



Commonwealth  
of Massachusetts

Center for Health  
Information and Analysis

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Executive Director

# Annual Report on the Massachusetts Health Care Market

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Center for Health Information  
and Analysis



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## Executive Summary

Massachusetts has achieved near-universal health coverage since 2006, when the first phase of health care reform was implemented under Chapter 58 of the Acts of 2006, Massachusetts' landmark health care reform bill. Massachusetts recently entered into the next phase of reform when Chapter 224 of the Acts of 2012 (Chapter 224) was passed, which focuses on lowering health care costs while maintaining or increasing the quality of care delivered in Massachusetts.

The 2013 *Annual Report on the Massachusetts Health Care Market* includes information on health care costs and quality with in-depth analyses of the commercial health care market, including premiums, coverage, and spending. The Center for Health Information and Analysis (the Center) will continue to assess the impact of particular Chapter 224 initiatives on public and commercial market health care trends to increase transparency in the Massachusetts health care payment and delivery system.

Most Massachusetts residents receive their health care coverage through their employers (62% in 2011) although in recent years this population has shifted somewhat to public coverage. In a continuing trend, the health coverage available through Massachusetts employers in 2011 cost more and had lower benefit value. Between 2009 and 2011 premiums rose by 9.7% to pay for benefits that decreased by 5%. Consistent with this trend, employees are paying increasingly more out-of-pocket for their health care. Deductibles have grown in Massachusetts by more than 40% between 2009 and 2011, approaching the national average.

The Massachusetts commercial health insurance market remains concentrated with a few large payers that account for the vast majority of enrollees. Blue Cross Blue Shield (BCBS), Harvard Pilgrim HealthCare (HPHC) and Tufts Health Plan (Tufts) make up nearly 80% of the commercial market; BCBS alone accounts for 45%.

Within the commercial health insurance market, spending for member care rose 3.8% between 2010 and 2011. There has been some transition from fee-for-service (FFS) to alternative payment methods, but only in commercial HMO products. In 2012, 39% of total commercial payments were made within a global payment/budget framework (all within HMO products), while the majority of payments (61%) were made using the FFS method. Meanwhile, enrollment in HMOs dropped from 63% in 2011 to 59% in 2012.

The majority of commercial health care payments continued to be made to high priced providers. In 2011 and 2012, approximately 80% of health care spending for acute hospitals and physicians was concentrated in higher priced providers. Furthermore, most commercial payments went to a few large provider systems. Partners HealthCare System (Partners) received over three times the amount paid to the next largest system, CareGroup (28.4% and 9.2%, respectively). Of the overall commercial payments to acute hospitals, Partners received approximately one-third, another third went to all other hospital systems combined, and the remaining third was paid to all hospitals not affiliated with a system. Of total physician group payments, Partners accounted for nearly one-quarter, almost 2.5 times higher than the second largest physician group system, Atrius Health.

## Introduction

This is the first *Annual Report on the Massachusetts Health Care Market* to be published by the Center for Health Information and Analysis (the Center). This *Annual Report* is published pursuant to M.G.L. c. 12C, which requires the Center to report on health care payer and provider cost trends, provider price variation, and the prevalence of alternative payments methods in the Massachusetts health system, among other topics.<sup>1</sup>

- Chapter One includes an overview of health insurance coverage of Massachusetts residents and concentration of membership in the commercial market, as well as trends in member premiums, benefit levels, and cost sharing.
- Chapter Two presents the uses of premium dollars by commercial health care payers, including retention of premium funds for business administration and management, and spending for member medical expenses. Chapter Two also covers the prevalence of alternatives to traditional fee-for-service-based payment methods and Massachusetts health plan performance on selected quality measures.
- Chapter Three provides a more in-depth analysis of Massachusetts hospital and physician group systems, including commercial health care payment concentration and health status adjusted total medical expenses by Massachusetts physician group systems within the larger payers' networks. Chapter Three also includes provider system performance on certain quality metrics.
- Chapter Four summarizes selected recent cost containment reform initiatives implemented in Massachusetts under Chapter 224 of the Acts of 2012 (Chapter 224) that may have an impact on health care costs and future cost trends.

The Center's *Annual Report* is intended to serve as the basis for the Health Policy Commission's annual cost trends hearings conducted under M.G.L. c. 6D, and for the Health Policy Commission's annual report on spending trends to the Massachusetts Legislature.

