

The Massachusetts Health Policy Commission  
Cost and Market Impact Review  
HPC-CMIR-2017-2  
Preliminary Report Response

*Joint response for the proposed transaction to create  
BILH and BILH CIN on behalf of*

- A. Beth Israel Deaconess Medical Center, Inc.
- B. Mount Auburn Hospital
- C. New England Baptist Hospital
- D. Lahey Health System, Inc.
- E. Seacoast Regional Health Systems, Inc.
- F. Beth Israel Deaconess Physician Organization,  
LLC d/b/a Beth Israel Deaconess Care  
Organization
- G. Mount Auburn Cambridge Independent Practice  
Association, Inc.

## Responding Organization and Context

Given the Health Policy Commission's ("HPC") decision to present its Cost and Market Impact Review ("CMIR") of transactions identified as HPC-CMIR-2017-2<sup>1</sup> in a single Preliminary Report (the "Preliminary Report") dated July 18, 2018, all entities involved in the aforementioned transactions (together, the "Parties") have agreed to respond in kind.

During the course of the HPC's July 18 meeting, Commissioners raised a number of questions about the Preliminary Report and the transaction. This submission addresses many of those questions including transaction efficiencies and plans for operational innovation. Commissioners also raised concerns regarding access and cost, issues that were also identified as being of concern to the Attorney General in her letter dated July 9, 2018. While the Parties may disagree with many of the Preliminary Report's findings, we remain fully engaged in addressing those concerns with the Health Policy Commission, the Massachusetts Department of Public Health, the Federal Trade Commission and the Attorney General's Office to demonstrate our commitment to operate in the best interests of the Commonwealth and the patients the Parties serve.

### A. Executive Summary

#### Key Takeaways

- Beth Israel Lahey Health ("BILH") will deliver improved access, quality, efficiency, and value – and we have concrete plans to do so.
- We offer what the HPC has been seeking – market-based competition to address unwarranted price variation and other market dysfunction.
- The "Willingness-to-pay" ("WTP") model is not appropriate as applied to Massachusetts in the Preliminary Report – it failed to predict past impacts of mergers, drastically overstated potential price increases, and ignored Massachusetts' regulatory structure.
- The Parties provide essential clinical services, including behavioral health, which they would be challenged to maintain absent the formation of BILH.
- BILH is estimated to create \$149 million to \$270 million in annual efficiencies and total savings.

Recognizing the harmful effects of unwarranted price variation, the HPC has appropriately called for competition among healthcare providers to address this market dysfunction. Effective competition is exactly what BILH will provide. BILH will represent the first time that a system will have the reputation, geographic coverage, and value position to challenge the dominant health system's market position, and pressure such system to reevaluate its pricing strategy. BILH has also planned specific initiatives to improve access to care and population health, and to achieve efficiencies that will benefit the citizens of the Commonwealth that cannot be realized by the Parties on their own.

The Parties appreciate the enormous effort of the HPC in analyzing the proposed affiliation and producing its Preliminary Report, and respectfully request consideration of the additional information provided in this response. We ask that the HPC evaluate the creation of BILH, consistent with the

---

<sup>1</sup> HPC-CMIR-2017-2: The Proposed Merger of Lahey Health System ("Lahey"); CareGroup and its Component Parts, Beth Israel Deaconess Medical Center ("BIDMC"), New England Baptist Hospital ("NEBH"), and Mount Auburn Hospital ("MAH"); Seacoast Regional Health Systems; and Each of their Corporate Subsidiaries into Beth Israel Lahey Health; and The Acquisition of the Beth Israel Deaconess Care Organization by BILH; and The Contracting Affiliation Between BILH and Mount Auburn Cambridge Independent Practice Association ("MACIPA").

HPC's prior statements regarding its goals and the need for market-based competition, as well as the realities of the Massachusetts market.

At the board meeting on July 18, 2018, where the Preliminary Report was presented, Commissioners raised a number of questions about the Preliminary Report and sought clarification from the Parties about the following: what BILH will accomplish; why these accomplishments require the formation of BILH; estimates of savings and market efficiencies; how the Parties have supported community hospitals and will continue to do so; how BILH will transform care delivery; how to avoid above-market price increases; the impact on the competitive market and the dominant health system; how this is different from the formation of the dominant health system in 1994; how to protect providers serving low income populations; the viability of the Parties with and without the transaction; and how this will be a win for the Commonwealth and for all providers.

The Commissioners also raised questions about the WTP methodology. Chair Stuart Altman noted that "Massachusetts is different," referring to the regulatory regime that differs from other markets where the WTP was applied. He also described the model results as "hypothetical." Commissioner David Cutler noted of the conclusions drawn from the WTP model in the Preliminary Report, "The models here are more difficult, in terms of forecasting the future...one would be less certain in this case than in other cases because of all the unknowns."

We address the range of the Commissioners' questions throughout this response and provide additional support that reinforces the initial reaction of the Commissioners who questioned the WTP's applicability in Massachusetts. We also pose additional questions for consideration in the Final CMIR Report ("Final Report"). We challenge the applicability and reliability of other key methodologies and conclusions in the Preliminary Report and urge the HPC to reconsider its assessment as it produces its Final Report.

### ***A Reminder of BILH Commitments***

At the outset, we note the following characteristics and commitments of the BILH Parties which are well-documented elsewhere and described in detail in this response:

- BILH is committed to transformational, innovative reforms for the benefit of patients, purchasers, and consumers; these reforms require the scale and combined resources of all Parties
- The formation of BILH will yield substantial cost savings and efficiencies in Massachusetts
- BILH community hospitals will be sustained and strengthened through BILH, as evidenced by prior acquisitions by the Parties; BILH will provide the financial strength to maintain these efforts
- BILH providers currently hold a lower-cost, high-quality market position, which they are committed to maintain to remain competitive through the combined system
- BILH is committed to underserved populations

In BILH, the Parties will create a forward-thinking, transformative, and geographically distributed healthcare delivery network to provide enhanced access to high-value care for patients in Eastern Massachusetts, meet the needs of purchasers seeking to reduce medical expenditures, and advance progress toward Massachusetts' stated goals of reducing healthcare spending and promoting adoption of alternative payment methodologies ("APMs"). The Parties have been committed to this vision from the start,<sup>2</sup> and BILH will strive to achieve essential efficiencies the individual Parties cannot achieve on their own and provide meaningful competition to the dominant health system.

---

<sup>2</sup> A comprehensive explanation of how BILH will address the core concerns of the HPC and AGO – *to provide market-based competition, help reduce costs, improve access, quality, value, and equity, and address market dysfunction* – was previously submitted to the HPC and is now available publicly in Appendix 1.

**The Substantial Cost of Doing Nothing**

The Preliminary Report significantly understates the financial challenge that the Parties face absent the transaction. Including updated and corrected financial data, we show in this response that the Parties have experienced significantly reduced operating performance over the past three years (including a combined operating loss of \$70.8 million in Fiscal Year (“FY”) 2017), as well as reduced days cash on hand and increased capital needs due to aging infrastructure. Unless BILH is formed, many of the Parties will be increasingly challenged to sustain their current level of investment in clinical services, behavioral health programs, and population health initiatives they provide to the communities they serve in Eastern Massachusetts.

**BILH Will Yield Significant Cost Savings through Efficiencies**

There are a variety of efficiencies that will only be gained through this transaction, most of which will directly benefit the Commonwealth and all of which will benefit our patients. These estimates and accompanying explanations are enumerated later in this response and summarized below:

Figure 1: Estimated Annual Efficiency Impact

Category of Efficiency	Estimated Annual Impact <sup>3</sup>
Care redirection from higher-priced provider	\$9 million to \$14 million <sup>4</sup>
Total medical expense (“TME”) savings related to select integration initiatives	\$52 million to \$87 million
Cost synergies	\$42 million to \$66 million
Other savings as a result of transaction	\$46 million to \$103 million
<b>Total Efficiencies</b>	<b>\$149 million to \$270 million</b>

In addition to the efficiencies described in Figure 1, we believe that the competitive pressure created by BILH on the dominant health system could significantly impact unwarranted price variation. As detailed later in this response, a minor variation in the dominant health system’s pricing strategy could result in significant savings to the Commonwealth.

**BILH Initiatives**

In order to turn this vision into action, the Parties have moved forward with the development of concrete plans for integration that will ensure concerted progress toward these goals. Among the 32 teams and over 240 stakeholders involved in integration planning to date, we highlight a sampling of BILH priorities and, when applicable, the estimated TME savings to the Commonwealth. **More detail on these initiatives and their potential impact can be found on Pages 37-47 of this response.**

- **Behavioral Health:** Transform patient access through an innovative and proven system-wide model to integrate behavioral health into primary care practices. Reduce emergency department (“ED”) boarding for patients needing inpatient services through centralized bed management. Increase patient access to community-based services through dynamic long-term investments. Estimated TME savings are \$23 million to \$58 million.

<sup>3</sup> Estimated by year five of operation as BILH. For detail on these categories and their calculations, please see Sub-section 3, pages 21-25.  
<sup>4</sup> HPC Preliminary Report, page 55.

- **Pharmacy:** Improve patient safety, clinical efficacy, and cost-effective prescribing through the development of a Pharmacy and Therapeutics (“P&T”) Committee overseeing drug use policy and formulary management. Implement a novel approach to extended pharmacist intervention for high-risk patients in transitions of care. Reduce pharmacy supply costs through new programs, services, and contracts. Estimated TME savings are \$8 million.
- **Continuing Care:** Provide seamless and coordinated care close to patients’ homes by creating a consolidated home health program. Reduce use of unnecessary institutional post-acute care by creating a high-performing preferred extended care network. Enhance patients’ experience and improve population health outcomes through advanced geriatric services and investment in next-generation care management infrastructure. Estimated TME savings are \$15 million.
- **Primary Care:** Create proximate and timely patient access through a system-wide nurse triage program and other fundamental access enhancements. Reduce administrative burden and enhance workforce development through new workflow and training approaches. Estimated TME savings are \$6 million.
- **Ambulatory Care:** Develop an integrated service center that enables patients and referring providers to efficiently find and schedule the right primary care physician or specialist, via digital or telephonic access.
- **Supply Chain:** Centralize purchasing and establish a value analysis process and structure to ensure the introduction and ongoing use of clinically-effective and cost-conscious clinical products, technologies, and services.
- **Laboratory:** Deliver higher quality and more cost-effective laboratory and pathology services by reducing outsourcing of select commercial reference testing and unified purchasing of lab equipment and supplies. Reduce the high costs of turnover through internal workforce development.
- **Clinically Integrated Network (“CIN”)/Population Health Management:** Establish a centralized claims and clinical data repository for advanced population health analytics. Improve population health through medical management initiatives. Standardize best practices in care and quality management. Enhance pharmacy support to patients in non-hospital settings.

Against the backdrop of these commitments, we wish to address some concerns and suggestions regarding the Preliminary Report.

***Attributes of the Parties and the Need to Form BILH***

While the Preliminary Report highlighted many features of the proposed system and positive past contributions of the Parties that will constitute BILH, the Preliminary Report did not recognize how challenging it will be for the Parties to continue to contribute individually as they have to the health of the Commonwealth. We request that the Final Report recognize these past contributions, the challenges the Parties face in the absence of forming BILH, and the new opportunities only possible through the formation of BILH, including:

- **Behavioral Health:** the Parties, in particular Lahey, have led the effort to provide innovative behavioral health services. Without BILH, Lahey faces financial challenges that will limit its ability to continue to provide these services.
- **Lower-Cost Providers:** the Parties’ track record of maintaining a lower-cost, high-quality position through the growth of their respective systems, as stated in the Preliminary Report;<sup>5</sup>

---

<sup>5</sup> “As Lahey and BIDCO have grown by affiliating with or acquiring new community hospitals, their prices have not generally risen relative to competitors, and their spending has grown at generally the same rate as the rest of the market based on current available data.” Source: HPC Preliminary Report, page 2.

- **Stronger Community Hospitals:** the Parties’ significant past success in supporting and strengthening care delivery, particularly enhancing care in local community hospitals – which requires financial investment that may not be possible without BILH;
- **Commitment to the Commonwealth’s Safety Net:** the Parties’ critical role in supporting the safety net for the Commonwealth’s most vulnerable and low-income populations, including its unparalleled commitment to behavioral healthcare, which can only be maintained and expanded through the combined resources of the Parties;
- **Innovation and Transformation Goals:** the strong potential for transformative market improvements, access, cost-savings, efficiencies, and care delivery improvements associated with the formation of BILH;
- **New Market Options to Benefit Consumers:** the potential for BILH to partner with insurers on innovative health plan designs that can increase competition, improve equity, and reduce costs; and
- **Impact of BILH on the Dominant Health System:** the potential for the sole dominant health system to lower its prices, or slow the growth rate of its prices, in response to the first meaningful competition it will have faced, and the savings that would result.<sup>6</sup>

### ***Unique Characteristics of the Massachusetts Market***

We share the concern expressed by many of the Commissioners that the Preliminary Report did not adequately address the unique nature of the healthcare market in Massachusetts. While many of these factors were identified in the Preliminary Report, the implications of this unique environment were not fully incorporated into its conclusions. We respectfully urge that the Final Report and its conclusions more appropriately reflect and rely on the following findings, observations, and market realities, including:

- **Chapter 224 and Enforcement of the Cost Growth Benchmark:** the Massachusetts regulatory environment, and its effectiveness in controlling price growth in the Massachusetts market, enforcing the Cost Growth Benchmark, and guarding against excessive growth in TME;<sup>7</sup>
- **Deteriorating Market Environment for Providers:** the financial challenges experienced by the Parties over the past three fiscal years, and the risk to their ability to continue to be viable competitors and to adequately invest in current clinical services absent the transaction;
- **Destabilizing Impact of Status Quo:** the persistent destabilizing and harmful impact of the status quo, including a dominant health system that impedes effective market competition;
- **Market-Based Solution to Unwarranted Provider Price Variation:** the HPC’s stated need for market-based solutions to the ongoing challenge of unwarranted price variation in the provider market in Massachusetts.<sup>8</sup>

### ***WTP Model Fails When Applied to Past Transactions***

When we applied the WTP model to past transactions in Massachusetts, particularly those involving BIDMC and Lahey, **the WTP model predicted higher post-merger prices but no such changes actually occurred.** This clear failure raises serious doubts about the accuracy and validity of the WTP

---

<sup>6</sup> This addition of competition to the market differentiates this proposed transaction from the formation of the dominant health system in 1994, when there was not meaningful competition.

<sup>7</sup> HPC Board Meeting Presentation, March 29, 2017, describing HPC enforcement of the Cost Growth Benchmark through enactment of the Performance Improvement Plan regulation. Available at <https://www.mass.gov/files/documents/2017/03/zx/20170329%2520-%2520Commission%2520Document%2520-%2520Presentation%2520vFinalAM.pdf>.

<sup>8</sup> HPC, Factors Underlying Variation in Inpatient Hospital Prices, June 2017. Available at <http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/publications/factors-underlying-variation-in-inpatient-hospital-prices.pdf>.

model for a state with the regulatory constraints and market dynamics of Massachusetts. Despite these and other flaws with the WTP model (enumerated in this response), the Preliminary Report presented the WTP model's raw calculation as a virtual certainty, without any acknowledgment of these serious limitations.

### ***WTP Model Does Not Incorporate the Effects of Chapter 224***

We believe the Preliminary Report did not incorporate the impact of the Cost Growth Benchmark and other regulatory controls to effectively limit the growth in prices and spending. This was especially surprising because some Commissioners and staff have cited the effectiveness of the Cost Growth Benchmark and other controls to provide such limits.<sup>9</sup> Without this additional context, the Preliminary Report raised concerns about theoretical cost increases in a hypothetical market that does not meaningfully reflect the actual Massachusetts market and regulatory environment.

### ***WTP Model Ignores Pricing Pressure on the Existing Dominant Health System***

Another important limitation of the Preliminary Report was the assumption that the dominant health system in the region would not be affected by the formation of BILH. That ignores the reality that, to this point, the dominant health system has not faced meaningful competition. The Preliminary Report did not adequately consider the potential impact of the introduction of meaningful competition in Eastern Massachusetts and the overarching impact of BILH creating a high-value option for purchasers and consumers. The Parties in BILH look forward to the opportunity to bring meaningful competition to the market, and to drive true savings to purchasers and consumers. Indeed, it is only through this increase in competition that BILH can achieve its objectives.

In fact, the formation of BILH is the only realistic option in the Eastern Massachusetts market that could combine the necessary components of reputation, price position, geographic coverage, and population health management capabilities to be a true competitor to the dominant health system. Since the regulatory model in Massachusetts focuses on limiting total growth in healthcare spending, it tends to lock-in unwarranted price variation. Therefore, market-based competition is necessary to address unwarranted price variation. Without competition, the underlying dysfunction in the Massachusetts market will continue, high-priced providers will continue to extract higher payments, and inequity in the system as described by the Attorney General will be maintained,<sup>10</sup> leading to further destabilization of the remaining providers. In a market with significant unwarranted price variation, true competition from a high-value health system will provide the real possibility of a meaningful preferred healthcare solution for insurers, employers, and consumers.

There is evidence to support the conclusion that increased competition can have an impact on costs, of which price is a significant variable. Contrary to the findings of the Preliminary Report,<sup>11</sup> there is research to support the notion that the formation of a strong, organized competitor to a dominant provider can, in fact, affect healthcare costs. Research performed by the Healthcare Financial Management Association and supported by the Commonwealth Fund has found that lower-cost markets tend to have competition among a few health systems that each have broad geographic coverage with highly aligned physician groups.<sup>12</sup>

---

<sup>9</sup> Stuart Altman and David Cutler were referenced at the following source: Bartlett, Jessica "State Maintains Strict Limit on Health Care Spending for 2019," Boston Business Journal, April 15, 2018. Available at <https://www.bizjournals.com/boston/news/2018/04/25/state-maintains-strict-limit-on-health-care.html>. Also, David Auerbach was referenced at the following source: Lannan, Katie "Mass. Commission Outlines Health Care Savings of \$4.7B," State House News Services, Reported by the Worcester Telegram, March 29, 2018. Available at <http://www.telegram.com/news/20180329/mass-commission-outlines-health-care-savings-of-47b>.

<sup>10</sup> Examination of Healthcare Cost Trends and Cost Drivers Pursuant to G.L. c. 12C, § 17, Report for Annual Public Hearing Under G.L. c. 12C, § 17, Commonwealth of Massachusetts Office of the Attorney General, October 13, 2016. Available at <https://www.mass.gov/files/documents/2016/10/ts/cc-market-101316.pdf>.

<sup>11</sup> HPC Preliminary Report, page 56.

<sup>12</sup> Landman, James H., PHD, JD, Moore, Keith, MCP, Muhlestein, David B., PHD, JD, Smith, Nathan J., PHD, and Winfield, Lia D., PHD. "What is Driving the Total Cost of Care? An Analysis of Factors Influencing Total Cost of Care in U.S. Healthcare Markets," Healthcare Financial Management Association, 2018. Available at <https://www.hfma.org/tcoc/>.

### ***Goal of this Response to Preliminary Report***

In this response, we strongly urge the HPC to consider critically the Massachusetts-specific context for the proposed affiliation. Several Commissioners flagged these concerns explicitly and here we provide additional information to permit both the Commissioners and the Preliminary Report authors the opportunity to reconsider the creation of BILH in the proper context for Massachusetts.

We also address the HPC's interest in better understanding the unique and exciting commitments of BILH to improve the health of the population and cost-effectiveness of care in Massachusetts by providing detailed descriptions of opportunities for improvement that have been identified by the Parties to date.

Therefore, in addition to providing additional information and analysis, we request that the Final Report address each of these questions.

- On what basis is it valid to apply the WTP model if it has failed to predict past transaction results, including those involving BIDMC and Lahey, following passage of Chapter 224 in Massachusetts?
- If the WTP model is used despite its many flaws, how will the Final Report adjust the model's calculation of potential price increases to address the impact of Massachusetts' regulatory constraints, past behavior of the Parties, the presence of a dominant provider, and other factors?
- How will the HPC calculate and incorporate the potential savings from competitive pricing pressure on the dominant health system into the estimated market impact?
- If BILH is not formed, how will current or future provider organizations compete effectively with the dominant health system or provide market-based solutions to unwarranted price variation?
- How will the HPC incorporate market and TME cost saving efficiencies in its estimate of market impact in the Final Report?
- How will the HPC acknowledge the significant support the Parties have provided to strengthen their community hospitals in the Final Report?
- How will the HPC consider BILH's significant past and future commitment to behavioral health services for the Medicaid population in its assessment of BILH's commitment to serving the underserved?
- How will the HPC incorporate BILH's contribution to effective, high-value, tiered or limited network products into its estimate of market impact?
- If BILH does not move forward, what will replace the care improvement initiatives identified by the Parties?

The remainder of this report describes in detail our concerns with several analyses and conclusions from the Preliminary Report (*B. Rebuttal to Preliminary Report Findings*), a description of new programs and initiatives that will be offered by BILH (*C. Transforming Care and Value in Massachusetts*), and an appendix with additional supporting material.

