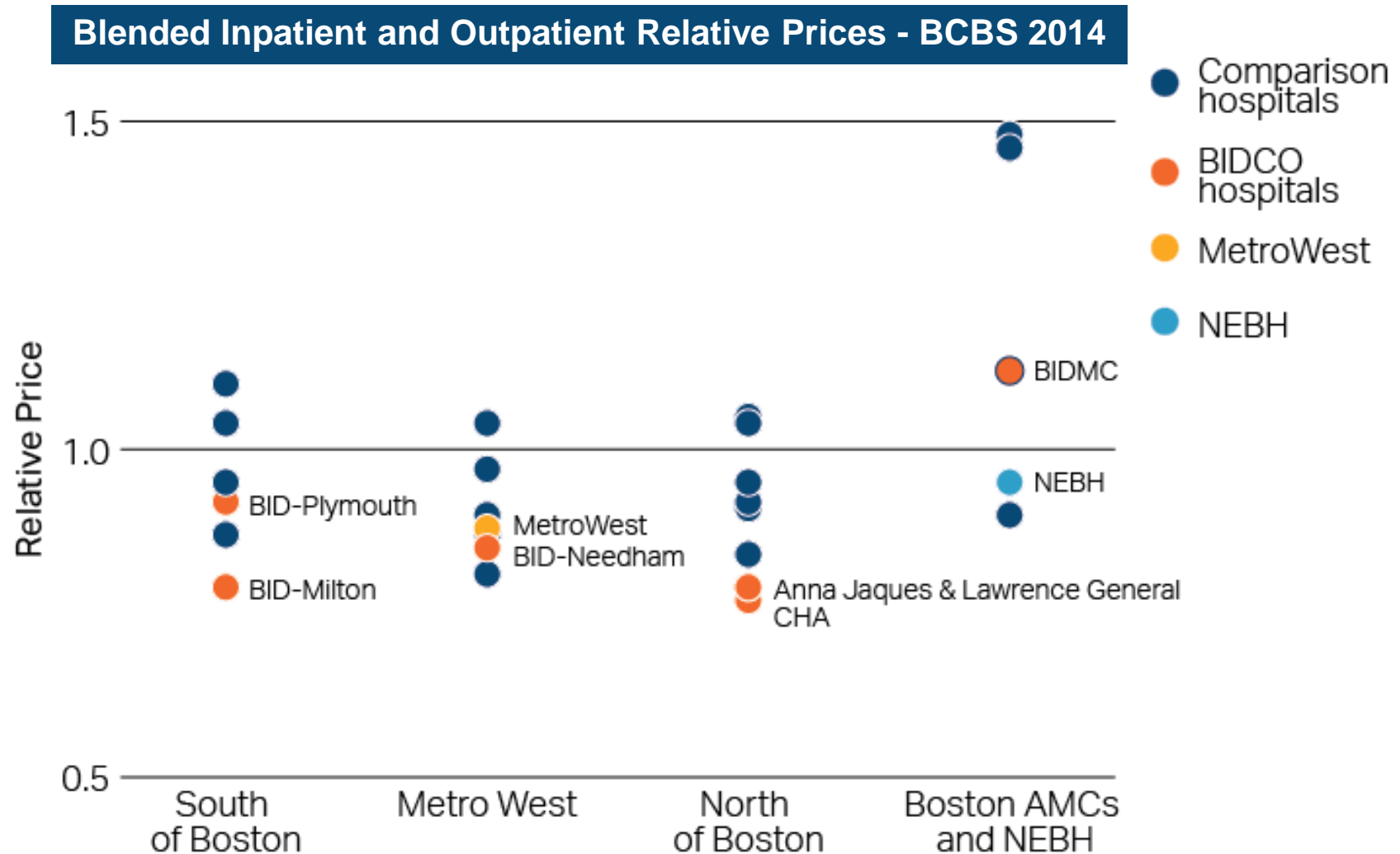
## MetroWest continues to be an important local provider, but its commercial market share has dropped significantly

### Commercial inpatient market share in MetroWest's PSA

2010 and 2015 CHIA hospital discharge data

Hospital System	Share of Discharges (2010)	Share of Discharges (2015)
<b>Partners</b>	<b>37.6%</b>	<b>41.6%</b>
- Newton-Wellesley	18.0%	21.5%
- MGH and BWH	16.6%	17.4%
- Other Partners	3.1%	2.7%
<b>Tenet</b>	<b>23.6%</b>	<b>15.3%</b>
- MetroWest	22.9%	14.1%
- St. Vincent	0.7%	1.2%
UMass	9.6%	11.8%
<b>BIDCO</b>	<b>8.7%</b>	<b>8.1%</b>
All Other Combined	20.5%	23.2%