The Center was established as an independent agency of the Commonwealth of Massachusetts by Chapter 224. The Center's mission is to monitor the Massachusetts health care system and to provide reliable information and meaningful analysis for those seeking to improve health care quality, affordability, access, and outcomes.

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<sup>1</sup> This report is submitted in fulfillment of M.G.L. c. 12C, section 16 established under Section 19 of Chapter 224 of the Acts of 2012, *An Act Improving the Quality of Health Care and Reducing Costs Through Increased Transparency, Efficiency and Innovation*. Previous Cost Trends reports by the Division of Health Care Finance and Policy, the Center's predecessor agency, were submitted pursuant to M.G.L. c. 118G, section 6 ½ established under Chapter 305 of the Acts of 2008, *An Act to Promote Cost Containment, Transparency, and Efficiency in the Delivery of Quality Health Care*.



## Chapter One: Health Insurance Coverage and Costs in Massachusetts

Funding for the Massachusetts health care system originates from a variety of sources including premiums, out-of-pocket spending by the insured (including cost-sharing for covered services and direct payments for non-covered services), taxpayer-subsidized coverage, such as Medicare and Medicaid, and direct payments made by uninsured individuals (“self-pay”) and self-funded employers.<sup>2</sup> This chapter examines health care coverage and payments, with a focus on the commercial market.

### **Key findings:**

- Health Insurance Coverage
  - In 2011, three out of every five Massachusetts residents obtained their insurance through their employer, although that number has declined as some coverage has shifted to Medicare and Medicaid.
  - Self-insured employers made up nearly half of the commercial market in 2011.
  - 79% of enrollee membership in the Massachusetts commercial insurance market was highly concentrated among the top three payers - Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC) and Tufts Health Plan (Tufts) - in 2011. BCBS alone insured or managed 45% of statewide commercial market enrollees.
  - From 2011 to 2012, member enrollment in commercial HMO products declined by four percentage points, while enrollment in PPO and other products increased.
- Premiums and Benefits
  - The average monthly Massachusetts health plan premium was \$421 in 2011, a 9.7% increase since 2009. Enrollees are, on average, receiving less generous benefits for these higher prices (a 5.1% decrease in benefit value during the same period).
  - The three largest insurers, BCBS, HPHC, and Tufts had the highest average premiums in 2010 and 2011.
  - The average deductible for Massachusetts employees with commercial health care coverage increased over 40% between 2009 and 2011, approaching the national average.

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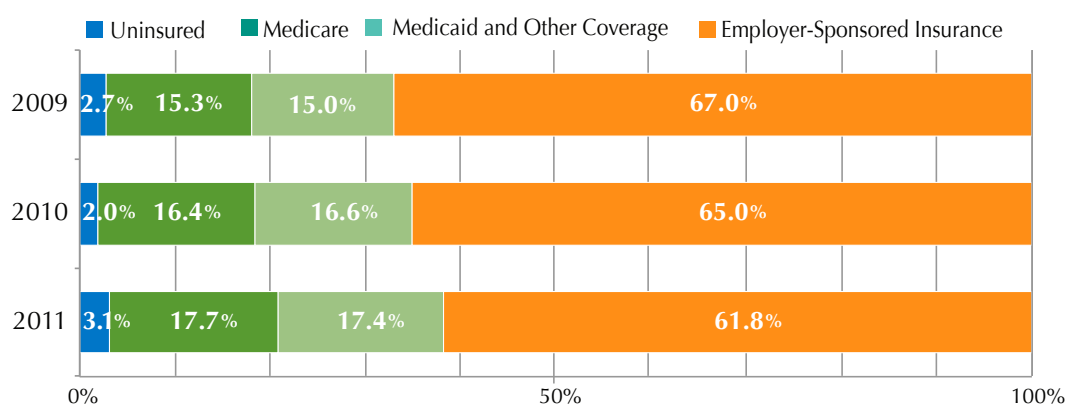
<sup>2</sup> Definitions can be found in Technical Appendix.