## **B. Rebuttal to Preliminary Report Findings**

The Preliminary Report inappropriately applied analytic methods to the Eastern Massachusetts healthcare landscape, some used for the first time in a CMIR process. It did not capture BILH's commitments, intentions, and the intensive regulatory landscape that limits BILH's ability to extract unwarranted price increases. As a result, the Preliminary Report drew conclusions that overstated the potential negative impact and did not adequately capture the potential positive impact of this transaction. We counter the Preliminary Report's conclusions in the following five sub-sections:

1. WTP model is not appropriate for predicting post-merger spending impacts in Massachusetts
2. Formation of BILH will create effective market competition in Massachusetts
3. Formation of BILH will yield significant efficiencies in Massachusetts
4. BILH has a track record and commitment to bolstering community hospitals
5. BILH is committed to serving underserved populations

## 1. WTP Model is Not Appropriate for Predicting Post-Merger Spending Impacts in Massachusetts

### Key Takeaways

- The Preliminary Report grossly overstated the potential impact of the merger on pricing and commercial spending in Massachusetts.
- The WTP model inaccurately predicted price increases for past mergers and affiliations in Massachusetts, when in reality no price increases occurred.
- The Preliminary Report ignored the intensive regulatory oversight in Massachusetts when applying the WTP model to estimate the proposed transaction's impact on spending.
- The Preliminary Report failed to acknowledge limitations regarding the accuracy, reliability, and precision of the WTP model.
- The WTP model ignores competitive pressure on the dominant health system.
- The WTP model does not account for market dynamics and competitive responses.
- The Parties have maintained lower pricing levels after past mergers or affiliations.

The Preliminary Report grossly overstated the potential impact of the merger on pricing and commercial spending in Massachusetts. The Preliminary Report presented an analysis of the competitive effects of the merger based on the WTP model to argue that BILH will not only seek, but also receive commercial rate increases far above historical and projected cost growth benchmarks. The Parties fundamentally disagree with how the Preliminary Report applied the WTP analytic model to estimate the impact of the merger on prices and spending, and the conclusions reached as a result. The problems with the HPC's application of the WTP model in this context are enumerated below.

### ***The WTP Model Inaccurately Predicted Price Increases for Past Mergers and Affiliations in Massachusetts, when in Reality No Price Increases Occurred.***

Past mergers and affiliations in Massachusetts that had meaningful changes in WTP have not led to the price increases predicted by the raw WTP calculation. BILH engaged economic experts to identify recent transactions for review in which the two-stage model approach employed by the HPC predicted a positive change in WTP of at least 4%. As a result, three recent mergers or affiliations were examined: Lahey's acquisition of Winchester Hospital in 2014; BIDCO's inclusion of Cambridge Health Alliance ("CHA"), Lawrence General Hospital ("Lawrence General"), and Anna Jaques Hospital ("AJH") in 2014; and Lahey's acquisition of Northeast Health System ("Northeast") in 2012. For each of these affiliations, the BILH economists estimated the change in WTP for inpatient services, and then used the HPC's own estimates to translate the change in WTP to a predicted change in price for inpatient services.<sup>13</sup> For the Lahey-Winchester affiliation, the model estimates that the transaction would lead to a 7% increase in WTP. When using the HPC's own estimates to translate this change in WTP to a predicted change in price, the model estimates a predicted price increase of 3% to 4%. For the BIDCO affiliation, the model calculated a 4% change in WTP, which implies a price increase of 1.5% to 3%, again based on the HPC's own estimates. Finally, for the Lahey-Northeast affiliation, the model

---

<sup>13</sup> Due to data limitations, the analysis was restricted to inpatient services only. Regardless, the implications drawn from this exercise – that the WTP model is ill-suited for making predictions about post-merger price increases in a market like Massachusetts – extend to the other segments examined by the HPC (outpatient services and physician services).

estimates that the transaction would lead to a 5% increase in WTP<sup>14</sup> and, again when using the HPC's own estimates to translate this change in WTP to a predicted change in price, the model estimates a predicted price increase of 4% to 5%. However, in all three cases, data show relative prices **did not materially change** following the transactions. Moreover, as acknowledged by the HPC itself in the Preliminary Report, "As Lahey and BIDCO have grown by affiliating with or acquiring new community hospitals, their prices have not generally risen relative to competitors, and their spending has grown at generally the same rate as the rest of the market based on current available data."<sup>15</sup>

Figure 2: Analysis of Select Past Transactions<sup>16</sup>

Transaction	Estimated Change in WTP	Predicted Change in Price	Actual Change in Price
Lahey-Winchester	7%	4%-5%	Zero
2014 BIDCO contracting affiliations <sup>17</sup>	4%	2%-5%	Zero
Lahey-Northeast	5%	4%-5%	Zero

Further detail on these analyses is available as Appendix 2.

***The Preliminary Report Ignored the Intensive Regulatory Oversight in Massachusetts when Applying the WTP Model.***

"Massachusetts is different." This statement was made by Chair Stuart Altman during the July 18, 2018 board meeting in the context of the Commonwealth's regulatory environment. The statement is also consistent with the actual environment as experienced by the Parties. Those three words embody the fundamental problem with applying the WTP model, particularly the WTP's raw results, to this affiliation to predict post-merger pricing and spending impacts.

The WTP model assumes there is a relatively free market for establishing pricing. Massachusetts is different. Few (if any) states have the dedicated resources and political mandate related to transparency of information, regulatory oversight, and accountability to consumers for performance as does Massachusetts, and certainly no other state in the country combines all of those factors.

- **Transparency of Provider Price information:** The Center for Health Information and Analysis ("CHIA") is tasked with tracking and publicly reporting healthcare provider information, including pricing. Providers cannot operate in Massachusetts outside of the public's knowledge, let alone the knowledge of regulators. This level of transparency is uncommon in nearly every other market in the United States. Providers in Massachusetts understand that unwarranted price increases will be in the public domain. They also understand that the HPC possesses the requisite information to determine if price increases are warranted or excessive, and to pursue corrective action.
- **Cost Growth Benchmark:** Among its many activities targeted to controlling cost and improving value, the HPC establishes an annual Cost Growth Benchmark for healthcare providers.<sup>18</sup> A first among states, this Cost Growth Benchmark, along with the transparency noted above, provides only a narrow corridor for price negotiations between providers and payers, especially as payers often cite the benchmark during negotiations in order to justify lower rates.

<sup>14</sup> Notably, the economic model used by the BILH economists to estimate the change in WTP for past transactions was able to closely replicate the change in WTP estimated in the Preliminary Report for the BILH transaction. That is, none of the findings in this section are driven by disparities in the model used by the HPC in the Preliminary Report when compared to the model used by the Parties.

<sup>15</sup> HPC Preliminary Report, page 2.

<sup>16</sup> As detailed in Appendix 2, the BILH economists calculate the change in WTP per discharge corresponding to each of these transactions, and then use the HPC's own estimated regression coefficients to calculate the predicted change in price resulting from the transaction.

<sup>17</sup> CHA, Lawrence General, and AJH.

<sup>18</sup> Chapter 224 of the Acts of 2012 established both the HPC and CHIA, as well as the state's Cost Growth Benchmark.

In 2016, an article co-authored by Commissioner David Cutler espoused the merits and impact of the Cost Growth Benchmark and its functionality in the market.

“By and large, the reduction in cost growth has had a lot to do with reduced price increases. Payer and provider rate negotiations are now conducted in light of the 3.6% target, and both payers and providers are aware that they will be subject to a performance-improvement plan through the HPC if their high spending could potentially jeopardize the Commonwealth’s ability to meet the benchmark. ...The volume of services has fallen as well, although not to the same extent. Hospital readmission rates in the Commonwealth are declining markedly, and many provider organizations have put in place high-cost case-management programs.”<sup>19</sup>

The regulatory regime in Massachusetts provides multiple safeguards against above-market, unwarranted price increases, including: the Cost Growth Benchmark, annual cost trends hearings and reports, and the threat of the imposition of Performance Improvement Plans (“PIPs”) if a provider organization is identified as having excessive health-status adjusted TME and threatens the Commonwealth’s ability to meet the Cost Growth Benchmark. In addition to the HPC, the Department of Public Health (“DPH”), and the Attorney General’s Office (“AGO”) assist in overseeing cost and prices through the mechanisms described below.

- **Accountability at Annual HPC Cost Trends Hearing and Cost Trends Report:** The annual healthcare cost trends hearing is a public event at which industry stakeholders, policymakers, and researchers come together to examine and address challenges and opportunities for improving care and reducing costs in the Commonwealth’s healthcare sector. Healthcare and industry leaders provide sworn testimony in advance of the hearing. CHIA and the AGO also participate in the hearing, and key questions are posed from Commissioners, as well as local and national experts to address the state’s performance under the Cost Growth Benchmark, the drivers of healthcare costs, and other healthcare reform efforts. The Annual Cost Trends Report is the yearly culmination of the HPC’s examination and research, and results in a series of recommendations to guide policymakers, purchasers, employers, consumers, and other market stakeholders to achieve common cost-containment and care-improvement goals.
- **Department of Public Health “Determination of Need” Program and Enforcement:** The purpose and objective of the newly-reformed Determination of Need (“DoN”) program is to align the Commonwealth’s DoN process, under the guidance of the DPH and the Secretary of Health and Human Services, with the HPC’s review of significant market proposals. The stated goals of the DoN program are to encourage competition within the Massachusetts healthcare sector with a public health focus; to support the development of innovative health delivery methods and population health improvement strategies within the healthcare delivery system; and to ensure that resources will be made reasonably and equitably available to every person within the Commonwealth at the lowest reasonable aggregate cost. The DPH’s goal is to advance the Commonwealth’s goals for cost containment, improved public health outcomes, and delivery system transformation.
- **Accountability for Excessive, Unwarranted Cost Growth:** The regulatory regime goes beyond monitoring and measurement of targets by imposing consequences and remedies when targets are not met. In 2017, a PIP process was established<sup>20</sup> in regulation for organizations or entities that exceed the cost growth benchmark and are identified as having excessive TME in a given

---

<sup>19</sup> Cutler, David, PhD, Walsh, Steven M., JD. “The Massachusetts Target on Medical Spending Growth.” NEJM Catalyst. May 11, 2016. Available at <https://catalyst.nejm.org/massachusetts-target-medical-spending-growth/>.

<sup>20</sup> Established through 958 CMR 10.00.

calendar year.<sup>21</sup> The PIP process is rigorous, as it requires an identified organization to create and implement a multi-faceted corrective plan within eighteen months.

The Preliminary Report stated the WTP model “has been accepted by courts in a range of recent anti-trust cases.”<sup>22</sup> We cannot dispute this. But, it is important to recognize that neither the Federal Trade Commission (“FTC”) nor the courts have applied the WTP model to estimate post-merger pricing and spending impacts from a healthcare provider merger in a state like Massachusetts. The FTC’s jurisdiction is national, which means they investigate healthcare transactions across all types of geographies. The cases referenced in the Preliminary Report are from states such as Idaho, Illinois, Ohio, and Pennsylvania – none of which compare to Massachusetts in terms of regulatory oversight of the healthcare industry. There are also markedly different competitive dynamics that were present in those cases than are present here.<sup>23</sup>

As a result, the conditions described above, which are unique to the Commonwealth, make it impossible to circumvent regulatory and public scrutiny, render the magnitude of the predicted price increase implausible to implement, and ultimately negate the effectiveness and applicability of the WTP model to predict post-merger price and spending increases in Massachusetts.

### ***The Preliminary Report Ignores Warnings about the Accuracy, Reliability, and Precision of the WTP Model***

More generally, the Preliminary Report inappropriately imparted a sense of “precision” when it comes to the estimated price increases. There is no discussion of the technical limitations or statistical significance of the WTP model. During the July 18, 2018 board meeting, Chair Stuart Altman acknowledged the imprecision of the WTP model stating the following: “...It is still an estimate. It is still highly probabilistic. But it’s the best we have, and I think it lays out a wide degree of error. There’s just no question. So, I think we carry this out to four decimal places, but the reality is, it’s highly hypothetical.”

Further, the Preliminary Report claimed the estimate to be highly conservative, without acknowledging the likelihood that it may be substantially overestimated. A telling indicator is that the academic literature that the Preliminary Report cited calls for caution while interpreting the effects of these models.<sup>24</sup>

### ***The WTP Model Ignores Competitive Pressure on the Dominant Health System***

The WTP model does not consider another key aspect of the Massachusetts environment: the existence of a dominant health system that has maintained its disproportionate market and price position, despite the regulatory conditions mentioned above. Since the regulatory model focuses on limiting total growth in healthcare spending, it tends to lock-in unwarranted price variation. Therefore, market-based competition is necessary to address unwarranted price variation. That is why the formulation of BILH is so essential.

---

<sup>21</sup> The HPC may seek a PIP if “the Commission identifies significant concerns about the [organization’s] costs and determines that a Performance Improvement Plan could result in meaningful, cost-savings reforms.” (958 CMR 10.04 (1)) If a PIP is required, the organization has 45 days to submit the plan to the HPC and the organization “shall be subject to compliance monitoring and regularly provide both public and confidential reports upon progress as specified in the approved Performance Improvement Plan and as may be otherwise specified by the Commission.” (958 CMR 10.11 (2)).

<sup>22</sup> HPC Preliminary Report, page 44.

<sup>23</sup> Even though the HPC’s regression model relating pricing to WTP is estimated using data from Massachusetts, it does not appropriately account for the effect of the Massachusetts Cost Growth Benchmark. In particular, the HPC’s model specification identifies the effect of WTP on pricing by comparing WTP levels and prices across hospital systems at a given point in time (i.e., a cross-sectional or a pooled cross-sectional comparison). The specification does not estimate the effect of WTP on pricing by examining changes in WTP for a hospital system over time and relating those changes to changes in prices charged by that system over time. As a result, the specification does not adequately capture the effect of the Chapter 224 regulation which would restrict the ability of a provider to increase prices over time, such as in response to an increase in WTP, but leaves the current pricing differences across systems baked in.

<sup>24</sup> Specifically, HPC Preliminary Report, page 44, footnote 152 cites Garmon, Christopher, “The accuracy of hospital merger screening methods,” 48 RAND J. OF ECON. 1068 (2017). This article includes the following caveat: “However, the relationship between the new screening tools and the post-merger price changes is not precise or robust to alternate price change measurements, so care should be taken when using the tools to screen mergers for further investigation.”

Only BILH can be that added dose of competition, providing a first-ever strong and credible alternative to the dominant health system for payers, rather than the disaggregated and uncoordinated pool of competition that exists today. Yet the HPC's analysis does not account for downward pricing pressure exerted on the dominant health system as a result of the merger, and instead, solely focuses on the raw WTP calculation of the change in the bargaining position of the Parties vis-à-vis the insurers.

Allowing only half the story to be told renders this application of the WTP model as further flawed. We urge the HPC to address this shortcoming by including the downward pressure on the dominant health system's pricing (applied within or outside the WTP model) to help appropriately adjust the WTP results for the unique market conditions brought about by the presence of a dominant provider.

### ***The WTP Model Does Not Account for Market Dynamics and Competitive Responses***

Even if the imputed rate increase were pursued, the Preliminary Report did not adequately take into account competitive responses. Massachusetts has an active healthcare marketplace, and any price increase of the magnitude alleged in the Preliminary Report would likely be met by competitive responses from other marketplace participants, mitigating the effect of any potential price increase.

Indeed, the Preliminary Report suggested rate increases could be implemented over several years, as opposed to a single year. Even so, the longer the time frame, the likelier it is that the price effects would be mitigated by competitive repositioning of rivals through new entry or expansion of existing competitors to provide access, especially in outpatient and physician services where the barriers to entry are lower. This limitation was not acknowledged in the Preliminary Report.

### ***BILH Parties Have Maintained Lower Pricing Levels after a Merger or Affiliation***

The Parties are currently low-priced providers. As the Preliminary Report acknowledged: **"the Parties have generally had low to moderate prices compared to other Massachusetts providers."**<sup>25</sup> This statement accurately reflects the Parties as they exist today, after recent mergers or contracting affiliations that have constituted the individual organizations. These recent transactions include:

- BIDMC's acquisition of Beth Israel Deaconess Hospital-Milton ("BID-Milton") and Beth Israel Deaconess Hospital-Plymouth ("BID-Plymouth") (formerly Jordan Hospital);
- CHA, Lawrence General, AJH, and NEBH joining the BIDCO ACO between 2012 and 2015;
- Lahey's acquisition of Northeast in 2012; and
- Winchester Hospital joining Lahey in 2014.

Following these transactions, the Parties did not obtain unwarranted price increases. The Preliminary Report acknowledged that there is not "evidence that the Parties have negotiated higher prices, either for new community hospital affiliates or for their hospitals overall, following past acquisitions or contracting affiliations with community hospitals."<sup>26</sup>

The HPC has stated that past performance and actions should be a critical consideration when speculating about future behavior.<sup>27,28</sup> The Parties strongly agree with this approach and request their

---

<sup>25</sup> HPC Preliminary Report, pages 2 and 32. Additional comments on the Parties' lower-cost positions are cited on pages 27, 29, 31, 32, 33, 34, 35. Specifically, on pages 31-32, the Preliminary Report also states "We also examined relative price for the Parties' physician networks and found that BIDCO, Lahey, and MACIPA generally have low to moderate physician prices compared to other eastern Massachusetts physician groups, and they are consistently lower-priced than Partners and Atrius."

<sup>26</sup> HPC Preliminary Report, page 32.

<sup>27</sup> HPC Preliminary Report, page 27, "Our analysis of a proposed transaction includes assessments of potential impacts on costs and market functioning, care delivery and quality, and access to care. In the following sections we examine the Parties' baseline performance in each of these areas and then assess the potential impacts of the proposed transaction based on this past performance and the Parties' stated plans and commitments."

<sup>28</sup> HPC Preliminary Report, page 35, "To understand the extent to which the Parties have achieved such goals in the past, which can inform assessments of how successful the Parties may be in achieving these goals in the current transaction..."

history of not receiving unwarranted price increases following significant transactions be considered in any evaluation of their future intentions.

### ***Significantly Increased Prices Would Diminish BILH's Competitive Advantage***

As stated, the Parties have a demonstrable history of competitive price performance for their hospitals and physician groups, which will continue to remain a major competitive differentiator for BILH. As high-performing networks like BILH succeed, higher-priced systems will be pressured to reevaluate their pricing strategy to be included in insurer networks at favorable tiers and to attract consumers, further reducing healthcare expenditure and cost growth.<sup>29</sup> In short, not only will BILH providers continue to remain lower-cost, the very introduction of BILH into the marketplace could have much broader beneficial effects on TME.

### ***Preliminary Report Market Concentration Methodology Is Not Determinative***

We noted that the HPC includes calculations of market shares and concentration measures calculated over Primary Service Areas ("PSAs") in its Preliminary Report, even though, by the HPC's own admission, these PSAs do not necessarily constitute relevant geographic markets for antitrust purposes.<sup>30</sup> We emphasize that market shares and concentration measures calculated using PSAs as geographic regions should not be viewed as being determinative of the likely competitive impact of the transaction.

### ***Conclusion***

We concur with Chair Stuart Altman that the WTP model is "hypothetical," with "a wide degree of error." We further assert that it was misapplied in the Preliminary Report, yielding extremely misleading and inflammatory estimates of market impact.

While the Parties acknowledge that the WTP model may serve as a reasonable predictive tool when applied in other markets, the variety of factors outlined above, particularly the implementation of Chapter 224 of the Acts of 2012, the unique regulatory environment in Massachusetts, and the presence of a dominant provider, invalidate this model as an accurate predictor of future actions in Massachusetts and for BILH as a system. **The WTP's failure to accurately predict outcomes from past Massachusetts transactions strongly suggests that it is not a viable model to be used in Massachusetts.**

The conclusion put forth in the Preliminary Report failed to adequately account for these problems with this approach; it did not adequately emphasize the Parties' history of not receiving unwarranted price increases after transactions; it disregarded and rejected the undeniable success of the Cost Growth Benchmark in limiting rate increases for all providers, both large and small; and it did not fairly consider the potential impact of BILH on increasing competition, and driving the market behavior of high-priced providers like the dominant health system, which will still have revenues more than double those of BILH.

The Preliminary Report did not adequately describe these limitations, even though the HPC and its Commissioners have publicly acknowledged the effectiveness of the regulatory mechanisms in Massachusetts to ensure that the future impacts asserted in the WTP model are not possible in this environment.

---

<sup>29</sup> Data from Massachusetts Health Connector's 2017 Open Enrollment Update presentation at the Board of Directors Meeting on January 12, 2017. Available at <https://www.mahealthconnector.org/wp-content/uploads/OE2017-Status-011217.pdf>. Indicates members are indeed shopping for high-value plans. Specifically, the plans with the lowest average premium increase had the highest gains in membership, and the plans with the highest average premium increase lost the most membership.

<sup>30</sup> HPC Preliminary Report, pages 39-43.