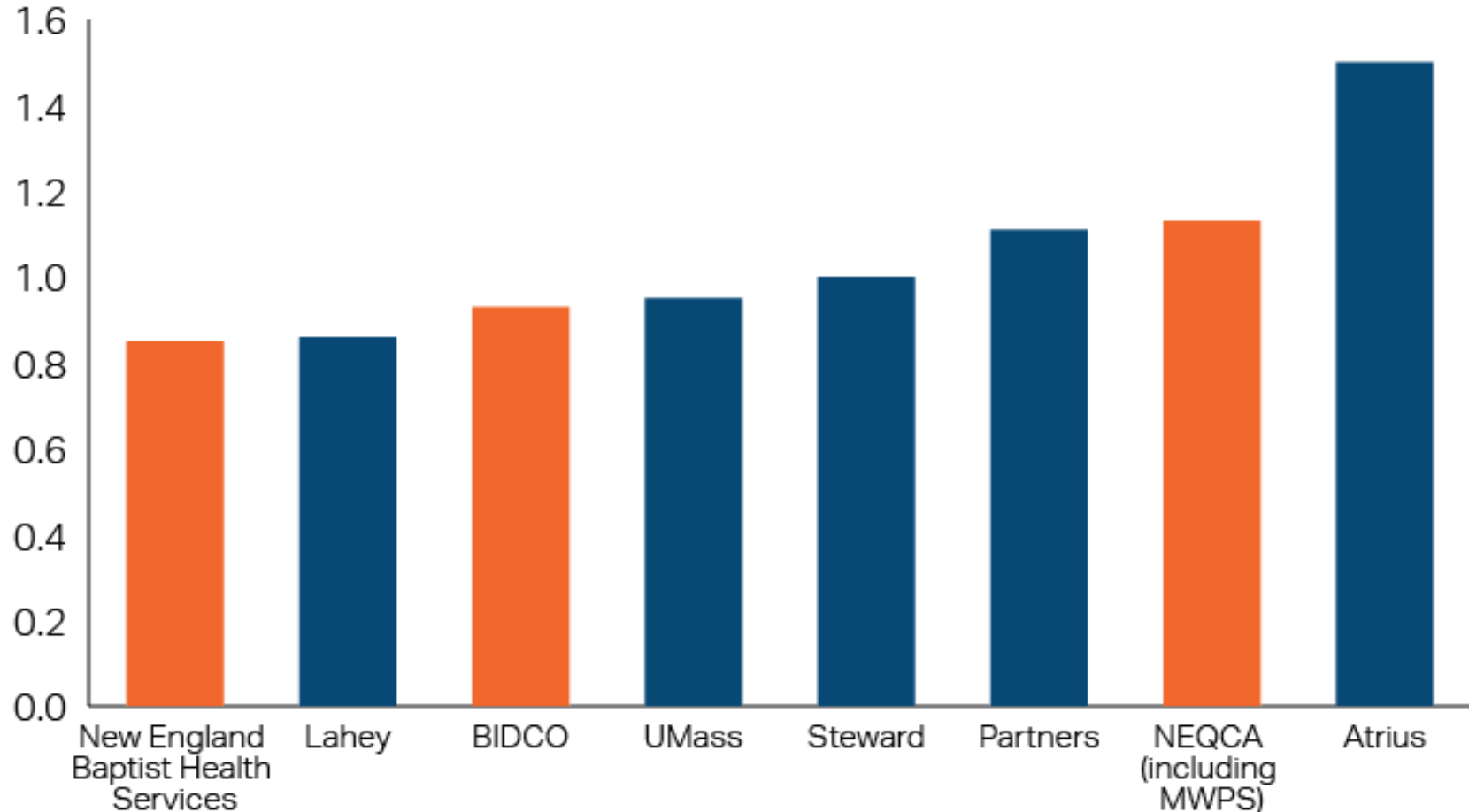
## BIDCO Hospitals, Metrowest, and NEBH had Low to Mid-Range Prices



NOTE: 2014 is the most recent year of data available, meaning that these figures may not yet fully reflect the impact of the recent growth of the BIDCO network

## BIDCO physician prices were low to mid-range; higher than NEBCIO and generally lower than MetroWest

Relative Prices of Major Physician Groups – BCBS 2013

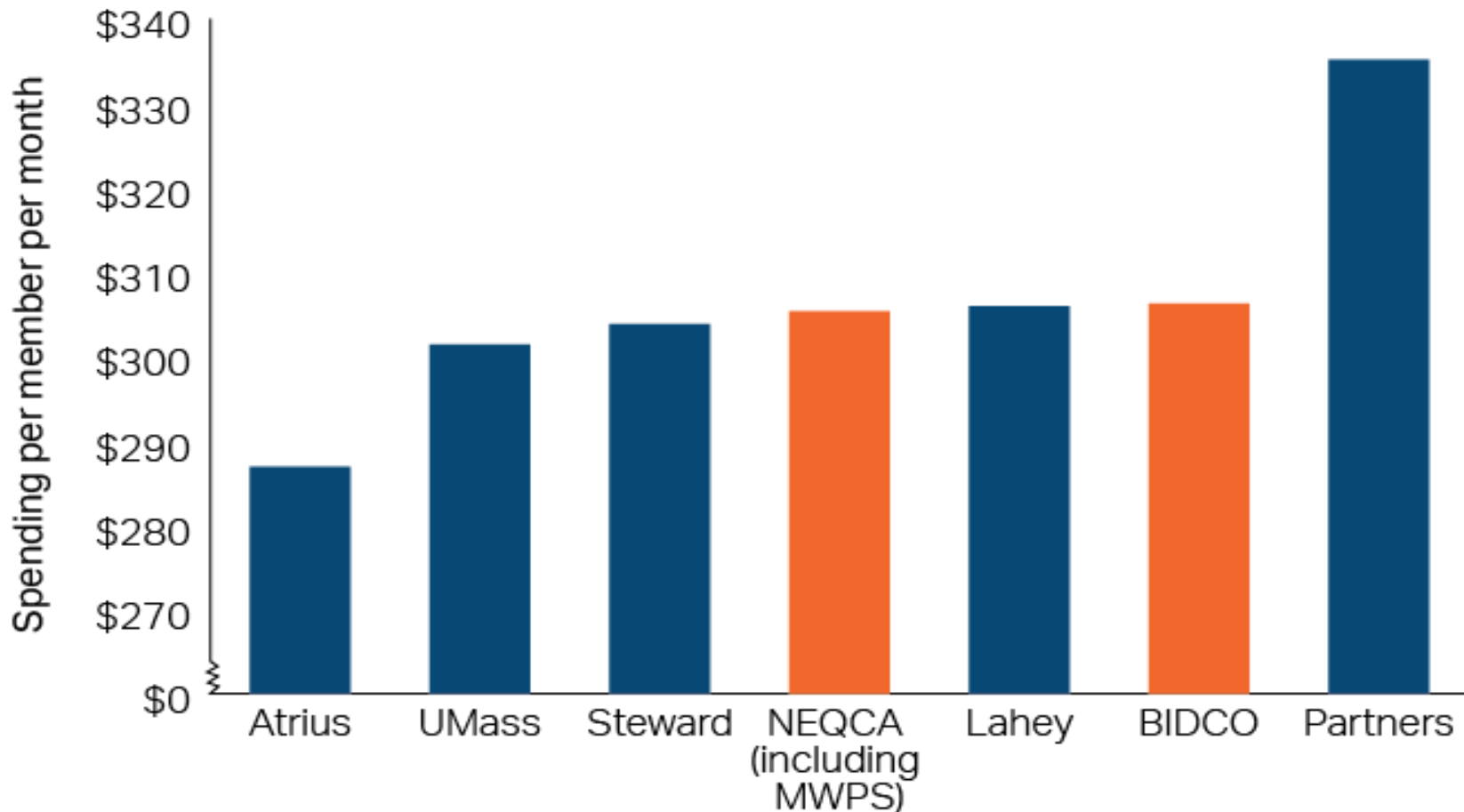


NOTE: 2013 is the most recent year of data available, meaning that these figures may not yet fully reflect the impact of the recent growth of the BIDCO network