## I. Massachusetts Health Insurance Coverage

Approximately 97% of Massachusetts' 6.6 million residents were estimated to hold some form of health insurance coverage each year from 2009 to 2011.<sup>3,4</sup>

While a majority of Massachusetts residents continued to have employer-sponsored insurance (ESI) coverage, the estimated share of the population enrolled in ESI fell by five percentage points, from 67% to 62%, from 2009 to 2011. Meanwhile, the estimated proportion of those enrolled in insurance through Medicare and Other Coverage (including Medicaid)<sup>5</sup> increased (Figure 1). This shift may be attributable to the recession and slow economic growth during the three-year period, as well as an aging population, among other factors, but it is also consistent with a longer-term shift away from ESI.<sup>6</sup>

**Figure 1: Massachusetts Resident Health Insurance Coverage (2009-2011)**



**Most Massachusetts residents had employer-sponsored insurance, though that proportion decreased while public coverage increased between 2009 and 2011.**

This report focuses on the commercial market, which is the largest health insurance segment of the market. Subsequent reports will include information on the public sector, which is of growing importance with the advent of national health care reform and efforts in Massachusetts to control costs and increase the quality of care across all payers.

3 U.S. Census Bureau, 2012 Massachusetts State and County Quick Facts: <http://quickfacts.census.gov/qfd/states/25000.html> (Accessed August 6, 2013).

4 The Center for Health Information and Analysis (2013) Massachusetts Household and Employer Insurance Surveys: Results from 2011. Report available at: <http://www.mass.gov/chia/docs/r/pubs/13/mhisreport-1-29-13.pdf> (Accessed August 6, 2013).

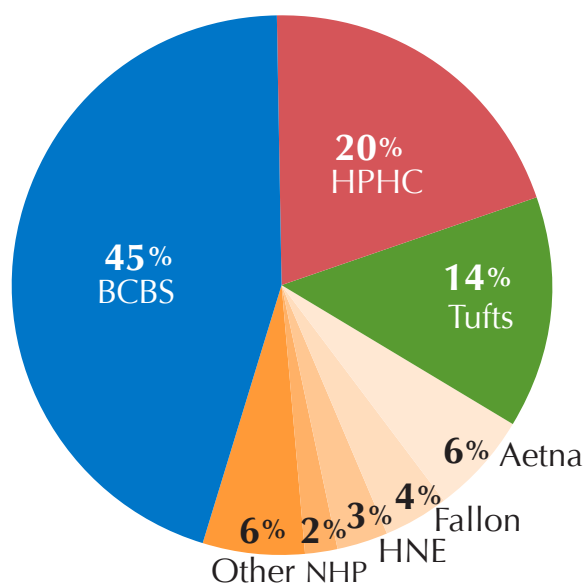
5 The Center's "Massachusetts Household Insurance Survey" examines insurance coverage based on a hierarchy: Medicare, employer-sponsored insurance, Other Coverage (including Medicaid). Other Coverage (including Medicaid) is combined because of the survey respondents' difficulties in reporting type of coverage. For lower-income residents, public or other coverage is primarily MassHealth or Commonwealth Care, while for higher-income residents it is non-group coverage and, to a lesser extent, Commonwealth Choice.

6 Economic Policy Institute (2012) Report on Employer-sponsored Health Insurance Coverage: <http://www.epi.org/publication/bp353-employer-sponsored-health-insurance-coverage/> (Accessed August 2, 2013).

## II. Commercial Market Payer Concentration

The Massachusetts commercial insurance market is highly concentrated (Figure 2).<sup>7</sup> In 2012, the top three payers – BCBS, HPHC, and Tufts – collectively accounted for 79% of reporting payer membership; 45% of enrollees were insured or managed by BCBS alone.<sup>8</sup>

**Figure 2: Commercial Payer Market Share in Massachusetts (2012)**



Source: TME zip-code level member-months (MMs) data filed by ten largest commercial payers; includes self-insured

**79% of commercial market enrollment was with Blue Cross Blue Shield, Harvard Pilgrim Health Care, or Tufts Health Plan in 2012.**

<sup>7</sup> Payer market share is based on the number of covered lives for both full and partial claims in Massachusetts, “member months,” defined in 957 CMR 2.00 as “the number of members participating in a plan over a specified period of time expressed in months of membership.”