*On what basis is it valid to apply the WTP model if it has failed to predict past transaction results, including those involving BIDMC and Lahey, following passage of Chapter 224 in Massachusetts?*

*If the WTP model is used despite its many flaws, how will the Final Report adjust the model's calculation of potential price increases to address the impact of Massachusetts' regulatory constraints, past behavior of the Parties, the presence of a dominant provider, and other factors?*

## 2. Formation of BILH Will Create Effective Market Competition in Massachusetts

### Key Takeaways

- The Preliminary Report incorrectly assumed that BILH would not pressure the dominant health system to slow its rate increases.
- Research does suggest that the formation of a strong, organized high-value competitor, like BILH, can affect prices.
- To appropriately assess the cost and market impact of this transaction, the HPC must calculate the potential impact of the dominant health system reevaluating its pricing strategy as a likely outcome of BILH competition.

### ***Competitive Pressure on the Dominant Health System***

Perhaps the most serious limitation of the analysis in the Preliminary Report is the assumption that the dominant health system in Massachusetts would be unaffected by the formation of BILH. The Preliminary Report incorrectly implied the entrance of BILH into the market would not lower or slow the increase in rates of the dominant health system.<sup>31</sup> This statement directly contradicts assertions previously made by the HPC and other government bodies that a market-based solution is what the Commonwealth needs to address its rising healthcare expenditures, price disparities and payment variation, and health inequities.<sup>32</sup> It also defies the basic principles of industrial organization and antitrust economics.

Several factors suggest that the dominant system would experience significant price pressure.

- The dominant health system's high price position is exactly what makes it vulnerable to a high-value, lower-cost competitor;<sup>33</sup>
- BILH would have the combined reputation, price position, geographic coverage, and population health management skill to be a true competitor; and
- Innovative insurance products built on tiered or limited networks with a recognized brand that can meet all of a patient's needs have been proven to shift market share.<sup>34</sup>

BILH will compete directly with the dominant health system to drive true savings to purchasers and consumers. In fact, the formation of BILH is the only identified competitive option to create a market-based solution to unwarranted price variation and the corresponding dysfunction in the market. Without such competition, nothing fundamentally changes in Massachusetts. As the current unwarranted price variation (i.e., the gap between the dominant health system and everyone else) will persist, its destabilizing impact on providers across the Commonwealth will worsen. However, with the introduction of true competition, there is the real possibility of reducing the dominant health system's above-market pricing.

---

<sup>31</sup> HPC Preliminary Report, page 56.

<sup>32</sup> Examination of Healthcare Cost Trends and Cost Drivers Pursuant to G.L. c. 12C, § 17, Report for Annual Public Hearing Under G.L. c. 12C, § 17, Commonwealth of Massachusetts Office of the Attorney General, October 13, 2016. Referenced in HPC Preliminary Report, page 12. Available at <https://www.mass.gov/files/documents/2016/10/ts/cc-market-101316.pdf>.

<sup>33</sup> From its inception, BILH has been designed to be a high-value, lower-cost competitor. Sources: Document entitled "Responses to DoN Questions" submitted as part of NEWCO-17082413-TO application to the Department of Public Health in September 2017; HPC Preliminary Report, page 50.

<sup>34</sup> Gruber, Jonathan, and McKnight, Robin, "Controlling Health Care Costs through Limited Network Insurance Plans: Evidence from Massachusetts State Employees," 2016. American Economic Journal: Economic Policy, 8 (2): 219-50. Available at: <http://www.nber.org/papers/w20462>.

### ***Mechanism of Price Adjustment***

There are two primary mechanisms by which increased competition from BILH could lead the dominant health system to either decrease prices or increase prices at a lower rate than the market: (1) Pressure applied by payers and (2) Pressure to regain market share.

- **Pressure Applied by Payers:** Payers in the market could impose external pressure to reduce price increases by the dominant health system. Currently, as acknowledged in the HPC Preliminary Report, the dominant health system is a “must-have” to payers,<sup>35</sup> which provides the system with a great deal of bargaining power. However, with a high-quality, lower-priced alternative available, payers may have greater ability to resist pricing increases and similar cost-inefficient demands made by the dominant health system during negotiations.
- **Pressure to Regain Market Share:** When BILH develops competitive tiered or limited network products that are priced well below existing products in the market and offers high-quality services, the dominant health system could lose market share as price-conscious employers and patients seeking high-quality alternatives shift their care to BILH. The dominant health system, out of concern to maintain market share, may be forced to develop its own limited network products. To make a limited network insurance product by the dominant health system competitively priced, it would likely need to provide significant price discounts. While this discount would only apply to the portion of patients in the limited network product, the discount itself could be much higher, resulting in significant savings.

### ***Small Pricing Movement Yields Large Savings***

Whether the mechanism is a smaller across-the-board reduction in annual increases, or a larger discount on a smaller population in a limited network insurance product, any reduction in the dominant health system’s pricing could have a significant impact. Given the annual commercial revenue of the dominant health system and its contracted physicians of approximately \$5 billion in Massachusetts,<sup>36</sup> each one percent reduction in relative price would yield approximately \$50 million in savings. Even with significant pricing reductions, given the current variation in relative price, the dominant health system would still have rates well above all others in the market, but the Commonwealth will have begun to achieve savings by addressing unwarranted price variation through market-based competition.

We encourage the HPC to estimate the potential impact if the dominant health system adjusted its pricing based on the competitive threat from BILH, and that these scenarios be included in the market impact conclusions in the Final Report.

### ***Provider Competition is Critical to Lowering Costs***

Contrary to the findings of the Preliminary Report,<sup>37</sup> there is research to support the notion that the formation of a strong, organized competitor to a dominant provider can, in fact, affect healthcare costs. Research performed by the Healthcare Financial Management Association and supported by the Commonwealth Fund has found that lower-cost markets tend to have competition among a few health systems with highly aligned physician groups.<sup>38</sup> Specifically, research found that “in most of the lower-cost markets...sufficient consolidation had occurred to leave between two and four health systems with

---

<sup>35</sup> HPC Preliminary Report, page 56.

<sup>36</sup> Source: \$5 billion based on 2016 CHIA Hospital Cost Report information for inpatient and outpatient services NPSR (\$1.3 billion + \$2.0 billion = \$3.3 billion). Physician services NPSR was estimated to be \$2.0 billion (\$3.3 billion multiplied by .26/.42 as physician services represent 26% of total TME while inpatient and outpatient services represent 42% of total TME (Source: Commercial CY2014-CY2016 Unadjusted TME by Service Category from the CHIA 2017 Annual Report TME Databook). Note: NPSR includes Massachusetts Eye and Ear Infirmary, which was not part of the system in 2016.

<sup>37</sup> HPC Preliminary Report, page 56.

<sup>38</sup> Landman, et al., “What is Driving the Total Cost of Care? An Analysis of Factors Influencing Total Cost of Care in U.S. Healthcare Markets,” Healthcare Financial Management Association, 2018. Available at <https://www.hfma.org/tcoc/>.

good geographic coverage competing within the market.”<sup>39</sup> This makes intuitive sense. When an attractive competitor emerges, with a full slate of comparable characteristics, it almost always forces dominant players to adjust their pricing behavior. As we have repeatedly argued, geographic coverage, low cost position, strong reputation, and population health management skills, are critical to effective market competition and resultant cost savings.

While the healthcare industry has some unique features, the underlying economic concept of competition is still relevant. Instances across a variety of industries indicate that a strong second competitor can either halt cost growth or, even more significantly, reduce prices.<sup>40</sup> Notable examples of a lower-cost entrant constraining price growth include Wal-Mart’s entry into the grocery market<sup>41,42,43</sup> and Samsung’s pricing strategy which drove down Apple’s iPhone prices.<sup>44,45</sup>

### ***BILH Will be a Lower-Cost Stand-Alone Option for Payers***

According to the Preliminary Report, if BILH’s entrance to the market does not create a competitive enough alternative to the dominant health system, BILH will become a second “must-have” in payer networks.<sup>46</sup> This argument does not hold for multiple reasons. Primarily, BILH will encompass a coordinated network of services and geographic reach that is sufficient to fulfill the needs of employers in Eastern Massachusetts (which the Parties are unable to do separately). A key goal of the transaction is for BILH to become more attractive to payers and consumers, and to act as a true alternative to the dominant health system in the market through its geographic scope, high-quality, and lower-cost position and reputation, which should provide confidence to potential customers that even their most complex medical needs can be addressed within a fully coordinated and integrated system of care. Currently, only the dominant health system enjoys this market position. Consumers seeking high-quality, lower-cost care would have no reason to additionally seek care from a higher-cost provider in the market.

Further, as it stands, if one provider in the market is considered a “must-have” system that can meet all a population’s needs on its own, and has a strong clinical reputation, there is no reason payers would need to supplement these services with another “must-have”. And to the extent that a second system is an alternative, its downward pricing pressure on the true “must-have” system, whose prices significantly exceed those of any other system, would far outweigh any gain in price negotiations of BILH, which will always be constrained to demonstrate its value. This dynamic, of reducing the degree to which the dominant health system is a “must-have” system, further supports the argument above that the Final Report must reflect some estimate of savings to the Commonwealth derived from pricing pressure on the dominant health system.

---

<sup>39</sup> Ibid., 22.

<sup>40</sup> Busso, Matias and Galiani, Sebastian, “The Causal Effect of Competition on Prices and Quality: Evidence from a Field Experiment,” Inter-American Development Bank and University of Maryland – Department of Economics, February 2015. Available at <http://www.nber.org/papers/w20054>.

<sup>41</sup> Basker, Emek, “Selling a Cheaper Mousetrap: Wal-Mart’s Effect on Retail Prices,” *Journal of Urban Economics*, 2005, 58, 203–229.9. Available at <https://doi.org/10.1016/j.jue.2005.03.005>.

<sup>42</sup> Basker, Emek and Noel, Michael, “The Evolving Food Chain: Competitive Effects of Walmart’s Entry into the Supermarket Industry,” *Journal of Economics and Management Strategy*, Winter 2009, 18 (4), 977–1009. Available at <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1530-9134.2009.00235.x>.

<sup>43</sup> Jia, Panle, “What Happens When Walmart Comes to Town: An Empirical Analysis of the Discount Retailing Industry,” *Econometrica*, November 2008, 76 (6), 1263–1316. Available at <https://onlinelibrary.wiley.com/doi/full/10.3982/ECTA6649>.

<sup>44</sup> “Rivalry between Apple and Samsung in smartphones will grow fiercer,” *The Economist*, September 2017. Available at <https://www.economist.com/business/2017/09/14/rivalry-between-apple-and-samsung-in-smartphones-will-grow-fiercer>.

<sup>45</sup> Edwards, Jim. “Apple is once again copying a page from the Samsung playbook,” *Business Insider*, March 2016. Available at <https://www.businessinsider.com/apple-copying-samsung-startegy-pricing-iphone-se-2016-3>.

<sup>46</sup> HPC Preliminary Report, page 56.

*How will the HPC calculate and incorporate the potential savings from competitive pricing pressure on the dominant health system into the estimated market impact?*

*If BILH is not formed, how will current or future provider organizations compete effectively with the dominant health system or provide market-based solutions to unwarranted price variation?*

### **3. BILH Will Yield Significant Cost Savings and Efficiencies that Cannot Be Achieved without Creating BILH**

#### **Key Takeaways**

- The Preliminary Report did not reflect several cost savings and efficiencies that raise the total positive impact of the formation of BILH to \$149 million to \$270 million annually by year five.
- Operating margin improvements that can be achieved through the formation of BILH, which are estimated to be \$88 million to \$169 million annually by year five, include \$42 million to \$66 million in cost synergies.
- Selected integration initiatives will yield additional TME savings of approximately \$52 to \$87 million for the Commonwealth.
- The Parties' financial strength is less than what was portrayed in the Preliminary Report, and the formation of BILH will yield much needed improved operating efficiencies and margins.

The Preliminary Report understated efficiency savings by focusing only on care redirection, and excluding savings in improved operating efficiencies and margins, as well as TME reductions that will yield savings to the Commonwealth. The Preliminary Report described four primary areas<sup>47</sup> of care redirection efficiencies, estimated by the HPC to generate \$8.7 million to \$13.6 million in savings annually. In response to the request of Commissioners,<sup>48</sup> we are providing more detailed information in these areas to make it possible for the Final Report to recognize these benefits to the Commonwealth. Estimated savings from four types of efficiencies are summarized in the figure below and explained further throughout this section.

---

<sup>47</sup> Increased retention of current BILH primary care patients at BILH hospitals, increased volume at BILH hospitals due to enhanced consumer preference or brand, recruitment of new primary care patients to BILH, and shifts of patient volume within BILH from BIDMC and Lahey HMC to lower priced BILH hospitals. Source: HPC Preliminary Report, page 51.

<sup>48</sup> In addition, page 3 of the Preliminary Report stated: "They [BILH] are considering plans for integrating their unique quality oversight and management structures and have stated an intention to expand or integrate current care delivery initiatives, but have not yet developed detailed plans for these efforts. While the Parties' ongoing planning process may result in initiatives that could improve patient care, it is unclear whether, to what extent, and on what time frame such initiatives may be adopted or what specific impacts any such initiatives might have."

Figure 3: Estimated Annual Efficiency Impact

Category of Efficiency	Estimated Annual Impact <sup>49</sup>
Care redirection from higher-priced provider	\$9 million to \$14 million <sup>50</sup>
TME savings related to select integration initiatives	\$52 million to \$87 million
Cost synergies	\$42 million to \$66 million
Other savings as a result of transaction	\$46 million to \$103 million
<b>Total Efficiencies</b>	<b>\$149 million to \$270 million</b>

### ***Improved Operating Efficiency and Margins***

Market efficiencies represent only a portion of the cost saving opportunities this transaction will generate. Planning by the Parties to date involved estimating operational savings BILH is likely to achieve. As one Commissioner indicated,<sup>51</sup> these types of savings from operational efficiencies represent true savings that flow through to yield savings for the Commonwealth and should be counted in considering the impact of the affiliation. We concur that these savings should be considered as they improve financial results and support the ability of the Parties to carry out their mission. The latest estimates determined by BILH show a range of **\$88 million to \$169 million in annual operating margin improvement** by year five of operations, of which an estimated \$42 million to \$66 million are from cost synergies. This estimate is consistent with the cost savings estimate provided in the Parties' original CMIR filing and can be stated with a higher level of confidence based on the analyses completed by the Parties since the submission date.

### ***Efficiencies Are Needed to Address Financial Challenges***

The operational efficiencies and other operating margin improvements that will be made possible through this transaction are vital to the financial health of the Parties moving forward. While the Preliminary Report stated in numerous instances that the Parties' financial performance and position is generally positive,<sup>52</sup> the information evaluated and presented is based on financial information through FY2016. An examination of data from FY2017 shows a much more challenging financial picture for the Parties.

The Parties combined incurred an operating loss of nearly \$71 million in FY2017, representing an operating margin of -1.4%, driven by a \$35 million operating loss for Mount Auburn Hospital (-8.5% operating margin) and a \$66 million operating loss for Lahey (-3.2% operating margin). While the operating margin has declined from past years, the Parties operated just above break-even in the two preceding fiscal years, with operating margins of 0.2% in FY2015 and 0.4% in FY2016. In the period from FY2015 to FY2017, unrestricted cash balances declined by nearly \$142 million and days cash on hand declined by 24 days over that same period.<sup>53,54</sup> Both CareGroup, the parent company of BIDMC, Mount Auburn, and NEBH, and Lahey received rating agency downgrades in the last twelve months.

An underlying question of the Commissioners is why the formation of BILH is necessary to pursue the initiatives BILH has identified. In some cases (e.g., the ability to avoid "free rider" problems with narrow network plans) the benefits are derived from the specific geographic scope, range of services,

<sup>49</sup> Estimated by year five of operation as BILH.

<sup>50</sup> HPC Preliminary Report, page 55. We are limited in our ability to respond to these estimates as the HPC has access to data that we do not.

<sup>51</sup> David Cutler at the HPC Hearing on July 18, 2018.

<sup>52</sup> HPC Preliminary Report, pages 15, 21, and 23.

<sup>53</sup> A decline in days cash on hand can limit the ability to invest in improved services, meet bond obligations and borrow additional funds if necessary.

<sup>54</sup> Based on audited financial statements of the BILH Parties.

and ability to develop a clear brand to support competition. In addition to these specific factors, there is an overarching requirement of having the financial well-being to invest in new strategies. The annual \$88 million to \$169 million in improved operating margin will help to overcome the challenging financial environment faced by the Parties, so BILH can invest in critical population health initiatives described below, as well as other efforts to continually improve care and compete effectively with the dominant health system.

***BILH’s Integration Initiatives Will Create Substantial Savings for the Commonwealth***

The HPC recently published opportunities to achieve significant healthcare savings, which include<sup>55</sup>

- reducing institutional post-acute care;
- reducing hospital readmissions;
- increasing commercial APM adoption;
- shifting community appropriate care;
- reducing avoidable ED use; and
- limiting growth in prescription drug prices.

BILH embraces these cost-saving opportunities and has committed to a number of key initiatives consistent with these goals. The following selected initiatives (which in no way represent the entirety of potential savings) are estimated to reduce healthcare costs as shown in the Figure below.

Figure 4: BILH TME Savings Estimates (\$ in Millions)

Integration Initiative	Estimated TME Savings
Collaborative Care Model	\$23 to \$58
Continuing Care	\$15
Pharmacy	\$8
Primary Care	\$6
<b>Total</b>	<b>\$52 to \$87</b>

*Collaborative Care Model for Behavioral Health Patients*

A major cost saving opportunity for BILH and the Commonwealth is the Collaborative Care Model that BILH will implement. A broad roll-out of this model will directly address improving access to care for patients needing behavioral health services by integrating behavioral health in primary care practices. Currently, there are approximately 400,000 patients at BILH that would directly benefit from this program’s implementation. It is estimated that the model will produce annual TME savings of **\$23**

---

<sup>55</sup> HPC, “Opportunities for Savings in Health Care 2018: A Roadmap to Reduce Massachusetts Health Care Spending by \$4.8 Billion in Five Years,” May 2018. Available at <https://www.mass.gov/files/documents/2018/05/04/Opportunities%20for%20Saving%20packet.pdf>.

**million to \$58 million.**<sup>56,57,58</sup> Additional detail provided in *C. Transforming Care and Value in Massachusetts*.

### *Continuing Care*

BILH will create a unified system of continuing care—including home health, palliative care, hospice, skilled nursing, and rehabilitation—that supports its commitment to providing seamless and coordinated care to patients across the continuum as close to their home as can be safely managed, resulting in reduced avoidable use of institutional post-acute care, enhanced patient experience, and improved population health outcomes. BILH will achieve this through the creation of a consolidated home health program that will meet a widening range of patient care needs either in the home or as close to home as possible, the creation of an organized, high-performing preferred skilled nursing facility (“SNF”) network, the development of advanced geriatric services for frail and medically complex older adults, and investment in next-generation care management infrastructure. While MACIPA and BIDCO have preferred SNF networks, we believe the savings impact can be much more substantial by implementing a BILH CIN preferred SNF network.<sup>59</sup> Specifically, TME savings are estimated to be approximately **\$15 million**.<sup>60</sup> Additional detail provided in *C. Transforming Care and Value in Massachusetts*.

### *Pharmacy*

BILH will improve patient safety, clinical efficacy, and cost-effective prescribing through a system Pharmacy and Therapeutics Committee overseeing drug use policy and formulary management. Furthermore, BILH will provide seamless pharmacy support across the care continuum by integrating ambulatory pharmacy services and extended pharmacist intervention for high-risk hospitalized patients, ensuring patients have their medications with clear instructions during transitions between settings of care. BILH will also reduce pharmacy supply costs through a variety of new programs, services, and contracts (e.g., specialty and retail pharmacies, employee pharmacy benefit manager, and group purchasing). Current estimates, backed by research literature<sup>61</sup> indicate a potential TME savings of approximately **\$8 million** by implementing system-wide pharmacist intervention for high-

---

<sup>56</sup>Calculated by taking the total BILH paneled patients within employed primary care practices that are not currently part of the collaborative care model (approximately 400,000) multiplied by approximate percentage of patients with a mental health or substance use disorder (20% to 25%). Resulting patient population (80,000 to 100,000) was multiplied by annual average healthcare expenditure for patients with behavioral health conditions (\$5,796) and then by estimated percent savings attributable to behavioral health and primary care integration based on 2014 Milliman study (5% to 10%), which translates to an estimated annual savings of \$23 million to \$58 million.

<sup>57</sup>Milliman Report for the American Psychiatric Association, “Economic Impact of Integrated Medical-Behavioral Healthcare” April 2014; Woltmann, E., Grogan-Kaylor, A., Pero, n B., Georges, H., Kilbourne, A.M., Bauer MS., “Comparative effectiveness of collaborative chronic care models for mental health conditions across primary, specialty, and behavioral health care settings: systematic review and meta-analysis, *American Journal of Psychiatry*,” 2012; 169 ( 8 ): 790 – 804. Unutzer, Jurgen et al, “Long-Term Cost Effects of Collaborative Care for Late Life Depression,” *American Journal of Managed Care*, February 2008. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3810022/>.