## BIDCO's health status adjusted TME was also low to mid-range

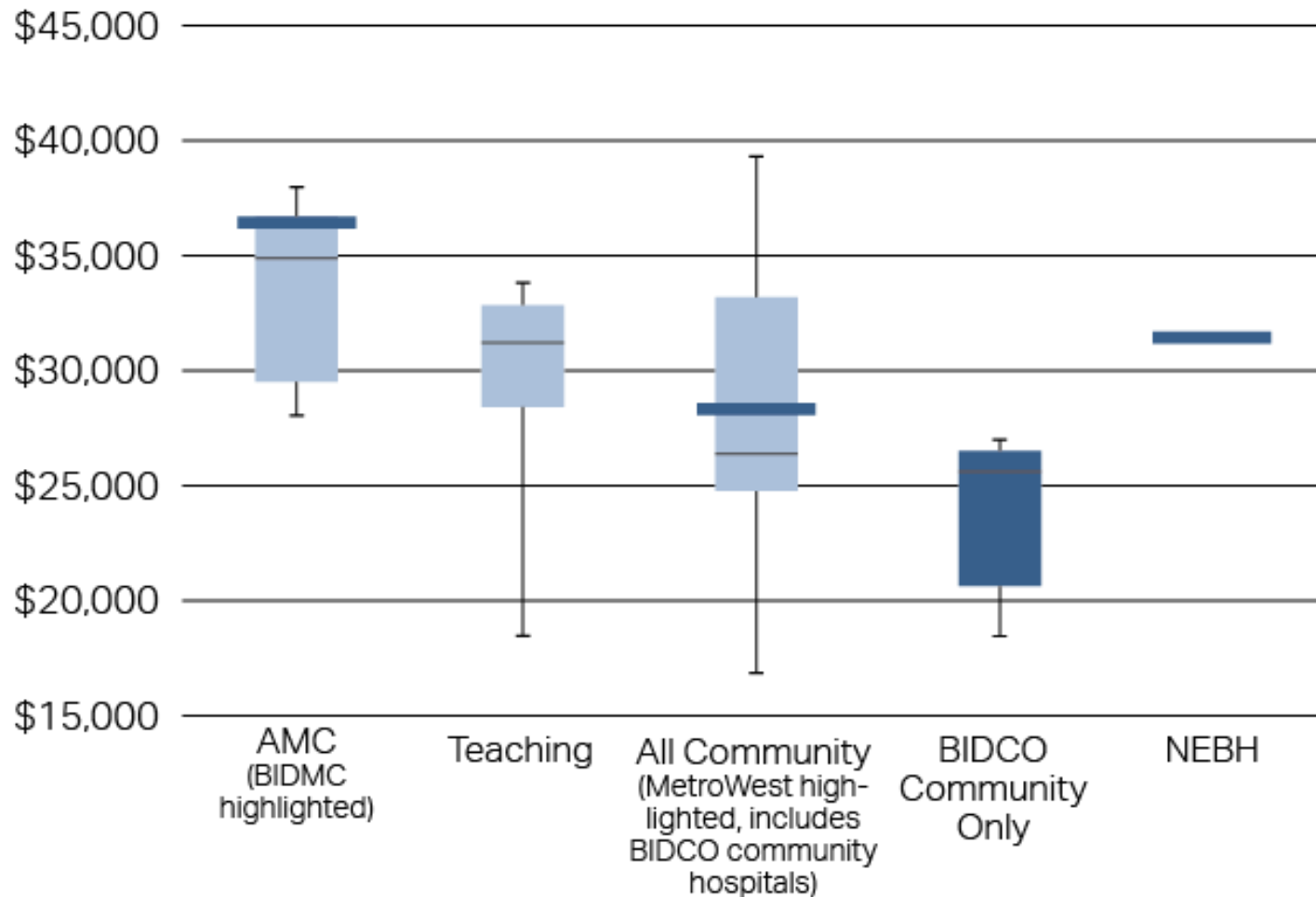
### Health Status Adjusted TME of Major Physician Groups – HPHC 2014



NOTE: 2014 is the most recent year of data available, meaning that these figures may not reflect the current spending efficiency of the parties.

## Spending for low-acuity joint replacement episodes for commercial patients treated at NEBH was lower than at most AMCs and some community hospitals

Average Spending for Knee Replacement Episodes by Hospital Type and For Party Hospitals – 2012 Episodes



NOTE: These spending calculations are based on 2012 claims data, and may not reflect the current spending efficiency of the parties.

## Principal findings: Cost and market baseline

---

- BIDCO has significant market share, and has grown rapidly in recent years. It is now the second largest hospital network in the state.
- NEBH has very large market share for orthopedic and musculoskeletal services.
- While MetroWest continues to be an important local provider, it has lost significant commercial market share in recent years.
- In the most recent available data, BIDCO, MetroWest, and NEBH/NEBCIO had low to mid-range hospital and physician prices and comparatively efficient medical spending.