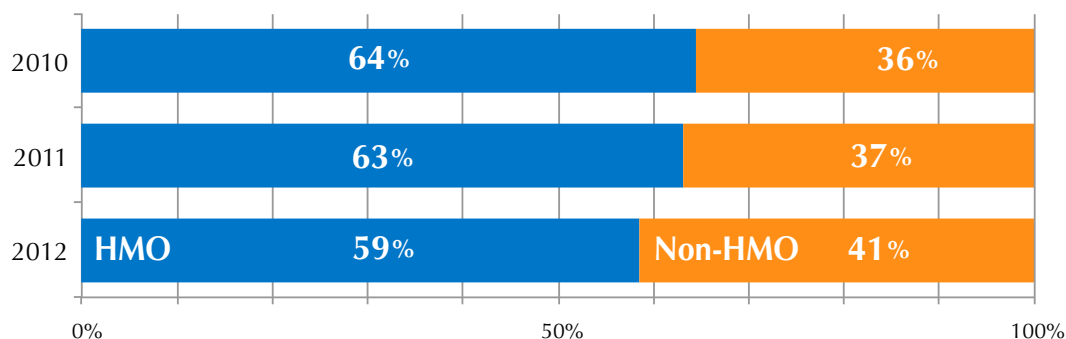
<sup>8</sup> As reported by Total Medical Expense (TME) zip-code level data filed by the ten largest commercial health care payers in Massachusetts (which includes self-insured businesses), representing 95% of the commercial market.

### III. HMO Enrollment in the Commercial Market

In contrast to other states, Health Maintenance Organization (HMO) products are the dominant product type in the Massachusetts commercial market.<sup>9</sup> HMO insurance products require their enrollees to select a primary care physician to coordinate their health care needs and to provide referrals to access specialized care. Other types of insurance products, such as preferred provider organization (PPO) products, generally do not require enrollees to select a primary care physician.

Even though HMO enrollment in Massachusetts was high by national standards, in recent years there has been a shift toward non-HMO coverage (Figure 3). This trend may have implications for the adoption of alternative payment methodologies, which have so far been used only in HMO contracts in the commercial market.<sup>10</sup>

**Figure 3: HMO Enrollment in the Commercial Market (2010-2012)**



Source: TME zip-code level member-months (MMs) data filed by ten largest commercial payers

**HMO enrollment in Massachusetts declined by four percentage points from 2011 to 2012.**

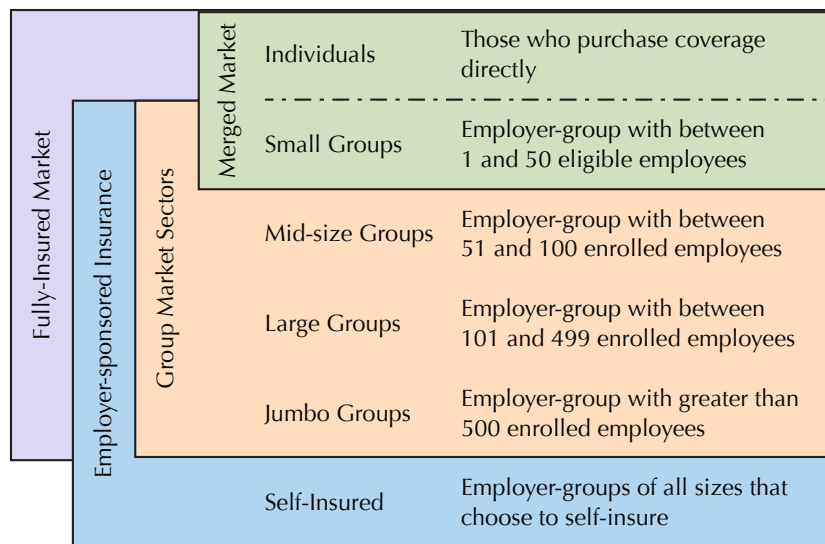
<sup>9</sup> Kaiser Family Foundation *State HMO Penetration Rate* (2011). Available at: <http://kff.org/other/state-indicator/hmo-penetration-rate/> (Accessed August 7, 2013). In 2011, the rate of HMO product prevalence in Massachusetts was 35% compared to 23% nationally. State penetration is the percent of the total population enrolled in HMOs. Data include all licensed HMOs which may include Medicaid and/or Medicare only HMOs.

<sup>10</sup> Based on payer reporting for 2012. See Chapter Two for further discussion of payment methods.