<sup>58</sup>Substance Abuse and Mental Health Services Administration (“SAMHSA”), “Selected Drug Use, Perceptions of Great Risk, Average Annual Marijuana Initiates, Past Year Substance Dependence or Abuse, Needing But Not Receiving Treatment, and Past Year Mental Health Measures in Massachusetts, by Age Group,” 2015. Available at [www.samhsa.gov/data/sites/default/files/1/1/NSDUHsaeMassachusetts2014.pdf](http://www.samhsa.gov/data/sites/default/files/1/1/NSDUHsaeMassachusetts2014.pdf).

<sup>59</sup> McHugh, John P. et al, “Reducing Hospital Readmissions Through Preferred Networks Of Skilled Nursing Facilities,” *Health Affairs*, September 2017. Available at <https://www.healthaffairs.org/doi/10.1377/hlthaff.2017.0211>.

<sup>60</sup> Total estimated BILH discharges to SNF (27,115) multiplied by estimated reduction in rehospitalization rate among patients discharged to SNF following implementation of an organized preferred SNF network based on peer-reviewed analysis (6.1%). Total re-admissions avoided (1,079) multiplied by estimated TME savings per avoided rehospitalization (\$14,000) (based on average IP revenue per discharge for BILH member institutions) results in estimated annual TME savings from program implementation (\$15 million).

<sup>61</sup> Phatak, Arti, PharmD, BCPS et al “Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and post discharge call-backs (IPITCH Study),” *Journal of Hospital Medicine*, October 2015. Available at <https://onlinelibrary.wiley.com/doi/full/10.1002/jhm.2493>; Mekonnen, Alemayehu B et al, “Effectiveness of pharmacist-led medication reconciliation programmes on clinical outcomes at hospital transitions: a systematic review and meta-analysis,” *BMJ Open*, February 2016. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4769405/pdf/bmjopen-2015-010003.pdf>; Hansen, Amanda, Knoer, Scott, Rough, Steve, Schenkat, Dan. “Creating organizational value by leveraging the multihospital pharmacy enterprise.” *American Society of Health-System Pharmacists*, April 2018. Available at: <http://www.ajhp.org/content/75/7/437>; Roebuck MC, Liberman JN, Gemmill-Toyama M, Brennan TA, “Medication adherence leads to lower health care use and costs despite increased drug spending,” *Health Affairs*, January 2011. Available at: <https://www.healthaffairs.org/doi/10.1377/hlthaff.2009.1087>.

risk hospitalized patients.<sup>62</sup> Additional detail provided in *C. Transforming Care and Value in Massachusetts*.

#### *Primary Care*

BILH will bring together a high-quality, integrated primary care system that will lead the region in superior patient and provider experience, convenient access, and population health management. To achieve this vision, BILH will build a new and systemic approach to accelerate primary care delivery redesign and innovation, create proximate and timely patient access through a system-wide nurse triage and other fundamental access enhancements, and new workflow and training approaches to reduce administrative burden and enhance workforce development. Extending a system-wide nurse triage program, currently used in some Lahey practices, is estimated to save approximately \$18,500 in annual TME per physician.<sup>63</sup> When applied to the 319 employed BILH primary care physicians to whom this service would be extended over time, the program is estimated to achieve TME savings of approximately **\$6 million**.<sup>64</sup> Additional detail provided in *C. Transforming Care and Value in Massachusetts*.

***How will the HPC incorporate market and TME cost saving efficiencies in its estimate of market impact in the Final Report?***

---

<sup>62</sup> Total estimated BILH adult discharges with polypharmacy (97,360) multiplied by reduced probability of 30-day ED visits post-discharge based on extended pharmacist intervention, based on peer-reviewed literature (10.4 percentage points) Resulting ED visit avoidance (10,125) multiplied by average ED reimbursement per visit (\$770) to estimate TME value (\$8 million).

<sup>63</sup> Lahey Health data based on proprietary third-party analysis conducted on FY 2017-2018 nurse triage program results within Lahey primary care practices.

<sup>64</sup> Estimated annual TME savings based on third-party evaluation of nurse triage services on medical and pharmacy claims experience of Lahey members on an average per physician basis (\$18,456) multiplied by 319 additional employed primary care practices to which the program would be extended over time to estimate TME savings potential (\$5.9 million).

#### 4. The Parties have a Track Record and Commitment to Bolstering Community Hospitals

##### Key Takeaways

- The Parties seek to strengthen local community hospitals, both owned and affiliated.
- The Parties have increased volume and the sophistication of care provided at their community hospitals, a key benefit that the Community Appropriate Discharges (“CAD”) analysis fails to capture.

We concur with the HPC’s statement that community hospitals “face substantial challenges, threatening Massachusetts’ progress toward an efficient, high-quality healthcare system accessible to all residents of the Commonwealth.”<sup>65</sup> And while some health systems shift care from community hospitals to Academic Medical Centers (“AMCs”) and build major ambulatory facilities to drive care away from local community hospitals, resulting in increasing costs, the Parties have taken the opposite approach, seeking to strengthen local community hospitals, both owned and affiliated.

##### ***The Parties Have Strengthened Community Hospitals***

The Preliminary Report stated that “following corporate affiliations with BID and Lahey, community hospitals’ shares of local CADs increased while community hospitals’ share of CADs statewide generally decreased.” The Parties have significant concerns regarding the CAD methodology that the HPC proposed for this analysis, as it is focused on a narrow group of admission types, distorting the overall picture of community hospital strength.<sup>66</sup> In particular, by excluding higher-acuity care, the methodology ignores many of the largest contributions that Lahey and BIDMC have made to expand the capabilities of community hospitals. As a result, the CAD analysis shown in the Preliminary Report significantly understated the Parties’ community hospitals’ growth. Our analysis shows both Lahey and BIDMC increased inpatient discharges and case mix index (“CMI”) at their community hospitals far in excess of the overall Eastern Massachusetts market.<sup>67</sup>

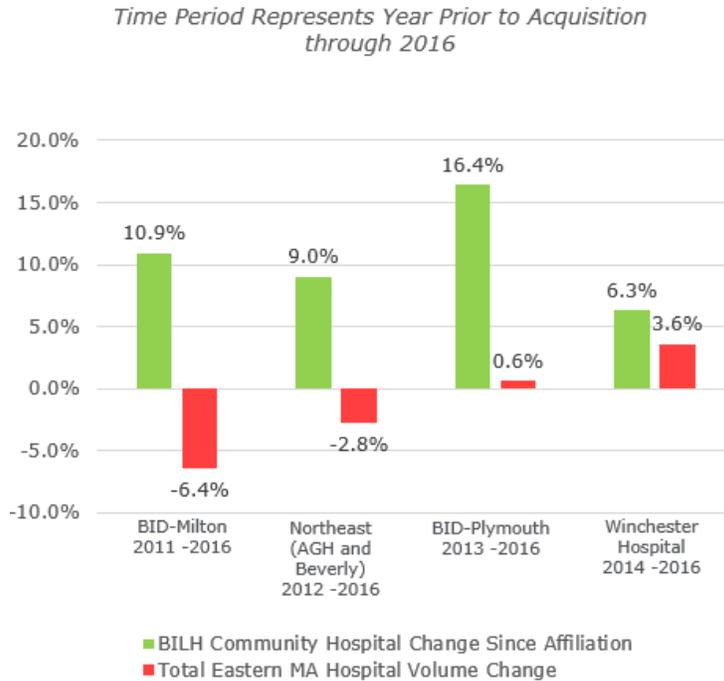
---

<sup>65</sup> HPC, Community Hospitals at a Crossroads, March 2016. Available at <https://www.mass.gov/files/documents/2016/07/xf/community-hospitals-at-a-crossroads.pdf>.

<sup>66</sup> HPC Preliminary Report, page 37.

<sup>67</sup> CHIA, Case Mix Database, 2012-2016. Total acute care discharges; excludes normal newborns, psychiatry, and rehabilitation.

Figure 5: BILH Community Hospital Growth in Inpatient Admissions Compared to Eastern MA Hospitals<sup>68</sup>



BIDMC and Lahey measure success with community hospitals by the degree to which they have been able to strengthen clinical capabilities in the community hospital setting (thereby increasing the average CMI) and reverse downward volume trends. The Parties have a well-documented history of enhancing care in local communities. A few notable examples are below:<sup>69</sup>

- BID-Milton became the system’s third site for robotic surgery following affiliation and has also seen programmatic improvements in bariatrics and the co-location of BIDMC’s renowned spine center. Inpatient bed capacity has also expanded from 88 to 102 inpatient beds;<sup>70</sup>
- at Beverly Hospital, Lahey hospitalists and intensivists have elevated critical care capabilities, recruited a pulmonologist to reduce outmigration, and added a neurosurgeon post-affiliation;
- MAH’s investment in transcatheter aortic valve replacement allows the hospital to offer minimally invasive cardio-thoracic surgical options with high-quality outcomes in a cost-effective setting;
- BIDMC further enhanced community care at BID-Needham through a new comprehensive cancer center on the BID-Needham campus, as well as a new inpatient wing, ED, and perioperative suite;
- at Winchester Hospital, Lahey has provided infectious disease back-up coverage and recruited new thoracic surgeons (among others) to see patients and perform surgeries locally;

<sup>68</sup> CHIA, Case Mix Database, 2012-2016. Total acute care discharges; excludes normal newborns, psychiatry, and rehabilitation.

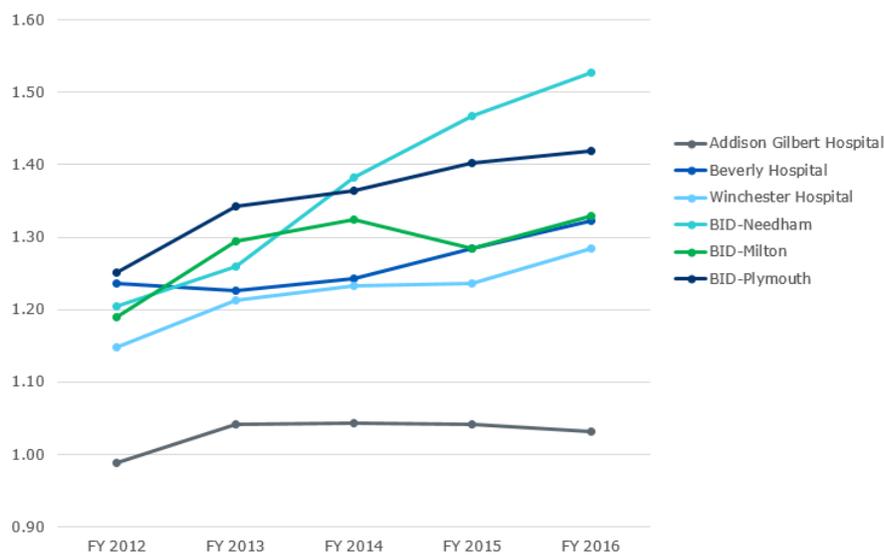
<sup>69</sup> Excerpt from pages 20-21 of the document entitled “Responses to DoN Questions” submitted as part of NEWCO-17082413-TO application to the Department of Public Health in September 2017. Available at <https://www.mass.gov/files/documents/2017/09/zj/don-application-response-newco.pdf>.

<sup>70</sup> BID-Milton recently opened a newly renovated, private room 12-bed unit.

- at BID-Plymouth, BIDMC has worked collaboratively with the local institution to plan and execute on a comprehensive cardiac interventional program with the goal of allowing these complex cases to be cared for locally; and
- the Lahey ED patient transfer protocol<sup>71</sup> has achieved significant success, as acknowledged in the Preliminary Report.

The aforementioned support and subsequent growth paints a more accurate picture of the Parties' commitment to providing care in community hospitals, which is supported by the growth in CMI achieved across both systems post-transaction (a factor not referenced by the HPC in the Preliminary Report but submitted in BILH's response to HPC-CMIR-2017-2), as shown in the figure below.

Figure 6: BILH Community Hospital Growth in CMI 2012-2016<sup>72</sup>



These results have generated overall savings as a greater share of care is delivered in a community setting versus a higher-priced teaching hospital.<sup>73</sup> These data points also demonstrate BILH's continued commitment to delivering the right care, in the right place, at an appropriate cost.

Several Commissioners asked why there is not more improvement in performance as measured by CADs. Given the clear improvements achieved in case mix and volume at the community hospitals that are part of the system, we would submit that the CAD methodology is not the best way to measure performance on the goal of optimizing the care provided at community hospitals and strengthening these critical institutions. Rather, measuring CMI and patient volume over time, pre- and post-transaction better measures a health system's commitment to its community hospitals, which BID and Lahey have successfully achieved.

The commitment to community hospitals can be pursued more quickly and vigorously with a joint bottom line<sup>74</sup> since it is possible to invest system capital and decide which services are best provided at which facility.

<sup>71</sup> This protocol encourages the delivery of lower acuity care in the community setting and higher acuity care at the teaching hospital (LHMC) by flagging patients that present at LHMC with community appropriate diagnoses and reside closer to Winchester Hospital or Northeast Hospital and initiating a discussion among the attending physician, patient, and his/her family.

<sup>72</sup> CHIA, Case Mix Database, 2012-2016. Total acute care discharges; excludes normal newborns, psychiatry, and rehabilitation.

<sup>73</sup> Lahey was recognized by the HPC in the Annual Health Care Cost Trends Report 2016 for success in this area. Source: HPC, Annual Health Care Cost Trends Report 2016, February 2017. Available at: <http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/publications/2016-cost-trends-report.pdf>

<sup>74</sup> As stated on pages 20-21 of the document entitled "Responses to DoN Questions" submitted as part of NEWCO-17082413-TO application to the Department of Public Health in September 2017. Available at <https://www.mass.gov/files/documents/2017/09/zj/don-application-response-newco.pdf>.

Nonetheless, BILH will also continue to pursue opportunities to further support and enhance community hospitals that are contracting and clinical affiliates. BIDMC, for example has worked very closely with its clinical affiliates at CHA, Lawrence General, and Signature Healthcare Brockton Hospital (“Signature Brockton”) to enhance community capabilities across a number of clinical areas, including cardiology, oncology, orthopedics, obstetrics and gynecology, podiatry, primary care, and other areas. Please see *Subsection 5* for additional detail.

***How will the HPC acknowledge the significant support the Parties have provided to strengthen their community hospitals in the Final Report?***

## 5. BILH is Committed to Serving Underserved Populations

### Key Takeaways

- The HPC analysis of inpatient Medicaid mix omitted admissions for detoxification services. Inclusion of these patients raises BILH's overall inpatient Medicaid mix from 14.7% to 19.5%.
- BILH has a strong track record of supporting affiliated community health centers and safety net hospitals across Eastern Massachusetts.

### ***BILH is Committed to Serving MassHealth and Underserved Patient Populations***

As not-for-profit health systems, it is core to our missions, and will be to the mission of BILH, to care for all patients regardless of insurance status and ability to pay. BIDMC's founding institutions were created more than 100 years ago to meet the needs of underserved communities in the Boston area. BIDMC's legacy, combined with Lahey's leadership, particularly in behavioral health services, will yield a not-for-profit system especially committed to providing needed services, including low-margin services, to all, including those who face barriers to accessing care.

### ***Key Behavioral Health Care Services Were Not Included in the Preliminary Report Medicaid Analysis***

It is critical to note that the HPC analysis of inpatient Medicaid mix omits inpatient detoxification admissions, a key service provided by BILH providers. The inclusion of these patients paints a vastly different picture of the proposed system's Medicaid patient panel. **BILH's overall inpatient Medicaid payer mix jumps from 14.7%<sup>75</sup> to 19.7%<sup>76</sup> when inpatient admissions for detoxification from BILH's three Acute Treatment Centers are included** in the inpatient data.

The scope and scale of BILH's behavioral health enterprise, which will care for nearly 1.1 million patient visits per year with an approximate 70% Medicaid payer mix, is a fundamental component of BILH's value to Eastern Massachusetts patients.<sup>77</sup> BILH will continue to improve care for all patients through targeted population health improvement efforts, including, but not limited to active participation in the MassHealth ACO Program; a systemwide commitment to integrating behavioral health and primary care; and the continuation and strengthening of partnerships with important community-based safety net providers.

### ***BILH is an Important Provider of Care for MassHealth Beneficiaries***

As noted in the Preliminary Report,<sup>78</sup> BILH hospitals treat a higher proportion of Medicaid patients than hospitals from the dominant health system, and the proportion of Medicaid patients served at

---

<sup>75</sup> HPC Preliminary Report, footnote 288.

<sup>76</sup> We encourage the HPC to use its data resources to refine this analysis. Our calculation: BILH FY2017 inpatients excluding detoxification (147,284) multiplied by HPC-reported BILH Medicaid mix (14.7%) = BILH Medicaid inpatients excluding detoxification (21,651); BILH detoxification admissions (10,900) multiplied by detoxification program Medicaid mix = additional Medicaid inpatients (9,496); BILH Medicaid discharges excluding detoxification (21,651) plus BILH detoxification-related Medicaid inpatients (9,496) = BILH Medicaid inpatients including detoxification (31,147); BILH Medicaid inpatients including detoxification (31,147) divided by total BILH patients served including detoxification (158,184) = BILH Medicaid percent of inpatients including detoxification (19.7%). Sources: Percent of Medicaid discharges calculated by the HPC for FY2017 and reported in footnote 288 of the Preliminary Report; total discharges for FY2017 from CHIA as cited by The Boston Globe ("Beth Israel-Lahey merger raises a Medicaid issue," by McCluskey, Priyanka Dayal, July 16, 2018); and admissions and Medicaid mix for detoxification program sourced from internal Lahey Health Behavioral Services admissions data from July 1, 2017 through June 30, 2018.

<sup>77</sup> Calculated using internal data from the Parties.

<sup>78</sup> HPC Preliminary Report, page 77, footnote 278.

BILH hospitals has increased over the past three years.<sup>79</sup> We appreciate the HPC’s identification of these facts in footnote 278 of the Preliminary Report and request that it be brought forward into the conclusions of the Final Report:

“The proposed BILH-owned hospitals generally have lower Medicaid payer mix than comparator hospitals, although their Medicaid mix is higher than most of the dominant health system’s hospitals except for North Shore Medical Center. Northeast has a higher Medicaid payer mix than the Melrose Wakefield Healthcare hospital campuses, Newton-Wellesley Hospital, and Emerson, and BID-Plymouth has a higher Medicaid mix relative to South Shore Hospital, Brigham and Women’s Faulkner Hospital, and Newton-Wellesley. Some party hospitals have also seen larger increases in Medicaid payer mix than some comparator hospitals in recent years. The hospitals serving high proportions of Medicare discharges relative to their PSAs also usually have a higher Medicare mix by [gross patient service revenue].”<sup>80</sup>

It is also important to note that BIDMC – the only AMC and the largest of the BILH hospitals – is the seventh largest provider, in absolute terms, of inpatient and outpatient care for MassHealth beneficiaries across all of Massachusetts. In Eastern Massachusetts only, it is among the top five providers of inpatient care to all Medicaid beneficiaries and one of the top three providers of outpatient care to that population.<sup>81</sup> Additionally, BIDMC extends its geographic reach of the underserved populations it provides care for through its affiliation with AJH. The affiliation with BIDMC has allowed AJH to bring a variety of service lines to underserved communities including Haverhill and Amesbury.<sup>82</sup>

### ***BILH has Supported Affiliated Community Health Centers***

BIDMC has longstanding close relationships with six community health centers across greater Boston, Quincy, Malden, and other communities, including:

- Bowdoin Street Health Center in Dorchester;
- The Dimock Center in Roxbury;
- South Cove Community Health Center (“SCCHC”) in Chinatown, Quincy, and Malden;
- Charles River Community Health (“CRCH”) in Brighton and Waltham;
- Fenway Health in Boston; and
- Outer Cape Health Services, with various locations on Cape Cod.

Together, these community health centers serve more than 120,000 patients each year – more than 50% of whom are Medicaid beneficiaries or are uninsured.

BIDMC has made significant efforts to support needed care in the local community health centers, including:

---

<sup>79</sup> CHIA, Massachusetts Case Mix Hospital Inpatient Discharge Data (“HIDD”) Fiscal Year 2016 Documentation Manual (V1.00). The table shows the payer mix percentages as a percent of total discharges, excluding normal newborns, in aggregate from FY2015 through FY2017 for AJH, BIDMC, BID-Milton, BID-Needham, BID-Plymouth, LHMC, MAH, NEBH, Northeast Hospital (including Beverly Hospital and Addison Gilbert Hospital), and Winchester Hospital. The payer categories are based on CHIA “payer type definition.” Document manual available at <http://www.chiamass.gov/assets/docs/r/hdd/FY2016-HIDD-Guide.pdf>.

<sup>80</sup> HPC Preliminary Report, page 77.

<sup>81</sup> It is also important to note that the Massachusetts mean Medicaid mix (21%) provides a somewhat distorted benchmark for commitment to Medicaid populations because the mean is heavily influenced by strong outliers (e.g., Boston Medical Center is 53%. Source: HPC Preliminary Report, footnote 287). We urge the HPC to also consider the *median* Medicaid mix (17%) as a metric.

<sup>82</sup> Clinical Affiliation with Beth Israel Deaconess Medical Center, Anna Jaques Hospital. Available at: <https://www.ajh.org/about/beth-israel-deaconess-affiliation>.