## All of the parties have sought to develop structures to support care delivery improvement initiatives, although their approaches vary

---

### **BIDCO's structure particularly focuses on supporting risk contract performance, including:**

---

- A member ownership and governance structure that engages all members in decision making, including contracting
- Population health management initiatives that focus on specific risk populations, with varying degrees of participation across member providers
- A robust infrastructure for collecting and analyzing risk patient data and providing regular quality and efficiency reports to members
- A well-developed funds flow model designed to distribute risk surpluses and deficits to member providers

### **BIDMC and HMFP have developed structures to support clinical affiliates, including:**

---

- Regular meetings between senior clinical staff of BIDMC, HMFP, and community affiliates to identify areas for potential improvement and communicate best practices
- The development of improvement programs for affiliates focused on specific service lines
- Placement of BIDMC/HMFP physicians at and joint recruitment of clinical leaders for community hospitals and recruitment of primary care physicians to their service areas
- Information technology systems that allow web-based remote sharing of patient records between BIDMC and community provider sites

## All of the parties have sought to develop structures to support care delivery improvement initiatives, although their approaches vary

---

### **NEBH's care delivery structures focus on optimizing patient care processes, including:**

---

- Well-defined surgery “pathways” for orthopedic and musculoskeletal surgical care to track and manage patients across the spectrum of services required throughout a joint replacement, from preoperative assessment to appropriate use of post-acute care
- Well-developed relationships with post-acute care providers, including the ability to share electronic health records with some of these providers
- Electronic health record systems and data analytics that allow NEBH to track relationships between clinical processes and outcomes in order to further refine care models

### **MetroWest has structures to support targeted improvement programs, including:**

---

- Robust quality reports and scorecards, generated both locally and by Tenet, that regularly describe performance for all MetroWest patients
- Standing committees focused on specific quality and patient experience improvement initiatives
- Lean management strategies to encourage continuous process improvement

# The HPC evaluated the parties' performance on a broad set of nationally endorsed quality measures

## Evaluation of Clinical Processes (Hospital and Physician)

- **CMS Hospital Compare:** 8 measures and composite score
- **HEDIS Physician Process:** 12 adult and 8 pediatric measures

## Evaluation of Clinical Outcomes (Hospital only)

- **CMS Hospital Compare:**
  - Surgical and non-surgical HAI composites (6 total HAI measures)
  - Hip/Knee Replacement Complication Rate
  - Hip/Knee Replacement Readmission Rate
  - Overall Hospital Readmission Rate
- **AHRQ Hospital Measures: PSI-90** (from CHIA), **IQI-90** and **IQI-91** (calculated using discharge data)
- **Leapfrog Group Hospital Measures:** obstetric measures (C-section, episiotomy, early delivery rates)

## Evaluation of Patient Experience (Hospital and Physician)

- **CMS HCAHPS:** 10 measures, focusing on “willingness to recommend” and “rating of 9 or 10”
- **CG-CAHPS:** 8 adult and 8 pediatric measures, focusing on “willingness to recommend”

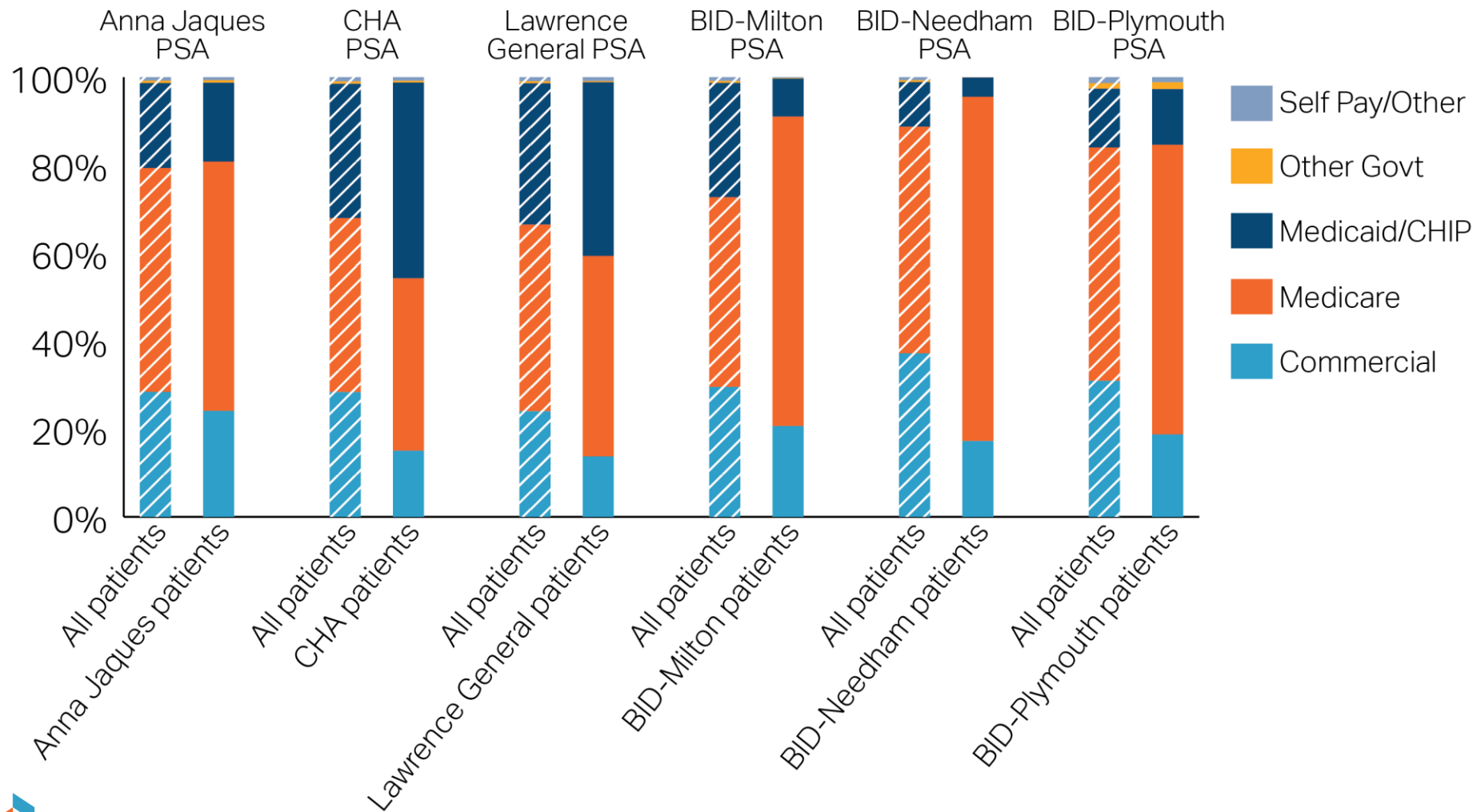
## Principal findings: Care delivery and quality baseline