## IV. Commercial Health Insurance Market Trends

### Overview of the Commercial Health Insurance Market

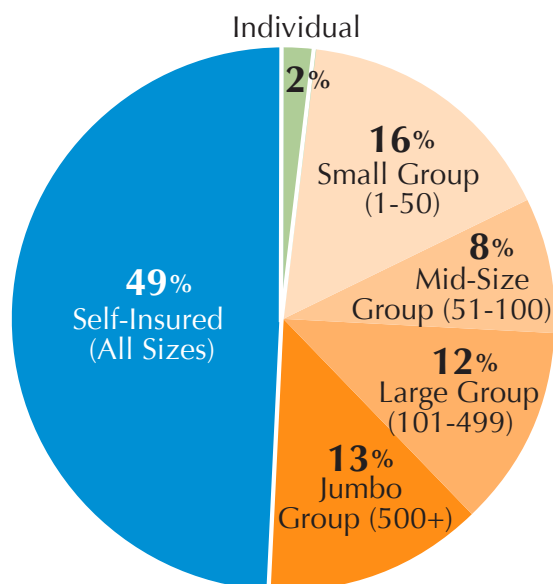
**Figure 4: Commercial Insurance Market Sectors**



The commercial health insurance market in Massachusetts is made up of a sector of individuals who purchase their own insurance coverage and the ESI market sector (Figure 4). The ESI commercial insurance market sector is also divided between self-insured employers and fully-insured employers. Self-insured employers made up nearly half of the market (49%) in 2011 (Figure 5). These employers are typically large, and pay directly for their employees' health care costs rather than purchasing an insurance product. While these employers retain the risk for their employees' health expenditures, they often contract with payers or third-party administrators to design and manage their plans.

Fully-insured employers purchase health insurance coverage for their employees from a commercial payer. The fully-insured market sector can be further subdivided into the individual market,<sup>11</sup> and by employer size into small, mid-size, large, and jumbo groups. Between 2009 and 2011, payers reported a small (two percentage point) shift from the fully-insured to the self-insured market sector.

<sup>11</sup> M.G.L. c. 176J allows individuals to purchase coverage in the small group health insurance market (creating the "merged market") and applies the small group insurance laws to both small group and individual plans. The merged market represented 18% of the total market in 2011.

**Figure 5: Enrollment by Market Sector (2011)**

Source: Oliver Wyman analysis of data from Massachusetts payers for resident and non-resident insured and self-insured lives; based on member months.

The remainder of this chapter, unless otherwise noted, focuses on the “fully-insured” segment of the employer-sponsored insurance market. The data presented in this chapter, unless otherwise noted, represents six Massachusetts payers, representing 84% of the Massachusetts’ commercial market.<sup>12</sup> As group definitions have changed from prior years, caution should be used when comparing results to previous reports.<sup>13</sup>

### Premium Growth and Inflation

The data and information presented within this report have not been adjusted for inflation. Prices are shown in nominal terms.

According to the Bureau of Labor Statistics’ Consumer Price Index Inflation Calculator, inflation was approximately 1.6% from 2009 to 2010 and 3.1% from 2010 to 2011 (4.9% over the two year period). In comparison, the overall increase in Massachusetts premiums from 2009-2011 was 9.7%.

12 Payers include: Blue Cross Blue Shield of Massachusetts, Fallon Health and Life Assurance Co., Harvard Pilgrim Health Care, Health New England, Inc., Neighborhood Health Plan, and Tufts Health Plan. United Healthcare of New England was excluded from this analysis due to data concerns.