- **Mammography Screening:** BIDMC/HMFP assisted Fenway Health and Outer Cape Health Services to establish on-site mammography screening;
- **Bolstering Community-Based Access to Behavioral Health Care:** BIDMC sends a psychiatrist to CRCH to train and build the primary care and behavioral health teams' capacity to treat mental health/behavioral health issues in the community;
- **Community-Based Opioid Treatment:** BIDMC provides financial support to stabilize and expand the Office Based Opioid Treatment ("OBOT") program at The Dimock Center, and has also established an OBOT and Medication Assisted Treatment program at Bowdoin Street Health Center;
- **Prevention and Wellness:** BIDMC led funding for the building of a Wellness Center at Bowdoin Street Health Center in order to support various community health programs at Bowdoin;
- **Local Maternal and Child Health Care:** BIDMC has spearheaded more than 50 years of maternal and child health services at BIDMC-affiliated community health centers, and recruits residents with its health centers in mind, many of whom go on to work at the health centers;
- **Improving Health Literacy for Disease Prevention:** BIDMC is supporting a health literacy program at Bowdoin Street Health Center focused on teaching those who are at-risk for diabetes about nutrition, self-care, exercise, and strategies to prevent the onset of this deadly disease;
- **Diabetes Prevention and Care:** BIDMC has provided long-time support of the Live and Learn Program, which is focused on diabetes care and prevention at CRCH;
- **Cancer Patient Navigator Program:** Collaborating with SCCHC, BIDMC created a Chinese cancer patient navigator program to facilitate access to cancer screening, treatment and support for the Chinese community. BIDMC works closely with SCCH and affiliated health centers to ensure culturally and linguistically appropriate care in both community and hospital settings; and
- **Support for Community-Based Care:** BIDMC has provided significant financial support for capital projects needed to support community-based programs at CRCH, the Dimock Sewall Center, and the building and expansion of the new Fenway Health facility.

BIDMC also ensures that key specialty care is available in local communities in the following specialties: dermatology, endocrinology, infectious disease, neurology, nephrology, OB/Gyn, orthopedics, podiatry, and pulmonary care.

### ***BIDMC has Supported Safety Net Hospitals across Eastern Massachusetts***

BIDMC also has strong clinical affiliations with safety net institutions across Eastern Massachusetts – Signature Brockton, CHA, and Lawrence General. As part of these relationships, BIDMC serves as the tertiary and quaternary provider to patients in those communities and have also helped invest and expand critical local services to improve access for patients close to where they live and work. BIDMC has worked closely with all of its clinical affiliates to help these community providers build their own local capabilities through the recruitment of primary care physicians ("PCPs") and specialists dedicated to practicing in the community and program development to strengthen and help retain care in their local communities. Examples for each affiliate are discussed below.

- **Signature Brockton:** BIDMC has worked with Signature Brockton to strengthen its cancer and orthopedics services, resulting in Signature Brockton recently opening a new comprehensive cancer center in Brockton in partnership with BIDMC. BIDMC, through its affiliated faculty practice Harvard Medical Faculty Physicians, recruited and hired a Senior Chief of Hematology/Oncology and another oncologist dedicated to the Signature Brockton program to broaden and expand the range of services provided to all cancer patients. BIDMC has closely collaborated with Signature Brockton to rebuild its orthopedics program through the recruitment of a local Senior Chief of Orthopedics and recruitment of additional orthopedic sub-specialists. Additionally, BIDMC has

worked collaboratively to broaden capacity in other key areas including cardiology, podiatry, plastic and reconstructive surgery, and telestroke initiatives.

- **Lawrence General:** In Lawrence, BIDMC has helped to build Lawrence General's primary care base with the recruitment of seven PCPs. These are new, local PCPs practicing in their communities who refer patients to Lawrence General – and to BIDMC when they need tertiary or quaternary levels of care. Over the years, BIDMC has worked collaboratively in other areas to expand access to locally available primary and specialty care services by participating in program development efforts. For example, BIDMC provides medical direction for Lawrence General's cath lab, outpatient radiation oncology consultation, and supports telestroke initiatives.
- **Cambridge Health Alliance:** In partnership with CHA, BIDMC has also worked collaboratively to help expand access to locally available specialty care services, assist with physician recruitment, and participate in program development and recruitment efforts in thoracic surgery, pulmonary care, vascular surgery, joint recruitment of dermatologists and telederm, OB/GYN and surgery residents, neonatology coverage and training, cardiology, and telestroke services.

The Parties' ability to continue supporting safety net hospitals will depend on their financial performance, which will be improved through the efficiencies BILH will achieve.

*How will the HPC consider BILH's significant past and future commitment to behavioral health services for the Medicaid population in its assessment of BILH's commitment to serving the underserved?*

## C. Transforming Care and Value in Massachusetts

### Key Takeaways

- BILH would be able to create innovative insurance products that have not existed in this market.
- The Parties have undertaken a broad and collaborative pre-merger integration planning process consisting of 32 design teams to develop actionable commitments and a clear roadmap for integration that achieves value to patients, significant cost savings, and growth.

BILH will have the financial resources, clinical and administrative expertise, specific program experience, and scale to implement key initiatives the individual Parties would not be able to achieve on their own. Of course, there is no single-source solution to achieve the goals BILH aims to accomplish. Our success will be the result of numerous leaders and staff working countless hours across a variety of initiatives to define the path forward. The Parties have begun this process of identifying initiatives, within the antitrust constraints that apply before the transaction is completed and are pleased to share several of these initiatives below.<sup>83</sup>

### ***BILH Will Help Create High-Value Tiered and Limited Network Insurance Products***

Several Commissioners asked how BILH will create innovative insurance products, and why BILH can do better than an insurer forming a tiered or limited network from multiple competing providers. The Parties have made substantial progress in planning the delivery system and geographic coverage for transformative, innovative insurance products that will provide direct benefit to consumers, as described below. However, it is clear that the Parties cannot yet discuss payment rates and cannot bring discussions with insurers about these potential opportunities to fruition. Nonetheless, our business case rests on three principles:

- Tiered or limited network products have effectively reduced costs and are increasingly attractive to consumers;
- BILH can offer more value as the core of a provider network and a clear market option for consumers; and
- Partnering with BILH will allow insurers to offer better tiered or limited network products than contracting with a wide array of independent providers.

By reducing the use of high-priced providers, these products reduce unwarranted price variation, help eliminate the subsidization of high cost care by low income consumers and provide savings to consumers who choose high-value providers.

*Tiered or limited network products have effectively reduced costs and are increasingly attractive to consumers*

Academic and industry research indicates that tiered or limited networks yield cost savings and have the potential to reduce healthcare spending, making formation of these networks directly aligned with

---

<sup>83</sup> While many opportunities to improve care and value have been identified, there are legal restrictions that limit what the Parties can discuss and what decisions can be made at this point. The Preliminary Report repeatedly stated that the Parties have “failed to indicate” how they will operate post-affiliation. We would respectfully note that the Parties must adhere to strict antitrust guidelines that limit the exchange of vital information that would be used to make such determinations. Until this transaction closes, the Parties are separate entities and, as such, must behave as competitors. Simply put, there are many decisions the Parties cannot make until the affiliation is complete.

the HPC's goals. In a 2016 analysis of Massachusetts Group Insurance Commission (GIC) state plan enrollees,<sup>84</sup> for example, consumers who opted to switch from a broad network plan to a narrow network plan spent nearly 40% less on medical care. Reduced utilization and lower prices paid per service performed drove these savings.

Additional sample studies in Massachusetts have found that when cost sharing differentials between preferred, or lower-cost, providers and non-preferred providers are significant, consumer behavior changes without compromising access or quality: utilization of non-preferred providers drops while utilization of preferred providers increases.<sup>85</sup> Additionally, research indicates that narrow networks feature lower premiums than products with larger or broader networks,<sup>86</sup> and that narrow network products can have positive spillover effects that drive better value among all providers, including those in broad network products.<sup>87</sup>

Consumers' interest in participating in tiered or limited networks has significantly grown in recent years. Tiered or limited networks account for approximately 19% of the commercial lives in the state.<sup>88</sup> Much of the growth has occurred through GIC plans.<sup>89</sup> BILH has identified the GIC as a strong opportunity for partnering to offer innovative products. This partnership would effectively help produce cost savings for Massachusetts on two fronts—both the overall cost of care in Massachusetts and the health insurance costs of the government for its employees.

Given the significant unwarranted variation in relative price in Massachusetts, there is ample opportunity to achieve savings through tiered or limited network products. The desire of payers to mitigate unwarranted price variation and shift care to high-value providers creates a significant part of the opportunity that BILH will pursue. The savings available by keeping care in lower-priced, high-value providers will directly reduce TME, which can in turn be reflected in lower premium and/or lower out-of-pocket costs.

*BILH can offer more value as the core of a provider network and a clear market option for consumers*

Upon its formation, BILH (and BILH CIN) will be newly and uniquely positioned to be the network for a high-value product due to its competitive quality, low-cost position, service breadth, and geographic coverage in the context of a fully-integrated and coordinated delivery system. No other limited network in Massachusetts has been able to offer this combination of attributes to compete effectively with the dominant health system and provide a meaningful market option for consumers. The creation of this network will be a significant step forward in the quality of tiered and limited network plans, and directly responsive to the HPC's recommendation<sup>90</sup> to strengthen market functioning and system transparency through demand-side incentives.

BILH will bring product solutions to the market in partnership with payers that improve value to consumers and employers in four ways. We have described several initiatives to better manage population health later in this document. The solutions that we can develop will partially depend on

---

<sup>84</sup> Gruber, Jonathan, and McKnight, Robin, "Controlling Health Care Costs through Limited Network Insurance Plans: Evidence from Massachusetts State Employees," 2016. American Economic Journal: Economic Policy, 8 (2): 219-50. Available at: <http://www.nber.org/papers/w20462>.

<sup>85</sup> Frank, M.B., Hsu, J., Landrum, M.B. and Chernew, M.E., "The Impact of a Tiered Network on Hospital Choice," Health Services Research Journal, 50: 1628–1648, March 2015. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4600365/>.

<sup>86</sup> Polsky, D., Cidav, Z., Swanson, A., "Marketplace Plans with Narrow Physician Networks Feature Lower Monthly Premiums than Plans with Larger Networks," Health Affairs, October 2016. Available at: <https://www.healthaffairs.org/doi/10.1377/hlthaff.2016.0693>.

<sup>87</sup> "Narrow networks may have important spillover effects worthy of further examination. For example, the popularity of low-premium plans (associated with narrow networks) has a positive spillover effect because it places pressure on providers within all networks to offer greater value—perhaps in the form of lower reimbursement rates or cooperation in the development of innovative, cost-saving alternatives to fee-for-service reimbursement." Source: Dafny, L Leemore, Hendel, Igal, Marone, Victoria, Ody, Christopher, "Narrow Networks on the Health Insurance Marketplaces: Prevalence, Pricing, and the Cost of Network Breadth," Health Affairs, September 2017.

<sup>88</sup> CHIA, 2017 Cost Trends Report Chartbook, Page 42. Available at <https://www.mass.gov/files/documents/2018/03/28/2017%20CTR%20Chartpack.pdf>.

<sup>89</sup> Ibid, 5.

<sup>90</sup> HPC, 2017 Annual Health Care Cost Trends Report, page 6, March 2018. Available at <https://www.mass.gov/files/documents/2018/03/28/Cost%20Trends%20Report%202017.pdf>.

the sequencing of investments we ultimately choose to make and the capabilities of health plan partners to support our model of care.

- **Improved Patient/Member Access to Care:** Create new models of customer service and appointment scheduling for new and existing patients (e.g., through a system-wide service center as a unified front door to the BILH system). This will lower the barriers for patients in gaining access to physicians and other providers. Additionally, BILH intends to offer enhanced primary care access through a robust system-wide nurse triage program, further supplementing patient access to care.
- **Improved Patient/Member Experience:** Develop an organizational model committed to create convenient, high-quality access to care by providing a fully-integrated network of care. This will simplify the administrative complexities of dealing with multiple health systems and ensure a greater level of information exchange in support of patient care.
- **Innovation-Driven, Targeted Improvements in Care Management, Continuity of Care and Quality of Care:** As a fully-integrated system, BILH will be able to manage all aspects of a patient’s care transitions, an area where BILH will be investing. This would directly enhance patients’ quality of care and consolidate transition of care efforts such as discharge planning, transportation support, and scheduling follow-up appointments. Additionally, BILH will supplement these services by investing in additional health analytic capabilities that will allow for targeted identification of high-risk patients and create interventions with tailored health solutions and care management approaches to address patients’ needs.
- **Affordable Market Options for Consumers:** Offer competitive unit prices and reduced levels of utilization through more integrated clinical and care planning. Allowing consumers to have more accessible and affordable healthcare options in the Greater Boston area.

However, this cannot be achieved without an integrated structure that aligns financial incentives through a shared bottom line. Only through a fully-integrated model can providers fully coordinate care, reduce overhead, and fully plan together to align strategy and investments in clinical services. This will help achieve a level of integrated performance beyond what is possible through contractual affiliations alone, furthering efforts to properly support providers to succeed under value-based payment models and risk contracts by significantly improving patient care, effectively spreading risk, making investments in infrastructure, and mitigating healthcare cost growth.

Partnering with BILH will allow insurers to offer more attractive and higher performing tiered or limited network products than contracting with a wide array of independent providers.

With the growing popularity of tiered or limited network insurance products, BILH can offer a significantly better foundation for these products. Rather than focusing merely on the exclusion of certain high-priced providers, the proposed plan would include an integrated network of providers with a strong reputation, integrated flow of patient information, broad geographic coverage and access points, and moderately-priced providers.

In addition, as described in footnote 202 of the Preliminary Report, limited network insurance products that have many independent providers in their network suffer from a “free rider” problem. When deciding how to make a limited network product more attractive, independent providers will always be tempted to be “free riders” avoiding their own concessions, and seeking to benefit from the concessions of others. However, an integrated system would be more likely to negotiate more favorable terms because they know they will receive the majority of the benefits from any concessions. While this dynamic is noted in the Preliminary Report, we believe it is a major driver of behavior that should be factored more directly into the analysis and conclusions.

Furthermore, the success of tiered or limited network products helps to bring pressure on the dominant health system to reconsider its pricing strategy. When an attractive competitor emerges, with a full slate of comparable characteristics, it almost always forces dominant players to adjust their pricing behavior. The Parties believe that the dominant health system has already begun to feel the

effect of the tiered or limited network products that have begun to take hold in the market and will feel more impact of these products as they become more effective under BILH.

We understand that it would be difficult for the HPC to calculate how these savings might be more likely without a “free rider” problem. Nonetheless, we urge that this opportunity for market efficiency, addressing unwarranted price variation, and the footnoted insight about how BILH addresses the “free rider” problem, be reflected in the Final Report analysis and conclusions regarding benefits BILH can deliver through innovative insurance products.

### ***32 Design Teams Have Begun to Outline BILH’s Commitments and Priorities***

Since November 2017, the Parties have undertaken a broad and collaborative pre-merger integration planning process, including the establishment of 32 design teams, involving over 240 leaders from across the BILH entities to leverage the collective strengths of each institution to create an innovative, high-value health system for the benefit of purchasers and consumers. Through this process, the Parties have developed actionable commitments and a clear roadmap for integration that achieves value to patients, significant cost savings, and enterprise growth. A list of design teams is included in Appendix 3.

Over the course of April to June 2018, the design teams presented their recommendations to a 12-member Leadership Work Group with clinical and executive leaders from across the BILH member institutions. The recommendations have all been extensively vetted by design team members and have received preliminary endorsement from the Leadership Work Group. Following the report-out process, each of the teams has moved into a next-stage planning initiative focused on synergies quantification, implementation work planning, and preparations for Day 1.

The detailed outputs and recommendations of the eight design teams referenced in the Executive Summary, those that are understood to be core concerns of the HPC, are described below.

## **Behavioral Health**

### ***Context***

- 20% of Massachusetts adults report living with a mental health disorder, and 9% report living with an alcohol or illicit substance use disorder.<sup>91</sup>
- 46% of Massachusetts adults (466,000 people) with a mental health disorder report not receiving care.<sup>92</sup> Among Massachusetts residents ages 12 and older with illicit drug or alcohol dependence or abuse, 86% and 92%, respectively, report receiving no treatment within the past year.<sup>93</sup>
- Massachusetts patients with both a behavioral health and chronic condition co-morbidity have an average TME that is 4.2 times the average commercial patient and 7.0 times the average Medicare patient.<sup>94</sup>
- Patients with a behavioral health diagnosis in Massachusetts are far more likely than other patients to “board” (i.e., spend more than 12 hours) in the ED, resulting in inefficiency and

---

<sup>91</sup> SAMHSA, “Selected Drug Use, Perceptions of Great Risk, Average Annual Marijuana Initiates, Past Year Substance Dependence or Abuse, Needing But Not Receiving Treatment, and Past Year Mental Health Measures in Massachusetts, by age group, 2015”. Available at [www.samhsa.gov/data/sites/default/files/1/1/NSDUHsaeMassachusetts2014.pdf](http://www.samhsa.gov/data/sites/default/files/1/1/NSDUHsaeMassachusetts2014.pdf).

<sup>92</sup> Mental Health America, Mental Health in America: Access to Care Data, 2014. Available at [www.mentalhealthamerica.net/issues/mental-health-america-adult-data](http://www.mentalhealthamerica.net/issues/mental-health-america-adult-data).

<sup>93</sup> SAMHSA, Behavioral Health Barometer: Massachusetts, 2015. Available at [https://www.samhsa.gov/data/sites/default/files/2015\\_Massachusetts\\_BHBarometer.pdf](https://www.samhsa.gov/data/sites/default/files/2015_Massachusetts_BHBarometer.pdf).

<sup>94</sup> HPC, 2013 Cost Trends Report, page 56, January 2014. Available at <https://www.mass.gov/files/documents/2016/07/rf/2013-cost-trends-report-full-report.pdf>.

diminished outcomes of care. Though patients with a behavioral health diagnosis only accounted for 14% of ED visits in 2015, they accounted for 71% of all ED visits that boarded.<sup>95</sup>

***Vision:***

To create a transformative and unified system of behavioral healthcare. This will include a population and evidence-based approach to identify and appropriately manage psychiatric and substance use disorders, easy access to a broad array of behavioral health services with multiple entry points, seamless transitions of care, and meaningful support for BILH clinicians.

***Recommendations:***

1. Implement an innovative and proven model of primary care – behavioral health integration (referred to as the Collaborative Care Model or the IMPACT Model) across all BILH employed primary care practices.
  - Build upon the experience and expertise of Lahey and BID-Plymouth, which have several years of experience in implementing the model across approximately 20 practices.<sup>96</sup>
  - Improve access to care for 400,000 patients across approximately 85 primary care practices that have not previously implemented the model.
  - Under the Collaborative Care Model, patients identified through the use of screening tools and direct PCP referral are introduced to a behavioral health clinician who works collaboratively with the PCP within the practice and is supported by a consulting psychiatrist; these clinicians deliver evidence-based behavioral health treatments, provide proactive follow-up and coordination, ensure close patient contact, and facilitate referral to more intensive treatment for more complex patients.
  - Hire additional behavioral health clinicians, consulting psychiatrists, and program supervisors over the course of implementation.
2. Create a centralized bed management and bed placement system to facilitate access to inpatient psychiatry and detoxification beds across the BILH system.
  - 143 inpatient detoxification beds across three acute treatment centers and 185 inpatient psychiatry beds across eight hospital sites within the BILH system.
  - Expand on success of current Lahey centralized bed management program to the rest of the BILH system with anticipated economies of scale over time.
  - Centralized department that monitors behavioral health patient progress through the Emergency Department and coordinates the placement of behavioral health patients to inpatient unit best suited based upon clinical presentation and geographic location.
  - More rapidly identifies and places patients requiring inpatient admission thus maximizing available system resources and reducing ED boarding.
  - Build capability to direct patients and providers to the full range of behavioral health services within the system, potentially facilitating alternatives to inpatient care.

---

<sup>95</sup> HPC, “Behavioral Health-Related Emergency Department Boarding in Massachusetts,” November 2017. Available at <http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/publications/20171113-hpc-ed-boarding-chart-pack.pdf>.

<sup>96</sup> Lahey began implementing the Collaborative Care model beginning in 2015 within primary care, and today covers 14 practices. BID-Plymouth began implementation of the model in 2016, and over the past one to two year period has extended it across four employed primary care practices (as well as several independent practices not measured here).

3. Develop a sustainable, dynamic, and comprehensive strategy for building community-based behavioral health services.
  - Define an enterprise-wide vision to guide behavioral health service delivery.
  - Develop a strategic plan to guide decision making related to current and future state delivery and investments that identifies specific goals and assigns priorities.

**Impact:**

- Improved access to timely and appropriate behavioral healthcare (in a 2018 survey of all Lahey PCPs with an integrated practice, 96% of respondents report an increase in access to a behavioral health specialist as a function of having an embedded behavioral health clinician on site; 90% report reduced wait time for input on psychiatric medications).<sup>97</sup>
- Lower total medical expense – adoption of the Collaborative Care Model (also known as the IMPACT Model) has been shown to be associated with a high probability of both improved patient outcomes and cost savings during a multi-year period.<sup>98</sup>
- Once fully implemented, BILH will have created one of the largest behavioral health-primary care collaborative programs in the country.
- Reduced ED boarding as a result of standardized admission workflow and accelerated bed placement across the BILH system (a 2018 review of Winchester Hospital following the implementation of centralized admission process showed that 91% of ED patients receiving psychiatric evaluation were discharged or placed in under 24 hours).