---

- All of the parties have sought to develop structures to support care delivery improvement initiatives, although their approaches vary
- On most standard quality measures, both BIDCO hospitals and physician groups tend to be at or above the state's average performance, and BIDMC performance was comparable to its AMC peers, but individual performance varies
- Clinical affiliation with BIDMC has been correlated with improved performance by hospital affiliates on patient experience and process measures
- NEBH performs exceptionally well on measures most relevant to its core orthopedic and musculoskeletal services
- MetroWest generally performs close to the state average, with some strengths and weaknesses relative to BIDCO hospitals and local comparators

## BIDCO community hospitals have relatively high government payer mix and some have high Medicaid mix compared to their communities

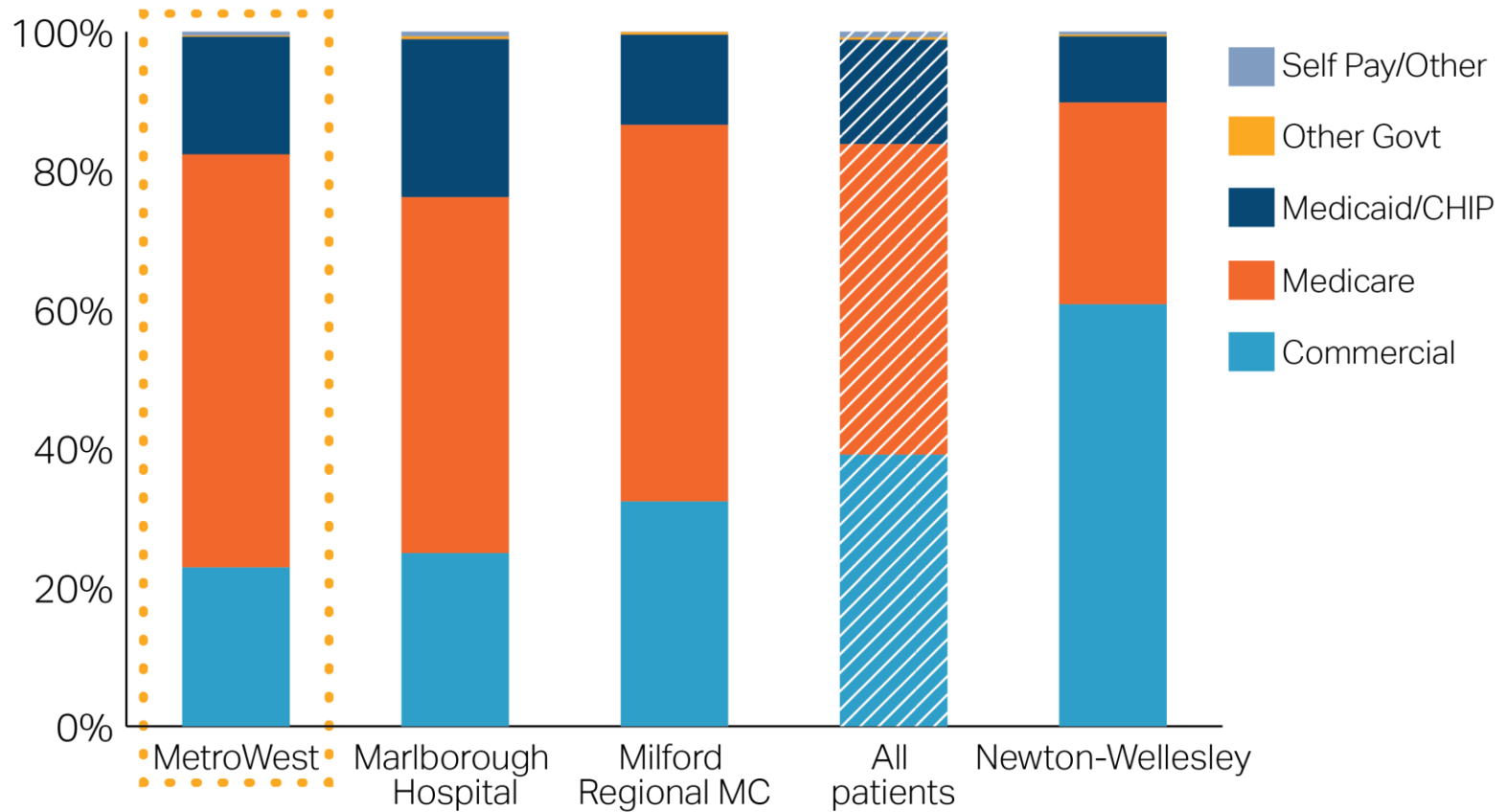
### Payer Mix for Residents of BIDCO Community Hospital PSAs – 2015 Discharges