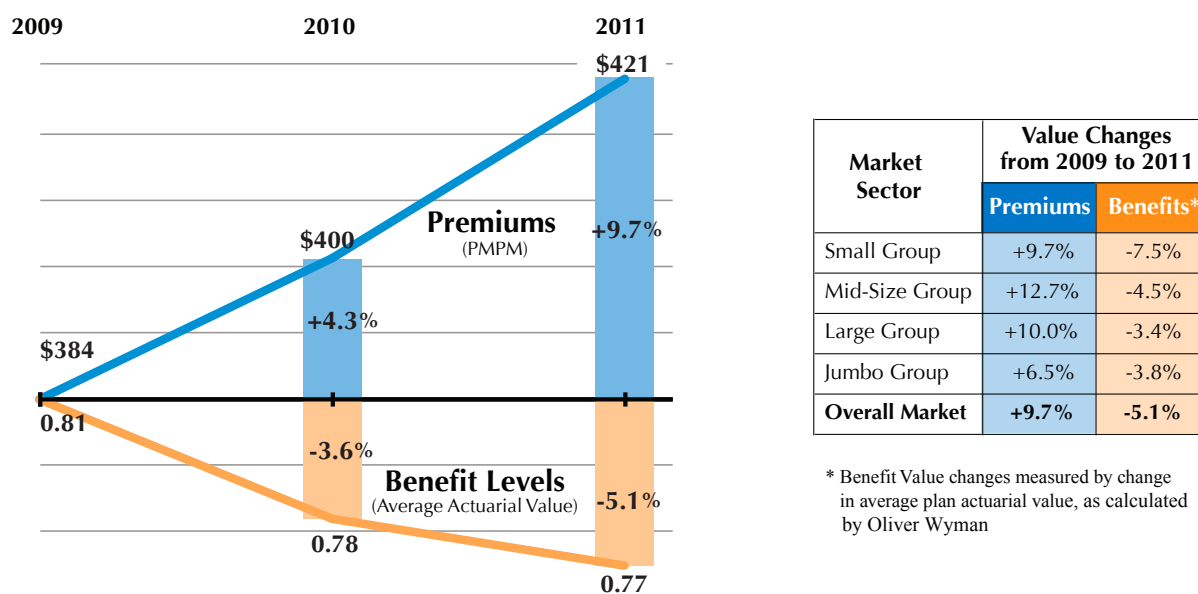
13 In previous reports, what had been referred to as the “large group,” made up of firms with more than 500 enrolled employees, is now referred to as the “jumbo group;” the “mid-size group,” previously used to define firms with between 50 and 500 enrolled employees, has been broken into a new “mid-size group” (51-100 enrolled employees) and a new “large group” (101-499 enrolled employees).

## Trends in Premiums and Benefit Levels in the Commercial Market

The average Massachusetts health plan premium was \$421 per month in 2011. This was \$21 (5.2%) higher than in 2010 and represents a 9.7% increase over two years (Figure 6).<sup>14</sup> While premiums increased faster than inflation, enrollees also received less generous benefits, on average. From 2009 to 2011, the level of average commercial benefits, as measured by actuarial value, dropped by 5.1%.<sup>15</sup>

**From 2009-2011, premiums in Massachusetts increased by 9.7% while the value of benefits decreased by 5.1%.**

**Figure 6: Commercial Market Premium and Benefit Level Changes (Base Year 2009, 2009-2011)**



Notes: Trend rates calculated from un-rounded PMPM amounts (not shown); premiums post-MLR rebates

Source: Oliver Wyman analysis of data from Massachusetts payers for resident and non-resident insured lives