**Continuing Care**

**Context:**

- 60% of the Medicare dollars spent in the first 90 days of an acute episode of care occurs post hospital discharge. A large portion of this is spent on skilled nursing facilities, which in Eastern Massachusetts exhibit wide variability in efficiency, quality, and other performance measures.
- Massachusetts has a 18.7% rate of discharge to institutional post-acute care, substantially higher than the U.S. average.<sup>99</sup>
- Reducing unnecessary use of institutional post-acute care through the use of home care services has the potential to improve quality and patient outcomes while reducing TME.
- The post-acute environment presents a unique opportunity to reinvent care delivery through the use of technology and innovative care models.
- Demand for continuing care is driven by the aging of the Massachusetts population – with individuals age 65+ projected to grow from 15% to 21% of the total state population between 2015 and 2030.<sup>100</sup>

---

<sup>97</sup> Lahey primary care physician survey, 2018. Results published in “In the Know” Newsletter on June 20, 2018.

<sup>98</sup> Milliman Report for the American Psychiatric Association, “Economic Impact of Integrated Medical-Behavioral Healthcare,” April 2014 Woltmann, E., Grogan-Kaylor, A., Pero, n B., Georges, H., Kilbourne, A.M., Bauer MS., Comparative effectiveness of collaborative chronic care models for mental health conditions across primary, specialty, and behavioral health care settings: systematic review and meta-analysis, American Journal of Psychiatry, 2012; 169 ( 8 ): 790 – 804. Jurgen Unutzer, et al, “Long-Term Cost Effects of Collaborative Care for Late Life Depression,” American Journal of Managed Care, February 2008. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3810022/>.

<sup>99</sup> HPC, “Opportunities for Savings in Healthcare,” May 2018. Available at <https://www.mass.gov/files/documents/2018/05/04/Opportunities%20for%20Saving%20packet.pdf>.

<sup>100</sup> Tufts Health Plan Foundation, Highlights from the Massachusetts Healthy Aging Data Report: Community Profiles 2015, 2015. Available at [http://mahealthyagingcollaborative.org/wp-content/uploads/2014/01/MA\\_HealthyAgingDataReport\\_Highlights\\_2015.pdf](http://mahealthyagingcollaborative.org/wp-content/uploads/2014/01/MA_HealthyAgingDataReport_Highlights_2015.pdf).

***Vision:***

To create a unified and innovative system of continuing care—including home health, palliative care, hospice, skilled nursing, and rehabilitation—that supports BILH's commitment to providing seamless and coordinated care to patients across the continuum as close to their home as can be safely managed, integrating with other services deployed to meet the system's population health goals, resulting in a high degree of patient satisfaction and fostering system collaboration.

***Recommendations:***

1. Develop an enhanced home health care program that will enable BILH to care for a wide range of patient care needs, either in the home or as close to home as possible.
  - Leverage and extend the combined expertise of MAH (CareGroup Parmenter Home Care and Hospice) and Lahey (Lahey Health at Home) as a system-wide home care platform.
  - Expand services and integrate a multi-disciplinary home care team, utilize home monitoring as well as other services, such as infusion, physical therapy, and behavioral health.
  - Provide more cost-effective management of high-risk patients, facilitate care retention, reduce TME, and support primary care in caring for complex patients.
2. Build and manage a high-performing, preferred skilled-nursing facility network.
  - Comprised of high quality, high-value facilities and services that meet defined performance criteria (including Medicare quality ratings, readmission rates, rates of functional improvement, and willingness to partner to develop common clinical pathways).
  - Robust partnerships with service providers such as skilled nursing, assisted living and inpatient rehabilitation facilities, and hospice services will create a seamless provider and patient experience while contributing to success in a value-based care environment.
3. Develop an advanced geriatric program to expand support for providers who care for frail and medically complex older adults.
  - Teams providing complex care management to the elderly greatly benefit by the clinical expertise and leadership of trained geriatricians and geriatric nurse practitioners in partnership with home care, palliative care, hospice, and behavioral health.
  - Providers with expertise in managing elderly patients provide important clinical guidance in many areas including communication and documentation of goals and directives for care, medication management, maintaining mobility, preventing falls, addressing cognitive impairment, and caregiver support. The program will stratify risk and intervene effectively in transitions of care for older adults, amplify system-wide expertise through geriatrician mentorship of PCPs, and expand the use of geriatric nurse practitioners providing onsite care coordinated with visiting nurse and rehabilitation services.
4. Develop a unified system-wide care management program.
  - Use evidence-based care models for high-need, high-cost patients that offer the potential to reduce costs while simultaneously improving patients' health and care experiences.
  - Coordinate across the entire system to improve overall population health, reduce duplicative efforts, and promote best practices.

***Impact:***

- Reduce institutional post-acute care utilization through investment in an integrated system-wide home care solution (combining CareGroup Parmenter Home Care and Hospice and Lahey Health at Home) - shifting the proportion of patients discharged to home care relative to institutional post-acute care would result in significant savings given the considerable cost variation between the two settings.

- Reduce avoidable hospital readmissions – studies support the notion that concentrating patient referrals to a limited number of SNFs that meet defined performance criteria through a preferred network may reduce avoidable rehospitalizations.<sup>101</sup>

## Primary Care

### Context:

- The average wait time to see a family practitioner in Boston in 2017 was 109 days. Nationally, average wait times have increased by 30 percent from 2014 to 2017 in major urban areas.<sup>102</sup>
- 55% of internal medicine and family medicine physicians experienced one or more symptoms of burnout in 2017, up from 43% in 2013.<sup>103</sup> Burnout is associated with disengagement with daily patient care activities and deterioration in quality of care.
- Average health status-adjusted TME for patients attributable to BILH PCPs are generally moderate compared to other Massachusetts provider groups. Furthermore, shifting a commercial patient to a BILH primary care practice would result in an average of \$32 in PMPM savings at current price and utilization levels.<sup>104</sup>

### Vision:

To create a high-quality integrated primary care system that will lead the region with superior patient experience, convenient access, and population health management. The scale, quality, and geographic distribution of our employed primary care providers is the cornerstone of the BILH delivery system. Patients will benefit from demonstrably improved access to a primary care team, and we will attract and retain providers by promoting learning and professional development and growth.

### Recommendations:

1. Build systems to accelerate primary care delivery re-design and innovation.
  - Provide systematic, ongoing training and development for clinicians and administrative staff, and establish an innovation model that engages providers and staff in testing, designing and implementing high value care processes.
  - Explore opportunities to design, create, and test radically different care delivery approaches that improve the care team configuration, space design, use of enabling technology, and delivery of care in the community and home.
2. Create proximate and timely access to new and existing patients.
  - Implement a system-wide, expanded nurse triage program to provide immediate access for primary care patients after hours and on weekends, extending the existing Lahey program to cover all employed BILH primary care practices.
  - Patients will have immediate telephonic access after-hours and on weekends to a triage nurse to address and resolve a range of patient issues, with an on-call physician available as backup.
  - Additional access enhancements will be achieved through a central service center, system-wide access standards, and alternative visit modalities (including virtual and on-demand care).
3. Reduce primary care administrative burden and enhance professional development.

---

<sup>101</sup> McHugh, John P., et al, "Reducing Hospital Readmissions Through Preferred Networks Of Skilled Nursing Facilities," Health Affairs, September 2017. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5664928/>; Rahman, Momotazur, et al, "Effect of Hospital–SNF Referral Linkages on Rehospitalization," Health Services Research, October 2013. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3844283/>.

<sup>102</sup> Hawkins, Merritt, 2017 Survey of Physician Appointment Wait Times, September 2017. Available at <https://www.merritthawkins.com/news-and-insights/thought-leadership/survey/survey-of-physician-appointment-wait-times/>.

<sup>103</sup> Peckham, Carol, Medscape Lifestyle Report 2017: Race and Ethnicity, Bias and Burnout, Medscape, January 2017. Available at <https://www.medscape.com/features/slideshow/lifestyle/2017/overview>; Peckham, Carol, Physician Lifestyles—Linking to Burnout: A Medscape Survey, Medscape, March 2013. Available at <https://www.medscape.com/features/slideshow/lifestyle/2013/public>.

<sup>104</sup> HPC Preliminary Report, page 54.

- Ensure provider wellbeing by 1) strategically redesigning workflows to decrease administrative workload, promote top of license practice, and distribute patient care responsibilities, and 2) providing an environment for continuous learning and development.
4. Implement shared services and a unified management structure for primary care.
- Develop an integrated primary care organizational model with unified leadership for employed primary care practices.
  - Build a robust shared services model to support employed primary care practices across administrative functions including finance, revenue cycle, human resources, supply chain, information technology, marketing, communications, and legal support.

**Impact:**

- Impact of innovation investments – expanding the use of multi-disciplinary, team-based care models that contribute to more efficient care and improved patient outcomes.<sup>105</sup>
- Improve patient access and patient experience.
- Nurse triage program is demonstrated to improve access to timely and appropriate care, reduce avoidable ED utilization by re-directing patients without emergent needs to an appropriate care setting, and improve physician satisfaction.<sup>106</sup>
- Initiatives to reduce administrative burden and alleviate primary care burnout have the potential to support the long-term sustainability of the primary care workforce.
- Operational cost savings associated with back-office integration.

**Pharmacy**

**Context:**

- Pharmacy care within a health system has vast and ever-growing effects on patient care and system sustainability.<sup>107</sup>
- Over the past several years, both Lahey and BIDMC have been investing to improve their pharmacy offerings, including ambulatory pharmacy, 340b optimization, and further focus in retail and specialty pharmacy.

**Vision:**

To create a highly-functioning pharmacy enterprise that provides integrated, high-quality care to all patients and uses evidence-based practice to support all care providers in the safe and effective use of pharmaceuticals across the continuum of care (inpatient, ambulatory, ED, physician clinics/office practices, outpatient pharmacy, and home care). Pharmacy Services will utilize the global knowledge, skills, and attitudes of all members as well as state-of-the-art pharmacy technology to provide exceptional patient-centered care.

**Recommendations:**

1. Create a system P&T Committee to assure clinical efficacy, patient safety, and cost-effective prescribing.
  - Create a system wide approach to drug use policy and formulary management.
  - Single system decision-making body and advisory panel for medical, nursing, and pharmacy staff on drug formulary and drug use management.

---

<sup>105</sup> Wagner, Edward H., "The role of patient care teams in chronic disease management," BMJ, February 2000. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1117605/>.

<sup>106</sup> Lahey data based on proprietary third party analysis conducted on 2017 to 2018 nurse triage program results within Lahey primary care practices.

<sup>107</sup> Kouk, Kristin, "McKesson RxO Team Identifies Five Health System Pharmacy Trends to Watch in 2018," McKesson, December 2017. Available at <https://www.mckesson.com/about-mckesson/newsroom/press-releases/2017/rxo-team-identifies-health-system-pharmacy-trends-to-watch-in-2018/>.

- Cross populate by working closely with local medical staff P&T Committee structures.
- 2. Deliver integrated ambulatory services to our patients in a variety of settings.
  - Implement a next-generation ambulatory pharmacy program across the BILH system that connects high-risk hospitalized patients prior to discharge with a pharmacist, sending them home with clear instructions, prescriptions that are prior authorized with insurers, minimizing inappropriate prescribing, and ensuring a safe transition of care.
  - Develop an effective collaborative, interdisciplinary program using consults and evidence-based, provider-approved protocols in the care of clinic and infusion center patients.
- 3. Unlock system-wide retail and specialty pharmacy savings.
  - Develop a Pharmacy Corporation within BILH.
  - Deliver integrated Prescription Benefits Manager (“PBM”) services for staff and patients.
  - Leverage existing specialty and retail pharmacy programs and infrastructure to combine efforts so that BILH can optimize programming.
- 4. Partner with Supply Chain to improve drug purchasing.
  - Implement a single group purchasing organization (“GPO”) and purchasing collaborative.
  - Improve upon or establish new contracts previously unfeasible (i.e., 503b outsourcing, pharmacy information technology/automation, sterile products, pumps and associated supplies, etc.).

**Impact:**

- Reduced adverse drug events, hospital readmissions, and ED visits – strong evidence that pharmacist involvement in hospital discharge transitions results in reduced adverse drug events, as well as lower 30-day readmissions and ED visits.<sup>108</sup>
- Significant opportunity for savings associated with system level drug formulary and clinical standardization initiatives, EHR integration, and specialty and retail pharmacy services.<sup>109</sup>
- Improved patient outcomes and reduced TME associated with appropriate prescribing and enhanced pharmacist support in the care model. A recent study determined that improved drug adherence dramatically reduced average annual medical spending for patients with congestive heart failure, hypertension, diabetes, and dyslipidemia. For all four conditions, hospitalization rates were significantly lower with higher medication adherence.<sup>110</sup> Medication synchronization programs, like those described by our recommendation, have been associated with increased medication adherence.<sup>111</sup>

**Ambulatory Access**

**Context:**

- Most patients and providers struggle to find the right care with the right provider at a convenient time and location. The healthcare system is calling out for simpler, more efficient, and self-navigable access solutions.
- Consumers are increasingly making health system choices on the basis of convenience, ease-of use, and timeliness of care, as well as price. The pressure to meet access demands will only

---

<sup>109</sup> Phatak, Arti, PharmD, BCPS et al “Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and post discharge call-backs (IPITCH Study),” *Journal of Hospital Medicine*, October 2015. Available at <https://onlinelibrary.wiley.com/doi/full/10.1002/jhm.2493>

<sup>109</sup> Hansen, Amanda, Knoer, Scott, Rough, Steve, Schenkat, Dan, “Creating organizational value by leveraging the multihospital pharmacy enterprise,” *American Society of Health-System Pharmacists*, April 2018. (available at: <http://www.ajhp.org/content/75/7/437>).

<sup>110</sup> Roebuck M.C., Liberman J.N., Gemmill-Toyama M., Brennan T.A., “Medication adherence leads to lower health care use and costs despite increased drug spending,” *Health Affairs*, January 2011. Available at: <https://www.healthaffairs.org/doi/10.1377/hlthaff.2009.1087>.

<sup>111</sup> National Community Pharmacists Association, “Assessing the impact of a community pharmacy-based medication synchronization program on adherence rates,” December 2013. Available at [ncpanet.org/pdf/survey/2014/ncpa-study-results.pdf](http://ncpanet.org/pdf/survey/2014/ncpa-study-results.pdf).

intensify as non-traditional market entrants such as CVS, Walmart, and Amazon seek to compete on this basis.

***Vision:***

BILH is fully committed to ensuring that patients “receive the right care, at the right time, in the right place”. This can be achieved through efforts encompassing operational excellence, capacity management, navigation, information technology systems, and care coordination across the continuum. These goals will require the development of an integrated service center that enables patients and referring providers to efficiently find and schedule the right PCP or specialist, via digital or telephonic access, with expanding functionality over time.

***Recommendations:***

1. Establish an integrated service center that is market differentiating and consistent with the BILH brand and commitment to superior access.
  - Phase 1:
    - Comprehensive “find-a-doc” functionality for patients and referring providers
    - Digital access/call-in number for triage with warm hand-offs
    - Scheduling for primary care, selected specialties and other willing practices
    - Building customer-focused culture and mentality
  - Phase 2:
    - Transition to navigator approach for select patient cohorts
    - Expanded scope of scheduling
    - Adding technological enhancements (e.g., virtual visits)
    - Billing and referral management and insurance eligibility
    - Direct patient scheduling through web portal
2. For the access strategy to be effective, BILH must develop a set of access standards that are measurable and achievable performance goals.
  - Aimed at improving patient and provider experience.
  - Will be created with proper governance and buy-in from a myriad of stakeholders.

**Supply Chain**

***Context:***

- Supply costs continue to be a key driver of expense growth for health systems in the Commonwealth. Across the future BILH, supply expenses approach roughly \$800 million in recent years, and this has been growing nearly triple the rate of inflation by internal estimates. Coupled with even steeper increases in pharmaceutical costs, this presents a significant challenge to the future sustainability of this and all healthcare systems.
- As one of the largest aggregate costs to BILH, supply chain represents one of the largest opportunities for savings achieved through the well-coordinated, data-driven, value-oriented integration of procurement processes and inventory management.
- Leveraging the combined scale of the new system, BILH will be able to negotiate better prices from suppliers and work towards greater standardization and adoption of high-value products.

***Vision:***

To develop a centrally coordinated and standardized model for its supply chain function — including procurement, receiving and logistics, supply value analysis, and vendor management — BILH will engage, collaborate with, and support all appropriate stakeholders across the continuum of care. By using the system’s scale and planned enhanced analytic capabilities to deliver the highest value inputs

to the provision of care, we will deliver significant savings and promote the business goals of providing high-quality, safe care in the most efficient and effective way possible.

**Recommendations:**

1. Consolidation to a single GPO.
  - All legacy organizations consolidate to a single GPO to leverage the aggregate spend of the enterprise to maximize value; to facilitate the standardization of products, vendors, and pricing; and to maximize efficiencies in procurement and contracting functions.
  - Moving to a single GPO allows BILH to combine its spend across all product lines and purchased services to drive greater savings. Furthermore, operating under a single GPO will streamline supply chain analytics for more efficient procurement and utilization.
2. Establish a value analysis structure.
  - Establish a value analysis structure and process designed to consistently govern the introduction, evaluation, standardization, and utilization of clinical products, new clinical technology, and clinical services used within the enterprise.
  - Supply and service decisions will be made using the value analysis processes. This ensures that BILH is using products and supplies with demonstrated clinical effectiveness while attaining the best possible pricing.

**Impact:**

- Reduced supply and service expense across the health system.
- Efficient and effective clinical product assessment, selection, and standardized use across the system to reduce variation and improve quality.

**Laboratory**

**Context:**

- Laboratory medicine, as a high fixed cost business model, presents significant opportunities to capitalize on economies of scale through appropriate consolidation of multiple laboratories under one platform.<sup>112</sup>
- Training programs for medical laboratory technologists are currently producing only a third of the workforce need, with fewer than 5,000 individuals graduating each year from accredited programs.<sup>113</sup> Since 1990, the number of lab training programs has decreased almost 25%.
- As a result of the pressure to decrease costs and improve services, laboratory consolidation is a common and foundational initiative for any large health system as it comes together.<sup>114</sup>

**Vision:**

To provide the highest quality, most timely, and cost effective anatomic pathology and clinical laboratory services for our patients, in partnership with our healthcare providers, institutions, and the communities we serve.

---

<sup>112</sup> Deloitte, "Understanding and evaluating deal considerations in the diagnostic and medical laboratory sector," 2018. Available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-lshc-diagnostic-medical.pdf>.

<sup>113</sup> American Society for Clinical Pathology (ASCP), Laboratory Personnel Jobs Are Available Nationwide. Reauthorize the Workforce Investment Act Including Provisions that Support Laboratory Training Programs. Why is Federal Support of the Laboratory Workforce Needed? June 2011.

<sup>114</sup> Cook, Jim, "Laboratory Integration and Consolidation in a Regional Health System," ASCP, DLM, Laboratory Medicine, Volume 48, Issue 3, 1 August 2017, Pages e43–e52, <https://doi.org/10.1093/labmed/lmw069>.

### **Recommendations:**

1. Create a system-wide approach to anatomic pathology.
  - Ensure all patients and clinicians have access to the same expertise regardless of location.
  - Optimize distribution of anatomic pathology services and access to specialized testing.
  - Deploy systems to connect pathologists at all BILH sites, encouraging collaboration and consultation from tertiary/quaternary hubs to community care settings.
2. Leverage combined volumes and internal expertise to advance in-sourced testing and reduce external expense.
  - Increase operational efficiency and lower costs through testing consolidation – including in-sourcing of commercial reference testing, consolidation of specialty and routine low-volume lab services to major specialty hubs, and increased use of testing formularies.
  - Negotiate with major reference labs — BILH currently uses 76 different reference labs.
  - Evaluate opportunities for consolidating or owning courier services.
  - Establish a system-wide approach to laboratory instrumentation
  - Improve uniformity of methodologies and protocols.
  - Decrease cost of reagents, consumables, and capital equipment.
  - Negotiate contracts with all vendors, including blood component vendors.
  - Invest in education and training for physicians, technical staff, and phlebotomists.
  - Incorporate and align individual facility and system level staffing initiatives/needs with expertise level assessment.

### **Impact:**

- Significant operational savings through renegotiation and consolidation of reference laboratories, standardization of instruments and equipment.
- Additional savings resulting from courier service consolidation/in-sourcing, tube vendor/supply consolidation, and additional contract consolidation and negotiation.