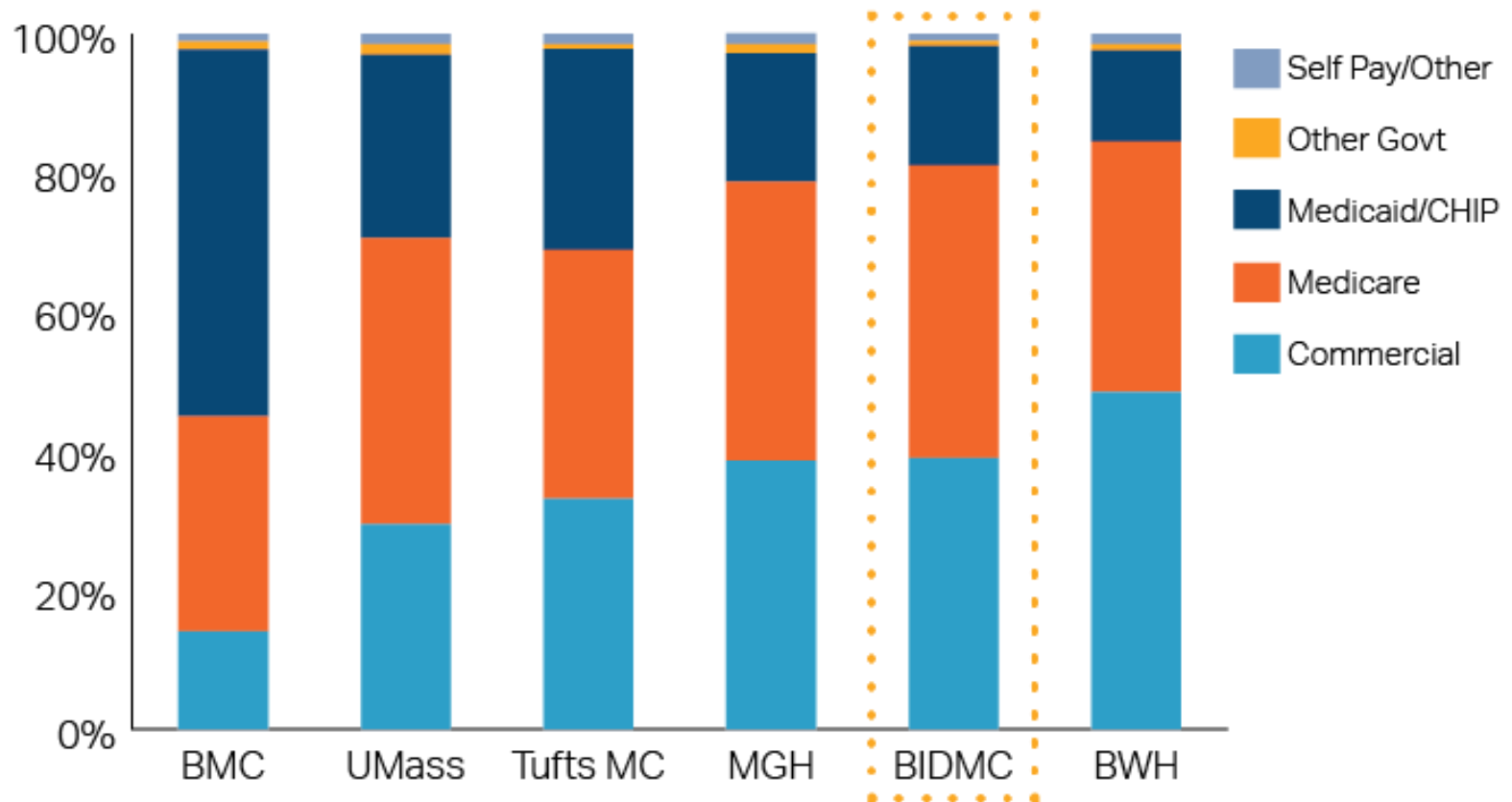
## MetroWest has high government payer mix and high Medicaid mix

### Payer Mix for Residents of MetroWest's Service Area- 2015 Discharges



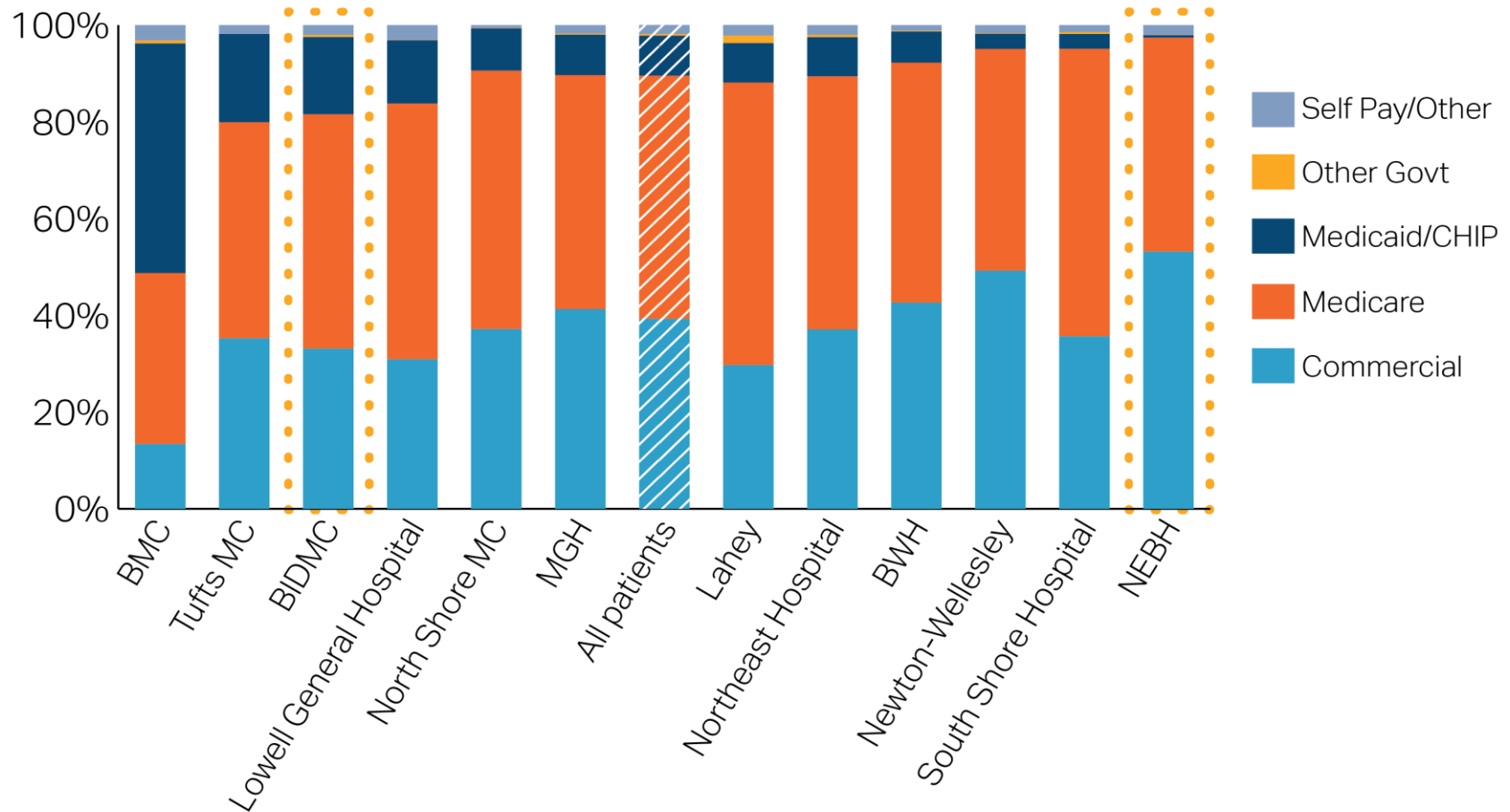
## BIDMC serves a relatively low proportion of government payer patients