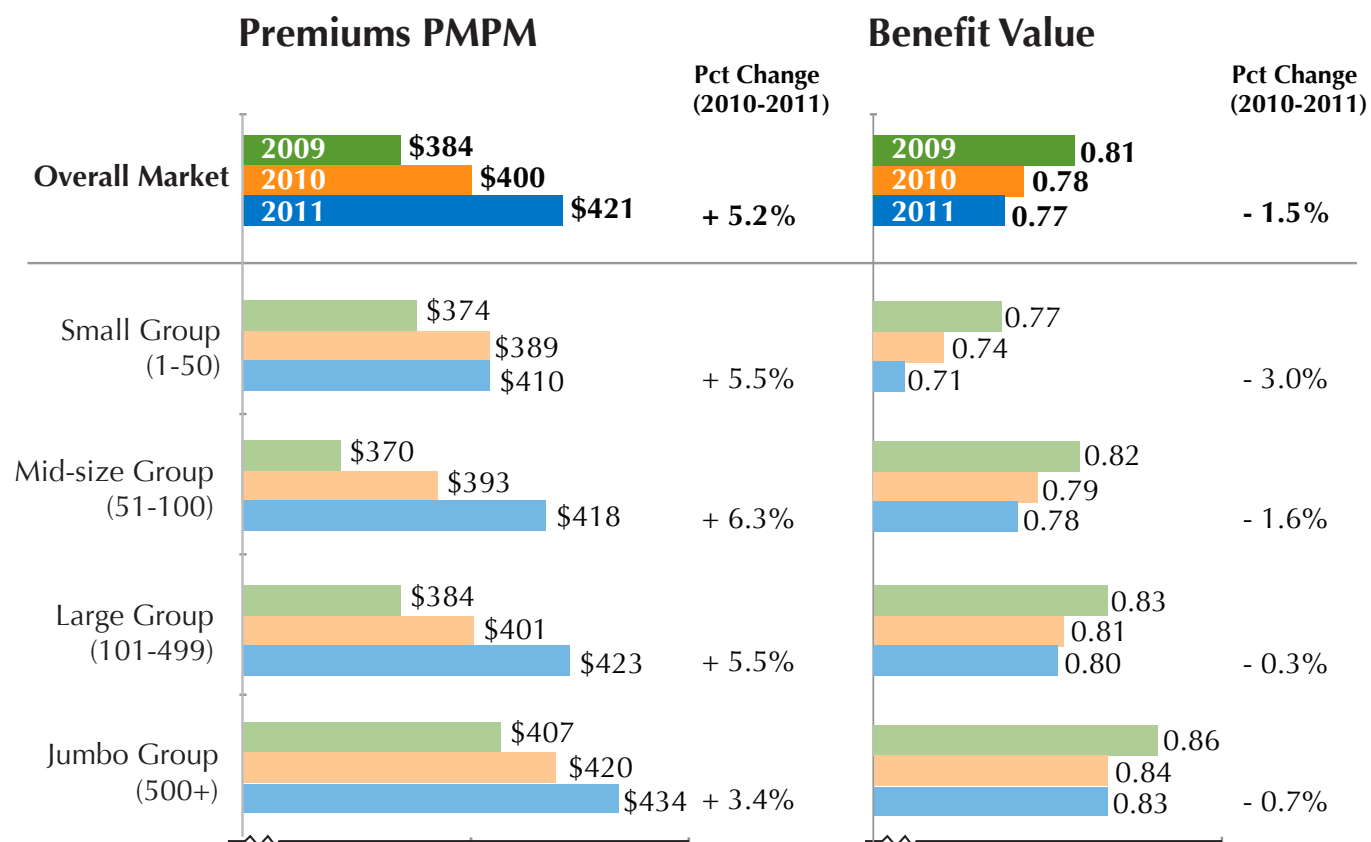
This dual trend – increasing premiums and decreasing benefit levels – was consistent across market sectors, but the effect was not the same for all sectors (Figure 6). The effect of increased premiums coupled with benefit declines was most pronounced in the small group market sector, where the benefit value started out lower and decreased faster (-7.5%) than in other market sectors. Although the small group market sector accounted for just 16% of the Massachusetts commercial insurance market, it included the greatest number of businesses. This sector is one of the most vulnerable to cost increases and has been the focus of policy interventions at both the state and federal levels.

14 Massachusetts premiums were approximately 10% higher than the national average. Data from the Agency for Health Care Research and Quality, Center for Financing, Access and Cost Trends, 2011 Medical Expenditure Panel Survey Insurance/ Employer Component (MEPS-IC): [http://meps.ahrq.gov/survey\\_comp/Insurance.jsp](http://meps.ahrq.gov/survey_comp/Insurance.jsp) (Accessed: August 6, 2013).

15 For actuarial value definition, and methods used within this report for defining actuarial value, see Technical Appendix. Measuring benefit level changes by adjusting premiums for benefits show similar trends. See Data Appendix for this additional information.

The jumbo sector maintained the highest average benefit levels and highest premiums for each of the three years. Due to slower premium growth, the jumbo market premiums in 2011 were more closely aligned with the other market sectors (Figure 7).

**Figure 7: Premiums PMPM and Benefit Level Changes by Market Sector (2009-2011)**



Note: Premiums post-MLR rebates; member months exclude self-funded employer groups; benefit value measured by Oliver Wyman calculated actuarial value

Source: Oliver Wyman analysis of data from Massachusetts payers for resident and non-resident insured lives



## Member Cost Sharing in the Commercial Market

In Massachusetts, those enrolled in the commercial market through ESI increasingly paid more between 2009 and 2011 for their health care in the form of increasing premiums, increasing cost sharing (copays and co-insurance), growing deductibles, and less generous benefits.<sup>16</sup> Massachusetts commercial market ESI enrollees contributed approximately 25% to their annual premium in 2011, while employers covered the remaining amount. Overall, this exceeded the national average employee contribution.<sup>17</sup>