## **CIN/Population Health Management**

### **Context:**

- **APM Adoption in the Commonwealth:** By 2022, the HPC has recommended a target of 68% adoption for commercial HMO APMs and 40% adoption for commercial PPOs.<sup>115</sup> At the same time, the launch and anticipated expansion of the MassHealth ACO program promises to result in even greater adoption of APMs for MassHealth patients over a similar time period.
- **Role of Population Health Management and CINs in Driving Improved Performance:** Robust population health management, especially the proactive management of chronic conditions as well as the coordination of transitions of care, is central to achieving the better outcomes at a lower cost. Clinically integrated networks are uniquely positioned to align provider resources and manage performance in support of these goals.

### **Vision:**

Create a unified CIN — composed of BIDCO, LCPN, and MACIPA — which leverages best practices in population health management and takes advantage of economies of scale, coordinated care management, and shared administrative infrastructure.

---

<sup>115</sup> HPC, Opportunities for Savings in Health Care, May 2018. Available at <https://www.mass.gov/files/documents/2018/05/04/Opportunities%20for%20Saving%20packet.pdf>.

**Recommendations:**

1. Consolidate CIN shared services to achieve efficiency and effectiveness.
  - Bring together the core services of legacy networks—including medical management, administration, information technology, and finance—through a unified management structure.
2. Develop system-wide programs to enhance medical management.
  - **Care Management:** Develop systemwide approach to care management teams with consistent, best-practice standards including standardized identification tools, patient assessments, care team ratios, care plans, and workflows.
  - **Pharmacy Management:** See pharmacy recommendations.
  - **Quality Measurement and Management Program:** Support the development of a systemwide, comprehensive approach to improving ambulatory and hospital quality performance.
3. Create a robust, integrated CIN data platform for claims and clinical data aggregation, reporting, and analytics.
  - In order to utilize consistent data and analytics to achieve population health management goals, create a single platform for aggregating claims and clinical data.

**Impact:**

- Consolidating shared services will reduce CIN infrastructure costs and improve coordination of care and associated clinical support and administrative functions.
- Standardizing care management teams brings the entire network to a baseline standard of care management and communications between providers and care managers.
- Developing an Ambulatory P&T committee will:
  - Monitor the quality and utilization impact of prescribing across the network;
  - Place pharmacists on care management teams to consult on individual patients;
  - Ensure seamless coordination between the inpatient and outpatient environments;
  - Examine the viability of individual health plan formularies; and
  - Drive specialty pharmacy cost containment.
- The comprehensive quality measurement and management program will yield significant gains in population health management for the network’s patient population, as well as improve the overall performance and sustainability of the CIN.
- Consolidating to a single data warehouse and analytics platform will yield additional infrastructure cost savings. There are also clear benefits to care delivery, including care management on an individual and cohort basis, including predictive analytics, as well as quality improvement and more consistent standards of care.

These examples represent just a few of the many initiatives BILH will implement that will benefit the Commonwealth. There is more work to be done, but the Parties have already identified a variety of opportunities to transform and improve care delivery that would simply not be possible absent this transaction.

*How will the HPC incorporate BILH’s contribution to effective, high-value, tiered or limited network products into its estimate of market impact?*

*If BILH does not move forward, what will replace the care improvement initiatives identified by the Parties?*

The Massachusetts Health Policy Commission  
Cost and Market Impact Review  
HPC-CMIR-2017-2  
Preliminary Report Response – Appendices

*Joint response for the proposed transaction to create  
BILH and BILH CIN on behalf of*

- A. Beth Israel Deaconess Medical Center, Inc.
- B. Mount Auburn Hospital
- C. New England Baptist Hospital
- D. Lahey Health System, Inc.
- E. Seacoast Regional Health Systems, Inc.
- F. Beth Israel Deaconess Physician Organization, LLC  
d/b/a Beth Israel Deaconess Care Organization
- G. Mount Auburn Cambridge Independent Practice  
Association, Inc.

## Table of Contents

Appendix 1: Introduction from Original CMIR Submission by the BILH Parties .....	3
Appendix 2: Detailed WTP Analysis.....	10
Appendix 3: BILH Design Teams .....	17

## Appendix 1: Introduction from Original CMIR Submission by the BILH Parties

*The rationale for forming BILH has been clearly articulated by the Parties from the earliest planning stages. The document below explains this rationale and was presented to the HPC as an introduction to the Parties' CMIR submission on January 19, 2018. (The term "NewCo" in the original submission has been replaced by "BILH" to avoid confusion.)*

The proposed transaction and creation of BILH will create a forward-thinking and geographically distributed health care delivery network to provide enhanced access to quality care for patients in Eastern Massachusetts, meet the needs of purchasers seeking to reduce medical expenditures, and advance progress toward Massachusetts' stated goals of reducing health care spending and promoting adoption of alternative payment methodologies ("APMs").

Presently, the Massachusetts marketplace is dysfunctional, as has been well documented by the Health Policy Commission ("HPC")<sup>1</sup>, and no market-based solution has emerged to create true competition and balance; yet, to date, neither legislation nor regulatory enforcement has brought parity to the market or corrected this dysfunction. The current environment of care continues to be fragmented and unsustainable. Unwarranted price variation and a challenging financial environment impede high-value organizations from competing effectively to close the competitive gap in Eastern Massachusetts. Specifically, community hospitals are struggling and many lack viable strategic options for future sustainability in a market where expensive providers focus on increasing volume at and shifting care to tertiary hubs. So long as the highest priced providers continue to be paid at materially higher rates for a level of quality performance that is not materially better, all other hospitals – community, teaching, and academic – in Massachusetts will suffer, and statewide expenditures will remain difficult to control. BILH represents the only currently available market-based option for the Commonwealth to address the identified weaknesses and inefficiencies in the market by presenting a viable alternative to higher-priced systems for payers and employers.

While public officials continue to examine a range of policy options intended to correct this dysfunction without harming important providers, no definitive action has been taken, and consensus continues to be a challenge. In contrast to the many policy options that have been discussed, there are far more limited choices with regard to allowing the market to "right itself." However, there is one promising opportunity: BILH will offer all critical elements necessary to compete, including a broad continuum of services, clinical expertise and depth, superb physicians, high-value performance, sufficient geographic footprint among community-based and tertiary providers, reputation, valuable research and education programs, and an effective structure for value-based insurance products and incentivized choices. Through BILH, the Commonwealth has an unprecedented opportunity to facilitate and introduce balance and competition to the marketplace.

BILH's objectives, which are closely aligned with those of the HPC, include:

- Optimally utilize the combined ambulatory, inpatient, behavioral health, community, tertiary, home care, and post-acute assets of BILH based on patient need and convenience, with an overall goal of improving health outcomes and quality of life for patients by keeping care in the most appropriate setting and spreading best practices throughout BILH's network of providers
- Achieve operational synergies, economies of scale, and efficiencies to further control costs and pass savings on to consumers through the development of attractive insurance products
- Reduce fragmentation in care delivery to improve cost-effectiveness and enhance the patient experience
- Bolster clinical programs, capabilities, and services in communities to expand access
- Strengthen teaching and research programs
- Provide streamlined transitions of care and navigational support to patients in their communities

---

<sup>1</sup> HPC, Community Hospitals at a Crossroads: Findings from an Examination of the Massachusetts Health Care System, March 2016.

- Build on existing community partnerships and evidence-based programs to maximum effect, strengthening public health, primary care and prevention, and behavioral health expertise and supporting efforts across the BILH system
- Properly support providers within the delivery system to succeed under value-based payment methodologies and risk contracts, such as the MassHealth ACO Program, by significantly improving patient care, effectively spreading risk to better manage care for at-need populations, making investments in infrastructure (e.g., information technology) required to succeed, and mitigating healthcare cost growth
- Align financial incentives through a shared financial bottom line to help achieve a level of integrated performance beyond what is possible in contractual affiliations alone, further supporting efforts to shift care to the most appropriate, lowest cost settings and to enhance the clinical capabilities available in the community

The HPC commands one of the most robust sets of data, market intelligence, and benchmarking capabilities in the country. The potential impact of moving forward with this transaction will be assessed, well-documented, and monitored by the regulatory bodies, payers, and other interested parties.

The HPC should also consider and inform the public about the significant risks that will flow from efforts to prevent the potential transaction from occurring. The risk of not moving forward with this transaction is the continuation of significantly unfavorable trends in healthcare expenditures, spending on the highest-priced providers, the acceleration of a lopsided market, the further destabilization of critical community hospitals and tertiary facilities, and the invitation to national health systems to exert influence over the providers that presently remain under the full jurisdiction of the Commonwealth. Failure to obtain regulatory approval to form BILH does not mean that there will be no further consolidation in the market. Whether the forces of consolidation come from outside the Commonwealth, or from the need to rescue financially stressed hospitals, proposed consolidations are likely to occur in the future. As a top performer on value, measured by the ability to deliver demonstrably high and competitive quality of care at a lower cost, and scope broad enough to meet the needs of a diverse set of healthcare consumers and purchasers, BILH is the natural and only market-based option that brings together a full spectrum of highly reputable Massachusetts non-profit hospitals to offer a meaningful alternative to high-priced providers, and introduce true competition to a lopsided market.

For further detail regarding the creation of BILH, its strategic objectives, and transaction rationale, please reference pages 2-6 of the document entitled “Responses to DoN Questions” submitted as part of NEWCO-17082413-TO application to the Department of Public Health in September 2017.

### **Key Considerations**

In both law and regulation,<sup>2</sup> the HPC is empowered to “examine factors relating to the Provider or Provider Organization’s business and its relative market position, including, but not limited to” the many factors specifically addressed in the cost and market impact review (“CMIR”) questions. Of note, is the final item listed: “any other factors that the Commission determines to be in the public interest.”

This clause appropriately empowers the HPC to think broadly about the public interest implications of its recommendations, consider other factors affecting the long-term viability and sustainability of providers, evaluate broader trends and threats, and assess what will be required for long-term success of a competitive market.

Accordingly, BILH respectfully urges that any findings and report regarding the impact of the proposed affiliation be compared to a robust assessment of the future marketplace, which BILH believes will be more challenging for providers and will not address the noted dysfunction. As such, BILH believes a thorough analysis of the potential impact of this transaction must include extensive analysis of the risks of not approving the transaction.

---

<sup>2</sup> Health Policy Commission, 958 CMR 7.00 Notices of Material Change and Cost and Market Impact Reviews, CMR 7.06(12); Massachusetts General Laws, Section 13: Notice of material changes to operations or governance structure of provider or provider organization; cost and market impact review, MGL 6D s. 13(d)(xii).

Therefore, BILH respectfully suggests that, in the public interest, the following additional key considerations be included as part of the HPC's review.

**1. BILH is the best hope for a competitive, market-based solution to unwarranted price variation.**

The HPC and the Attorney General's Office ("AGO") have identified and repeatedly explained the market dysfunction of unwarranted price variation in which price varies dramatically between hospitals and is not correlated to individual hospital quality.<sup>3,4</sup> This dysfunction leads to high costs and, in turn, destabilizes critical community-based providers that lack both volume and financial resources. High-priced providers do not currently face effective competition from other providers who can force them to evaluate their pricing strategy by offering a high-value alternative. The Special Commission on Provider Price Variation further explored these differences and developed recommendations to reduce unwarranted price variation.<sup>5</sup>

While additional legal or regulatory actions may seem like an option, the reality is that additional regulatory authority has not been granted to address unwarranted price variation. Therefore, BILH believes that effective competition is the best, quickest, most cost-effective, and most efficient means to address unwarranted price variation and overall cost growth within the Commonwealth; ensure needed consumer access to lower-cost community providers that are at-risk in the current environment; and promote greater affordability and access to health care and coverage for consumers throughout Eastern Massachusetts. Even if consensus is achieved and government action is taken to begin to address this dysfunction, the positive impact of BILH in the marketplace would complement any government intervention on commercial payment rates and facilitate greater affordability in the Massachusetts market.

As described throughout this response, BILH combines highly respected high-value providers that share a demonstrated commitment to quality and managing cost growth. With geographic coverage, savings from reduced utilization of high-priced providers, the ability to direct cases within BILH to the appropriate cost-effective facility, and outstanding population health management capabilities, BILH will be able to offer a unique value proposition to health plans, employers, and individual consumers. This type of innovation is exactly what providers have been asked to do: focus on managing total medical expenses ("TME") and quality and organize to succeed in a competitive market driven by value.

Since the AGO issued its first report on cost drivers in Massachusetts,<sup>6</sup> nothing has been able to rectify unwarranted price variation, undo its persistent negative impact on the stability of critical community providers, and secure access to care in communities throughout the Commonwealth. The single greatest opportunity to fix this dysfunction, and create a healthier and more stable competitive market, is a high-value competitor that can challenge the dominance of high-priced providers. Only a fully integrated delivery system like BILH can strengthen community providers, deliver value that competes effectively to shift volume from higher-priced providers, and apply pressure on higher-priced providers to evaluate their pricing strategy. All of these results are wins for the Commonwealth.

Blocking this affiliation would ensure that no organization would have the geographic coverage of community-based and tertiary providers, the continuum of care, competitive TME, and commitment to effective population health management necessary to successfully challenge high-priced providers in the market.

---

<sup>3</sup> Per The Annual Report Series on Relative Price: Healthcare Provider Price Variation in the Massachusetts Commercial Market, The Center for Health Information and Analysis, May 2017.

<sup>4</sup> Re-examining the Health Care Cost Drivers and Trends in the Commonwealth, Freedman Healthcare, February 2016.

<sup>5</sup> Joint Committee on Health Care Financing, Special Commission on Provider Price Variation Report, March 15, 2017.

<sup>6</sup> Office of Attorney General, Investigation of Health Care Cost Trends and Cost Drivers Pursuant to G.L. c. 118G, § 6½(b) Preliminary Report, January 29, 2010.

## **2. Massachusetts is unlike other markets, with several forces in place to avoid above-market price increases.**

A main concern of the CMIR is the impact BILH (or any provider affiliation) could have on provider prices. The Parties disagree with any premise that BILH will be able to unilaterally increase prices for several reasons.

First, the Parties currently offer outstanding value to healthcare consumers, through high-quality services at lower relative prices and TME than their competitors. This represents a core competitive advantage for BILH and one that the organization does not want to diminish.

Second, there is market pressure to manage TME, and meaningful public accountability for performance on this measure. BILH is already highly focused on managing TME through commercial APMs, Medicare accountable care organizations (“ACOs”), Medicare Advantage, and, in March 2018, the MassHealth ACO Program.

Third, there is now significant regulatory scrutiny of cost increases, helping to ensure that future pricing changes are reflective of the value provided.

So many of the pieces are in place for high-value care in Massachusetts – payers and providers focused on risk contracting and the real value of care, as well as public transparency on cost, quality, access, and value. However, what is missing is a health system that can compete with the Commonwealth’s dominant system – applying pressure on them to evaluate their pricing strategy by offering a high-value alternative. The opportunity to facilitate establishment of such a system should have strong appeal and be welcomed by regulators, given the collective interests of market stakeholders to lower total healthcare expenditures (“THCE”) and create higher quality through improved market competition.

## **3. Hospitals face several threats that will undermine their standing to the detriment of Massachusetts citizens and the economy.**

Competitive dynamics in healthcare portend significant challenges for non-profit hospitals and health systems. Health care is changing quickly, with multi-state affiliations and new entrants threatening to squeeze established providers, and potential policy changes pointing to very difficult times for providers and potential access threats for consumers. For Massachusetts providers to be competitive amidst these changes, they cannot be maintained in such small units that they cannot compete effectively nor maintain the capacity to provide care in local communities, care which will otherwise erode or diminish entirely. Examples of competitive threats include:

- a. **Multi-state Affiliations** – These affiliations could shift the standing of Massachusetts providers from being leaders of systems to being small players in systems based in other states. If this happens, Massachusetts providers could lose their prestigious standing among providers nationally.
- b. **Disruption** – Major technology and other non-provider companies are expected to enter the health care market and disrupt current models of care. If they are not engaged effectively for the benefit of Massachusetts and its citizens, these national companies could take profits and jobs out of state. BILH will be better positioned to invest in consumer-oriented information technology (“IT”), be an attractive partner, and effectively manage care to ensure that Massachusetts benefits from these disruptions. BIDCO is already a national IT leader among clinically integrated networks (“CINs”) in data sharing and care management tools and strengthening that skill set will help Massachusetts. To attract the required top talent in areas like IT and implement IT system solutions across a broad network of providers with heterogenous systems, BILH will need to spread infrastructure costs across a larger base.
- c. **Sending Profits Out of State** - Organizations that are not community-based non-profits may “cherry-pick” profitable patients and/or services, leaving a greater financial burden on existing non-profit providers that care for all patients regardless of ability to pay or insurance status. Major national healthcare companies are acquiring physician practices, including in Massachusetts. As these companies generate profits by applying pressure to local, non-profit

hospital providers and others, they take their profits out of state to the detriment of the Massachusetts economy.

- d. **Government Payment Reductions** - With the recent tax law changes and continued fiscal pressure on federal and state budgets, it is likely that Medicare hospital payments will be further reduced. Medicare physician fees are already slated for virtually no inflation increase for the next ten years, even without additional reductions due to the Tax Cuts and Jobs Act. Reductions in Medicaid payments to providers are a constant threat in the current environment, as growth trajectories in Medicaid spending are not sustainable and the federal role in financing continues to be debated. The Parties need every opportunity to be able to come together and, collectively, operate more efficiently.

In this dynamic and highly competitive landscape, government agencies, policy makers, and other stakeholders must work together to promote actions and strategies that will ensure Massachusetts has strong health systems that are leading health care delivery regionally and nationally; providing needed access to medical and behavioral health care in communities across the Commonwealth; and competing fairly and effectively with each other for the benefit of consumers, employers, and health plans.

#### **4. Stagnation and weakening of Massachusetts hospitals will continue if this affiliation does not move forward.**

The HPC, AGO, and other government regulators are implicitly part of a strategic planning process, not just for the BILH Parties, but for the health sector in Massachusetts. When setting strategy, one of the greatest errors is assuming that inaction is a viable option, and that the status quo can be maintained.

As described above, the market environment for health systems is changing quickly and is fraught with risk. In evaluating the risks associated with forming BILH, all stakeholders must also consider the risks for providers and the Commonwealth of not supporting the formation of BILH.

In this case, inaction will lead to deterioration of the constituent organizations as they cannot continue to effectively respond to external market threats or reverse the persistent negative impacts of unwarranted price variation that will intensify the destabilization of low-cost community and tertiary providers.

Without this transaction, the future Massachusetts health care market picture is bleak:

- a. The market will continue to lack a high-value challenger to the dominant system, either in geographic presence, clinical capability, or reputation. As a result, no significant progress in shifting care from higher-priced providers is likely.
- b. Community hospitals and academic medical centers (“AMCs”) outside the dominant provider will continue to weaken, attracting fewer commercially-insured patients, and widening the financial disparity caused by unwarranted price variation.
- c. Specialty market leaders like New England Baptist Hospital (“NEBH”) will weaken without a broader affiliation, as they would likely struggle to retain cases as provider organizations seek to control referrals.
- d. Independent community hospitals like Anna Jaques Hospital (“AJH”) will struggle to find sound financial footing as looser affiliations will not lead to the required investment in local clinical and technological resources. In the past, both BIDMC and Lahey have contributed to the maintenance, growth, and financial longevity/sustainability of community hospitals like BID-Plymouth (formerly Jordan Hospital), Winchester Hospital, and Beverly Hospital, none of which would have continued to be financially viable without corporate affiliates committed to their success.

#### **5. The challenges of high public payer mix must be shared**

BILH understands that other providers are concerned about this very challenging outlook as well, including providers with disproportionately higher public payer mix. BILH is committed to providing outstanding care to underserved Medicaid populations by applying the Parties’ ACO expertise in the

MassHealth ACO Program. BILH also recognizes and supports other efforts used to balance the proportion of payments from public payers, including the Health Safety Net (“HSN”) Trust Fund, which ensures that all acute care hospitals are contributing to those that bear disproportionate responsibility to care for our lowest income patients. BILH contends that the challenge of adequately supporting providers with a high public payer mix is critically important and is not inconsistent with the efforts of other providers to compete more effectively to address unwarranted price variation and cost growth. These issues must be addressed in parallel, or innovation and competition will be stifled.

## **6. Health plans, employers, and consumers must be part of the change**

It will take providers and health plans to develop competitive products, and employers and consumers to select these products to shift the current market dynamic. For the first time, with the approval of BILH, Massachusetts will have a legitimate contender in the field of play. High-value plans will reward providers, payers, and consumers for reductions in TME.

By creating an attractive provider network with highly reputable providers, deep clinical expertise, and geographic coverage, BILH will increase competition in the payer market as well. Payers will have the option to offer more innovative, high-value products. Even if only some payers choose to innovate with BILH, health plans will compete more, and employers will benefit from this competition and more options for high-value health plan products.

To the extent that BILH offers an option for a high-value network product, payers still have alternative providers with which they can contract. No monopoly situations are created. In each local market that BILH will serve, payers will also have options to contract with providers of both the dominant system as well as other provider organizations.

Some providers are concerned that BILH will reduce the market share of other high-value providers. BILH’s intense focus, however, will be on putting price pressure on higher-priced providers by being a high-value alternative to them. There are several factors that support this rationale, including current outmigration patterns and the fact that under risk contracts, lowering TME will be the major performance goal, which is unlikely to be achieved unless a significant portion of the market shift is away from higher-priced systems. There is much more to be gained by market share shifting from higher-priced systems than similar or lower-cost systems.