### Payer Mix at AMCs - All 2015 Discharges



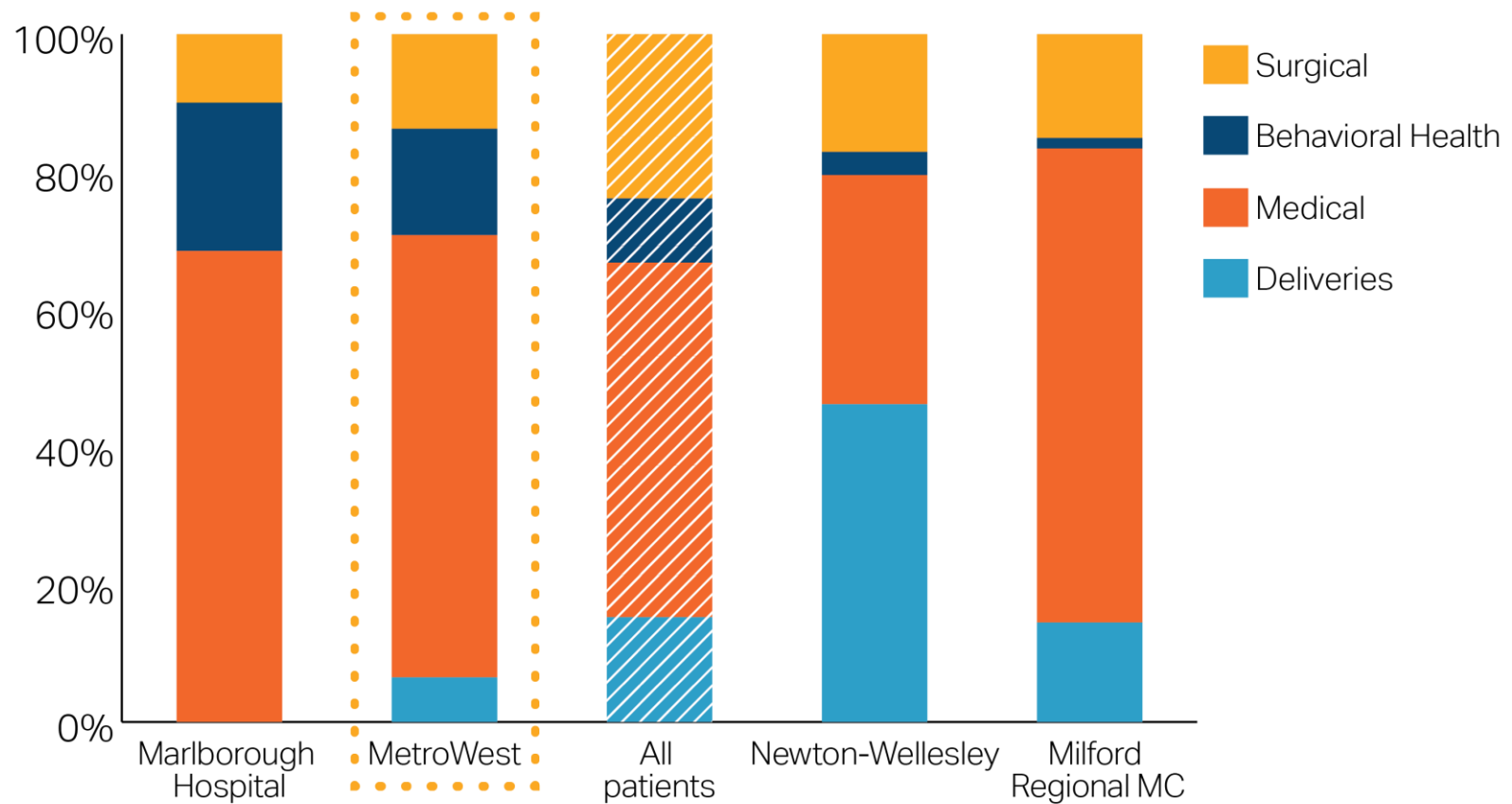
**NEBH also serves a low proportion of government payer patients. NEBH serves very few Medicaid patients in the most recent available data**

### Payer Mix for Inpatient Orthopedic and Musculoskeletal Services – 2015 Discharges for NEBH PSA Residents



## MetroWest and some BIDCO community hospitals provide substantial proportions of behavioral health services to their communities

### Inpatient Service Mix for Residents of MetroWest's PSA - 2015



## Principal findings: Access baseline

---

- The BIDCO community hospitals and MetroWest are important safety net providers for their communities, providing greater shares of services to Medicaid and Medicare patients than many other local community hospitals.
- In contrast, both BIDMC and NEBH serve low proportions of government payer patients, with NEBH providing a very low share of orthopedic and musculoskeletal services to Medicaid patients.
- MetroWest and some of the BIDCO hospitals (e.g., Cambridge Health Alliance and Anna Jaques Hospital) are also significant providers of behavioral health services to their communities.

## Cost impact: Questions examined

---

- 
- Will market leverage change?
  - Will prices change?
  - Will care shift to higher or lower priced providers?
  - Will utilization change?
-

## BIDCO would solidify its position as the state's second largest hospital network

### Commercial inpatient market share statewide

2010, 2013, and 2015 CHIA hospital discharge data

Hospital System	Statewide Share of All Discharges (2010)	Statewide Share of All Discharges (2013)	Statewide Share of All Discharges (2015)	Share of Discharges post-Transactions
Partners	27.8%	29.8%	28.6%	28.6%
<b>BIDCO</b>	<b>6.8%</b>	<b>7.4%</b>	<b>10.5%</b>	<b>13.4%</b>
Lahey	2.3%	4.7%	7.6%	7.6%
UMass	7.0%	6.7%	6.8%	6.8%
Steward	5.3%	6.6%	6.1%	6.1%
All Other Combined	50.8%	44.8%	40.5%	37.6%

## The parties would become the largest providers of inpatient orthopedic and musculoskeletal services in the state and in many local areas