## **7. Optimizing impact requires both BILH and BILH CIN**

To achieve the optimal impact on managing cost growth and improving quality, two entities play distinct and interwoven roles: BILH (a fully-integrated corporate affiliation) and BILH CIN (a BILH subsidiary with contractual affiliates).

Beth Israel Deaconess Care Organization (“BIDCO”), Lahey Clinical Performance Network (“LCPN”), and Mount Auburn Cambridge Independent Practice Association (“MACIPA”) have driven innovations to manage cost growth and improve quality over many years. By investing in population health infrastructure and analytics, engaging physicians, and entering value-based contracts, these provider organizations have driven significant improvement in cost and quality. BILH has repeatedly demonstrated these accomplishments to the HPC.

Provider organizations (independent practice associations, physician-hospital organizations, and ACOs) are limited in the impact they can have on structural costs within the system. To achieve the next level of savings for the system, these contractual affiliations must be supported by a core of providers in a corporate affiliation.

Only through a fully-integrated corporate affiliation can providers reduce overhead, and plan together to align strategy and investments in clinical services. Under contractual affiliations, providers lack the legal authority, ability, and motivation to make more complex decisions about resource allocation like strengthening community hospitals to shift care from AMCs. Similarly, only through a corporate affiliation can Beth Israel Deaconess Medical Center (“BIDMC”) and Lahey Health System (“Lahey”) collaborate with Mount Auburn Hospital (“MAH”) to rationalize the movement of clinically-appropriate cases to a high-quality and lower-cost community teaching hospital. As the contracting organizations reach their limits on

improving value through better coordinated care, additional value must come from changes that are only possible with close strategic alignment and a fully-integrated corporate affiliation.

If BILH, a corporate affiliation, is needed to achieve maximum impact, it is reasonable to ask why BILH CIN is needed, as well. BILH CIN, more efficiently deploying the resources of existing provider organizations, will continue to be the infrastructure to drive risk contract success. That infrastructure is shared also with other providers in the BILH CIN network that are not corporate affiliates. Though that contracting affiliation has limits compared to a fully-integrated corporate affiliation, it nonetheless adds value. The contracted affiliate can access population health management infrastructure and support that would be difficult to replicate as an independent entity. The broader CIN network also supports BILH in being able to offer high-value network insurance products with greater access.

## **Conclusion**

The current market has one dominant system which has four times the revenue of the next largest competitor. After forming BILH, the dominant system will still be more than twice as large as BILH (\$12.4 billion in annual revenue compared to \$5.3 billion). This alternative presents a market in which a dominant system is challenged by a high-value, but still smaller, second system. If BILH is prohibited from moving forward, there is little hope of a meaningful market-based challenge to the dominant system, leaving the current dysfunction in place.

The creation of BILH will offer the Massachusetts healthcare market a unique, highly competitive option not currently available to payers or consumers. BILH will be built on a platform of already high-value, lower-cost providers which will be further incentivized through full integration to seek opportunities to even more effectively manage TME. BILH is committed to working with health plans and employers to develop attractive insurance options that will benefit consumers and introduce meaningful competition into the healthcare market.

## **Appendix 2: Detailed WTP Analysis**

The following memorandum was completed by BILH's economic consultants.

**The remainder of this page is intentionally left blank**

This memorandum provides a summary of the methodology and the results from a retrospective analysis of the competitive effects of past transactions involving BILH member systems and hospitals. The objective of this analysis is to assess the extent to which the predictions of the WTP-based merger simulation model have been borne out in Massachusetts, a state that closely tracks and regulates healthcare spending. Specifically, we employ the two-stage model of hospital competition used by the HPC in its Preliminary Report to estimate the change in Willingness to Pay (WTP) resulting from prior transactions. Using this estimated change in WTP, we arrive at a prediction of post-merger price changes for these transactions based on the HPC's merger simulation estimates, and then compare these predicted price changes to actual changes in price observed in the data. In the following sub-sections, we describe the methodology underlying each of these steps.

### **Identifying Candidate Transactions for Review**

As an initial matter, we identified a set of candidate transactions in Massachusetts that would be appropriate for this exercise. We focused on past transactions involving BILH member hospitals and systems, given the HPC's detailed review of the pricing effects of these transactions in its Preliminary Report.<sup>1</sup> In particular, we identified the following transactions for which we estimated the change in WTP, the corresponding predicted price change based on the HPC's estimates, and the actual price change based on a retrospective analysis.

- Lahey Clinic's acquisition of Northeast Hospital System in 2012
- Lahey Heath's acquisition of Winchester Hospital in 2014
- BIDCO's affiliation of Cambridge Health Alliance (CHA), Lawrence General Hospital and Anna Jaques Hospital in 2014
- BIDMC's acquisition of Milton Hospital in 2012
- BIDMC's acquisition of Jordan Hospital (Plymouth) in 2014

### **Estimating Change in WTP**

The approach we use to estimate the change in Willingness to Pay ("WTP") for each of these transactions follows the economic literature examining the hospital industry and the methodology recommended in the analysis of hospital mergers by the FTC.<sup>2</sup> Specifically, this

---

<sup>1</sup> See HPC-CMIR-2017-2: "The Proposed Merger of Lahey Health System; CareGroup and its Component Parts, Beth Israel Deaconess Medical Center, New England Baptist Hospital, and Mount Auburn Hospital; Seacoast Regional Health Systems; and Each of their Corporate Subsidiaries into Beth Israel Lahey Health; and The Acquisition of the Beth Israel Deaconess Care Organization by BILH; and The Contracting Affiliation Between BILH and Mount Auburn Cambridge Independent Practice Association," p. 32, *available at* [https://www.mass.gov/files/documents/2018/07/18/Preliminary%20CMIR%20Report%20-%20Beth%20Israel%20Lahey%20Health\\_0.pdf](https://www.mass.gov/files/documents/2018/07/18/Preliminary%20CMIR%20Report%20-%20Beth%20Israel%20Lahey%20Health_0.pdf).

<sup>2</sup> See Joseph Farrell et al., "Economics at the FTC: Hospital Mergers, Authorized Generic Drugs, and Consumer Credit Markets," *Review of Industrial Organization*, Vol. 39 (2011), pp. 271-296.

approach is based on a “two-stage” model of competition.<sup>3</sup> In the first stage, health plans and hospitals bargain over prices and network composition. In the second stage, once hospital networks have been formed, consumers choose from a set of hospitals based on a variety of factors and under the assumption that they face the same out-of-pocket costs across all hospitals within this set. The approach involves measuring the bargaining position of a hospital (or hospital system) in its negotiations with health plans for inclusion in the health plans’ networks. While bargaining position might stem from a variety of factors, including favorable location or high quality, the analysis of unilateral effects attempts to measure the change in bargaining position that specifically results from a possible reduction in competition through the merger of hospitals that are viewed as substitutes by health plans and consumers. That is, the greater the degree of substitutability between the merging hospitals, the greater the change in willingness-to-pay or “WTP” (measured as the difference in WTP between the merged entity and the sum of the WTPs of the separate hospital systems) arising from the merger.

To estimate the change in WTP from each of the transactions listed below, we estimate a patient choice model using the inpatient case-mix data provided by CHIA for the time period 2012 through 2015.<sup>4</sup> The sample includes all acute care inpatient discharges in Massachusetts that are insured by commercial payers.<sup>5,6</sup> The model includes a number of characteristics that are thought to be important in determining a patient’s choice of which hospital to visit for inpatient care, including patient demographics and clinical indicators, as well as the location of the patient.<sup>7</sup> We estimate the model using a flexible, semi-parametric approach that creates groups based on patient characteristics (such as patient age and ZIP code) and estimates substitution patterns for patients within each group by examining the hospital choices of other patients who have similar characteristics.<sup>8</sup> This flexible specification is well suited to capture localized competitive interactions between hospitals that might be driven by the location of

---

<sup>3</sup> The WTP model was developed and applied to insurer-hospital bargaining in several influential academic articles: Town, R. and Vistnes, G., “Hospital Competition in HMO Networks,” *Journal of Health Economics*, Vol. 20 (2001), pp. 733 – 753, and Capps, C., Dranove, D.D., and Satterthwaite M.A., “Competition and Market Power in Option Demand Markets,” *The RAND Journal of Economics*, Vol. 34 (2003), pp. 737 – 763.

<sup>4</sup> While we also estimated a patient choice model using the 2016 CHIA inpatient case-mix data, we are unable to use this information to estimate price changes for mergers or affiliations that occurred in 2016 (e.g., NEBH’s affiliation with BIDCO in 2016), because we do not have data on prices for 2017 that can be used to estimate the post-merger pricing impact.

<sup>5</sup> We identified the following payers as commercial: Blue Cross Blue Shield (“BCBS”), BCBS Managed Care, Commercial, Commercial Managed Care, HMO, Other Non-Managed Care, PPO and Other Managed Care, Point-of-Service, and Exclusive Provider Organization.

<sup>6</sup> Because we lacked access to the All Payor Claims Data, we restricted the analysis to inpatient services only. Regardless, the implications drawn from this exercise extend to the other segments examined by the HPC (outpatient services and physician services).

<sup>7</sup> The full list of variables that are included in the model as potential drivers of patient choice include: state, county, ZIP code, age group (0-17, 18-45, 46-64, and 65+), gender, emergency status, DRG type (medical or surgical), DRG weight (<2 or 2+), MDC, and DRG.

<sup>8</sup> Patients are placed into bins based on the variables identified as potential drivers of patient choice using the iterative grouping procedure described in Raval, D., Rosenbaum, T., and Tenn, S.A., “A Semiparametric Discrete Choice Model: An Application to Hospital Mergers,” *Economic Inquiry*, Vol. 55 (2017), pp. 1919 – 1944. We set the minimum group size to 25. Ungrouped patients that remain after this procedure are grouped together into a bin.

outpatient centers or physician clinics that affect referral patterns or by the unique geographies of an urban hospital market.

Estimation of the patient choice model in this manner returns the shares assigned to each hospital in the choice set and associated with each patient grouping. These are then used to calculate the WTP for each hospital (and hospital system) based on the following transformation. The total WTP for a given set of hospitals is calculated as the log of the inverse of the residual share for each patient grouping. The total WTP for that set of hospitals is then calculated as the sum of the WTP across all patient groupings. The change in WTP resulting from each merger is then calculated as the difference between the WTP for the merged entity and the sum of the WTPs for the constituent member hospitals. Because the merging parties' shares are summed before taking the log transformation in the first instance, rather than after as in the second, the WTP model will predict an increase in WTP if the merging parties both have positive share for at least one patient grouping.

Based on this model, we estimated the change in WTP corresponding to each of the transactions listed above.<sup>9</sup> These are presented below in Exhibit 1. Of the transactions reviewed, three of them are associated with a meaningful change in WTP – Lahey's acquisition of Northeast, Lahey's acquisition of Winchester Hospital, and BIDCO's affiliation with CHA, Lawrence General and Anna Jaques Hospital. We focus on these transactions in our subsequent analysis comparing predicted and actual price changes.

**Exhibit 1**

<b>BILH Transaction</b>	<b>Change in WTP</b>
BID-Milton	1.7%
BID-Plymouth	1.2%
Lahey-Northeast	5.2%
Lahey-Winchester	6.6%
BIDCO	4.1%

**Estimating the Predicted Post-Merger Price Change from Past Transactions**

The next step in the analysis entails using the estimated change in WTP to come up with a prediction for the post-merger price change at the acquired or newly affiliated hospitals for the set of transactions identified above that have a meaningful change in WTP. In its analysis described in the Preliminary Report, the HPC estimated a linear regression equation (as described in footnote 160 of the Preliminary Report) that quantifies the relationship between WTP per discharge and price. For inpatient services, the estimates from the HPC's regression

<sup>9</sup> Our understanding is that the HPC uses the change in WTP/discharge as part of their regression model estimating the impact on pricing. The change in WTP/discharge is calculated as WTP per discharge of the combined system minus the volume (discharge) weighted averages of the pre-merger WTP/discharge values of the merging systems. In percentage terms, this change is equivalent to the percentage change in WTP reported in the Exhibit 1.

model indicate that the change in WTP associated with the BILH transaction (10.8%) would predict a price increase of (5-6.7%), depending on the exact specification of the regression model employed.<sup>10</sup>

We use the estimates from the HPC’s regression model to calculate the predicted price change at the acquired or newly affiliated community hospitals resulting from past transactions undertaken by the BILH member hospitals. Specifically, we calculate the change in WTP per discharge for each transaction, and combine it with the HPC’s own estimates of the relationship between WTP per discharge and price to arrive at a predicted price change at the acquired or newly affiliated hospital associated with each transaction.<sup>11</sup> These estimates are presented in Exhibit 2.

**Exhibit 2**

<b>BILH Transaction</b>	<b>Implied Post-Merger Price Change at the Acquired or Affiliated Hospital<sup>12</sup></b>
Lahey-Northeast	3.8 – 5.1%
Lahey-Winchester	3.9 – 5.2%
BIDCO-AJH	3.4 – 4.6%
BIDCO-CHA	2.1 – 2.8%
BIDCO-Lawrence General	2.8 – 3.8%

**Comparison with Actual Post-Merger Price Changes**

<sup>10</sup> Our understanding is that the HPC models the relationship between WTP/discharge and price as linear; however, the HPC’s estimates for changes in WTP and prices are reported in percentage terms in the Preliminary Report.

<sup>11</sup> In particular, we understand that in the HPC’s regression model relating price to WTP per discharge, the coefficient on WTP per discharge is 3,949 or 5,294, depending on the specification used. We multiply the calculated change in WTP per discharge for each of these transactions by these coefficients to arrive at a range for the predicted price increase for each transaction (in absolute dollar terms). To convert the range of the absolute price change to percentage terms, we divide by the inpatient, commercial Net Patient Service Revenue (NPSR) per discharge for the acquired system for the pre-merger year estimated from the CHIA Hospital Cost Reports. Due to a change in data reporting practices by Northeast described below, Northeast inpatient NPSR was understated prior to 2013; therefore, we use NPSR from 2013, rather than the pre-merger year (2011) for Northeast. This yields a conservative estimate of the percentage change, given the inpatient NPSR in 2013 was higher for Northeast than in 2011. Commercial NPSR excludes Medicare and Medicaid managed and non-managed care plans, but includes some types of non-commercial care, including Workers Comp, Self-pay, Other Government, Commonwealth Care, Health Safety Net, Non-Patient, and Other, which collectively account for only a small share of inpatient discharges. Because the HPC used unadjusted prices (i.e., not case-mix adjusted) as the dependent variable in its regression specification, we do not adjust the NPSR estimates by case-mix, either. The calculated percentage price changes are robust to using the NPSR estimates in the merger year (vs. the pre-merger year) as the base.

<sup>12</sup> Ranges of price effects are determined based on the range of coefficients reported from the HPC’s regressions of price on WTP per discharge.

In its Preliminary Report, the HPC states that “[W]e have not found evidence that the parties have negotiated higher prices, either for new community hospital affiliates or for their hospitals overall, following past acquisitions or contracting affiliations with community hospitals.”<sup>13</sup> That is, the HPC itself concluded that past BILH transactions did not lead to any price increases, a finding that is at odds with the prediction of the WTP-based approach, which predicts a positive price increase for each of these transactions.

As included in prior advocacy submissions to the HPC, the parties’ retrospective analysis of pricing impacts of prior transactions shows that Lahey’s acquisition of Winchester and BIDCO’s affiliations did not lead to any increases in prices at the acquired hospitals relative to competitors, after the transaction, despite the WTP model predicting positive price increases, shown above, .

Relative price data are not available prior to 2013, so we could not perform an analogous analysis of the impact of integration on Northeast’s acquisition. However, as shown in Exhibit 3, negotiated rate increases for the top three insurers stayed constant or declined following the acquisition.<sup>14</sup>

**Exhibit 3**

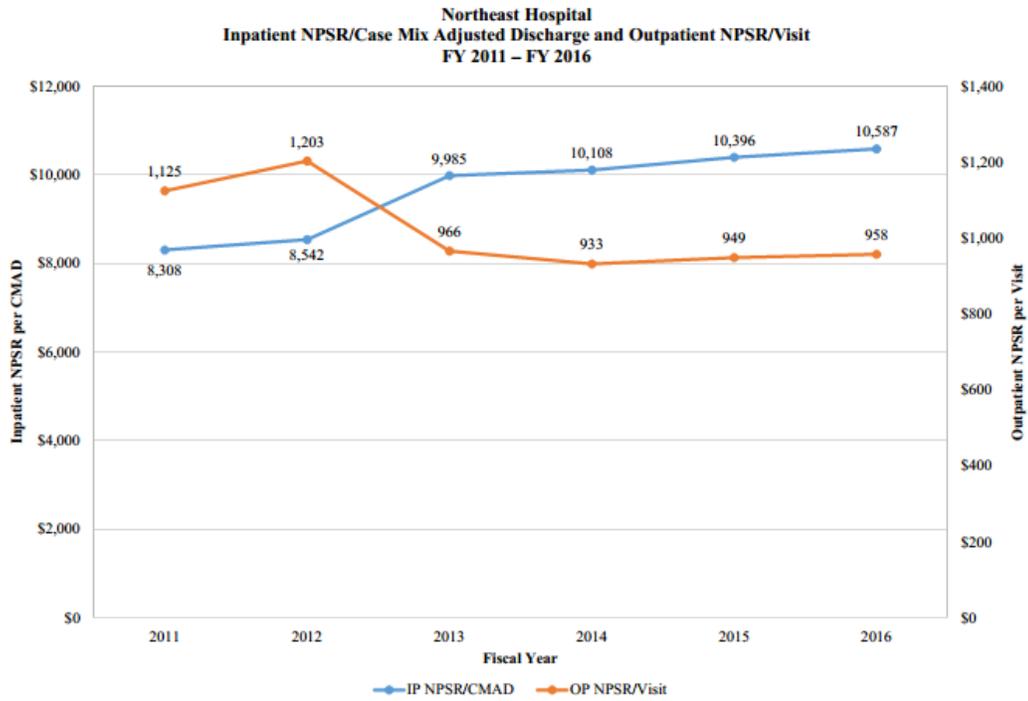
<b>Year</b>	<b>BCBS Rate Increase</b>	<b>HPHC Rate Increase</b>	<b>Tufts Rate Increase</b>
2011	4%	3.8%	4%
2012	3.3%	4%	4%
2013 (post-merger year)	0.1%	3.8%	3%
2014	3.2%	3.2%	2.8%

Source: internal Lahey data.

<sup>13</sup> See HPC-CMIR-2017-2: “The Proposed Merger of Lahey Health System; CareGroup and its Component Parts, Beth Israel Deaconess Medical Center, New England Baptist Hospital, and Mount Auburn Hospital; Seacoast Regional Health Systems; and Each of their Corporate Subsidiaries into Beth Israel Lahey Health; and The Acquisition of the Beth Israel Deaconess Care Organization by BILH; and The Contracting Affiliation Between BILH and Mount Auburn Cambridge Independent Practice Association,” p. 32, available at [https://www.mass.gov/files/documents/2018/07/18/Preliminary%20CMIR%20Report%20-%20Beth%20Israel%20Lahey%20Health\\_0.pdf](https://www.mass.gov/files/documents/2018/07/18/Preliminary%20CMIR%20Report%20-%20Beth%20Israel%20Lahey%20Health_0.pdf).

<sup>14</sup> While the CHIA Hospital Profiles show an increase in inpatient NPSR per discharge at Northeast from 2012 to 2013, this is due to a change in reporting methodology, rather than an increase in spending. Prior to 2013, gross ED charges for all patients seen in the ED were reported as outpatient revenue. However, from 2013 onward, gross ED revenue for patients seen in the ED and subsequently admitted as inpatients was reported as inpatient revenue. This shift is demonstrated in Exhibit 4.

# Exhibit 4



Source: Center for Health Information and Analysis, *Hospital Profile Databook*, 2015 – 2016.

Preliminary  
Privileged and Confidential  
Prepared at the Request of Counsel

### Appendix 3: BILH Design Teams

The 32 design teams are, in alphabetical order, as follows:

1. Academic Mission Work Group
2. Ambulatory Access
3. Behavioral Health
4. Cancer
5. Care Retention
6. Clinical Engineering
7. Clinically Integrated Networks / Population Health Management
8. Communication/Branding/Marketing
9. Continuing Care/Post-Acute Care
10. Debt
11. Electronic Health Record
12. Enterprise Resource Planning
13. Facilities/Real Estate
14. Financial Operations
15. Human Resources
16. Information Technology Operations
17. Investments
18. Laboratory
19. Legal
20. Medical Staff
21. Musculoskeletal Care
22. Nursing Leadership Council
23. Obstetrics, Maternal-Fetal Medicine, and Newborn Care
24. Patient Family Advisory Council
25. Pharmacy
26. Philanthropy
27. Primary Care
28. Quality
29. Revenue Cycle
30. Strategy and Business Planning and Development
31. Supply Chain
32. Urgent Care