### Commercial Market Shares for Inpatient Orthopedic and Musculoskeletal Services in NEBH's PSA Post-Affiliation

2015 CHIA hospital discharge data

Hospital System	Share of commercial orthopedic/musculoskeletal discharges
<b>BIDCO + NEBH</b>	<b>35.3% (7.3% + 27.9%)</b>
Partners	30.5%
Lahey	9.5%
Wellforce	6.2%
Steward	5.8%
All Other Combined	12.7%



## The addition of MetroWest would expand the BIDCO network into new areas west of Boston

### Post-Affiliation Commercial Shares for Inpatient Services in MetroWest's PSA

2015 CHIA hospital discharge data

Hospital System	Share of commercial discharges after BIDCO-MetroWest affiliation
Partners	41.6%
<b>BIDCO + MetroWest</b>	<b>22.2% (8.1% + 14.1%)</b>
UMass	11.8%
Milford Regional Med. Ctr.	5.9%
Boston Children's Hospital	4.2%
All Other Combined	14.2%

## NEBH joining BIDCO would significantly increase market concentration for orthopedic and musculoskeletal services

### Inpatient HHIs for orthopedic and musculoskeletal services

2015 CHIA hospital discharge data

Hospital PSA	Pre-Affiliation HHI	Post-Affiliation HHI	HHI change
<b>MetroWest</b>	2,655	2,936	<b>+281</b>
<b>NEBH</b>	1,948	2,357	<b>+409</b>
<b>BIDMC</b>	2,314	2,803	<b>+489</b>
<b>BID-Plymouth</b>	1,927	3,459	<b>+1,532</b>
<b>BID-Milton</b>	2,357	3,611	<b>+1,255</b>
<b>BID-Needham</b>	3,365	3,981	<b>+615</b>
<b>CHA</b>	2,554	2,987	<b>+433</b>
<b>Anna Jaques</b>	1,985	2,876	<b>+891</b>
<b>Lawrence General</b>	1,771	2,307	<b>+537</b>

## MetroWest joining BIDCO would also increase market concentration, particularly if NEBH also joins BIDCO

### Inpatient HHI calculations for all services: MetroWest and BID-Needham PSAs

2015 CHIA hospital discharge data

Hospital PSA	BIDCO - MetroWest transaction			Combined impact of both BIDCO transactions		
	Pre-Affiliation HHI	Post-Affiliation HHI	$\Delta$ HHI	Pre-Affiliation HHI	Post-Affiliation HHI	$\Delta$ HHI
<b>MetroWest</b>	2,256	2,486	<b>+229</b>	2,256	2,592	<b>+335</b>
<b>BID-Needham</b>	3,370	3,454	<b>+84</b>	3,370	3,584	<b>+214</b>

## Changes in NEBCIO physician rates are likely to result in a small to moderate increase in health care spending

### Impact on total medical spending of NEBCIO and MWPS physicians moving to BIDCO rates

HPC analysis of CHIA relative price data for three largest commercial payers

	Average Annual \$ Change in Revenue	Approximate % Impact to Regional TME
<b>NEBCIO physicians</b> (beginning 2017)	Up to \$4.5 million dollar increase	Up to 0.04% increase
<b>MWPS physicians</b> (beginning 2018)	No substantial impact	No substantial impact

## The parties could reduce spending through changes in referrals and utilization, but the likelihood and extent of savings is unclear

### NEBH transaction

- BIDCO could reduce spending by directing more orthopedic care to NEBH rather than higher-priced/less-efficient providers. However, BIDCO already has strong incentives to refer risk patients to efficient providers.
- Spending could decrease if BIDCO hospitals adopt NEBH's efficient utilization practices. The parties are planning this effort, but have not yet developed a timeline or identified resource commitments that would allow us to assess the likelihood or scope of savings.

### MetroWest transactions

- If MetroWest attracts more commercial patients away from higher-priced providers, it would result in lower health care spending. However, based on analyses of trends for other BIDCO-affiliated community hospitals to date, it is not clear that such a shift would occur.

## Principal findings: Cost and market impact

---

- The proposed transactions would increase market concentration and solidify BIDCO's position as the second largest hospital network in the Commonwealth. This could strengthen BIDCO's ability to negotiate higher prices or other favorable contract terms.
- As NEBCIO physicians join BIDCO contracts, there would be a small to moderate increase in total health care spending of up to \$4.5 million annually.
- If BIDCO retains its low to mid-range prices and redirects volume away from higher-priced systems, the transactions may reduce health care spending. However, BIDCO has had limited success to-date redirecting commercial patients away from higher-priced systems.

## Principal findings: Care delivery and quality impact for NEBH transaction

---

- Differences in performance between the parties on metrics related to orthopedic and musculoskeletal care quality, combined with the existing care delivery infrastructure of BIDCO, suggest potential for NEBH to help BIDCO hospitals improve performance on key quality measures
- However, the parties have not yet developed specific plans, timelines, or resource commitments to transmit best practices to non-owned BIDCO hospitals

## Principal findings: Care delivery and quality impact for MetroWest transactions

---

- The transactions are unlikely to significantly impact MetroWest's overall quality.
- However, clinical affiliation with BIDMC may improve performance in targeted areas (e.g. patient experience)
- Several specific elements of the BIDMC-HMFP-MetroWest clinical affiliation suggest the potential for some quality and care delivery improvement, including:
  - Enhanced electronic information sharing between BIDMC and MetroWest
  - Placement of BIDMC/HMFP staff at MetroWest in specific specialty service lines, particularly surgery and obstetrics
  - Capital investment by MetroWest to enhance its physical plant and equipment



## Principal findings: Access impact

---

- NEBH has stated it is committed to increasing access to its services for Medicaid patients. However, It is unclear how the affiliation with BIDCO would specifically help to increase access.
- The MetroWest transactions may increase access to certain services:
  - Evidence suggests that expansion of services targeted in BIDMC clinical affiliation will help to fill identified community needs.
  - The proposed transactions could represent an opportunity for collaboration among BIDCO hospitals serving significant behavioral health populations if the parties make such collaboration a priority

## Next steps

---

- Per M.G.L. c. 6D, § 13, the HPC issues a preliminary report
- The parties will have the opportunity to respond, and the Commission will issue a final report thereafter
- The parties may not close the transactions until at least 30 days following the issuance of the final report