Massachusetts employees with commercial coverage have historically had lower deductibles than their national counterparts; however, between 2009 and 2011 this gap nearly closed. From 2009 to 2011 the average deductible for a Massachusetts employee increased over 40%.<sup>18</sup>

**Massachusetts deductibles grew more than 40% between 2009 and 2011, approaching the national average.**

## Commercial Market Premium Trends by Payer

The three largest payers – BCBS, HPHC, and Tufts – had the highest average premiums between 2010 and 2011 (Figure 8).<sup>19</sup> In all three years, HPHC enrollees had the highest average premiums in the Commonwealth. Tufts reported the highest premium growth from 2010 to 2011 (+6.2%). Neighborhood Health Plan (NHP) premiums did not increase between 2009 and 2011.

Reported monthly premiums are not adjusted to account for differences in benefits levels, geography or enrollees' health status, age, or gender. Such factors can contribute to observed premium differences.<sup>20</sup>

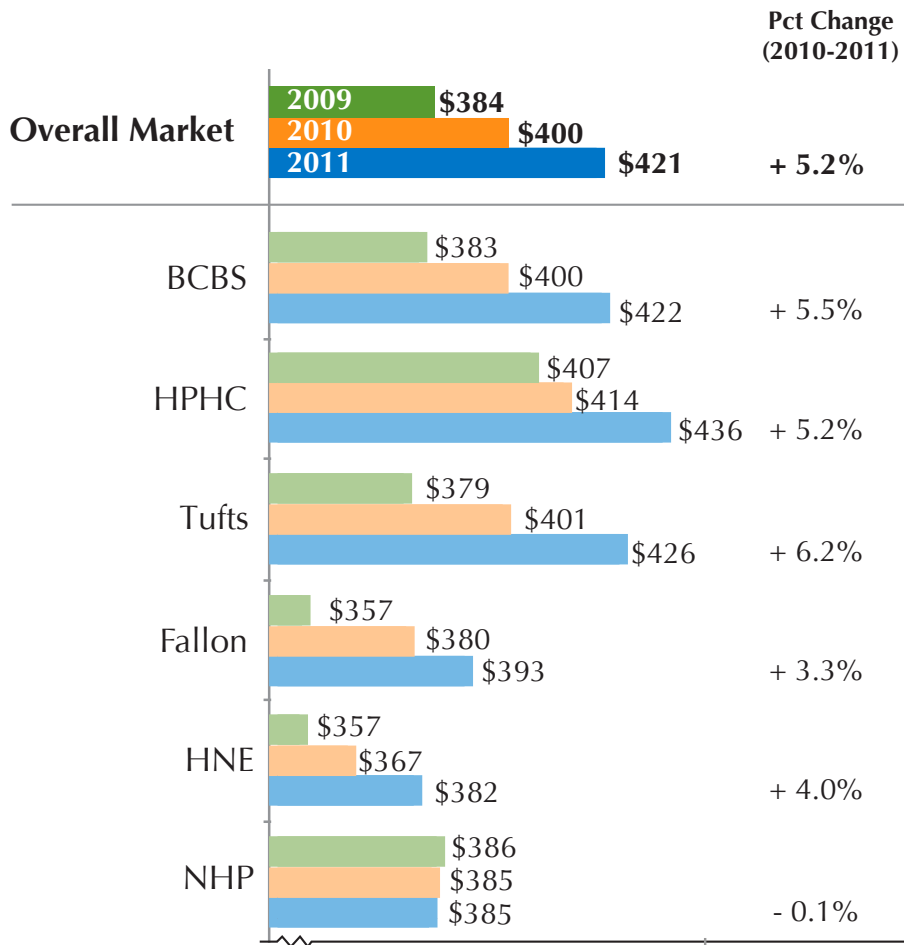
16 All data in this section derived from the Agency for Health Care Research and Quality, Center for Financing, Access and Cost Trends, 2011 Medical Expenditure Panel Survey Insurance/ Employer Component (MEPS-IC): [http://meps.ahrq.gov/survey\\_comp/Insurance.jsp](http://meps.ahrq.gov/survey_comp/Insurance.jsp) (Accessed: August 6, 2013).

17 Single-coverage employee contribution in 2011 averaged 25% in Massachusetts (\$1,438 over \$5,823) and 21% nationally (\$1,090 over \$5,222); family contributions averaged 26% in Massachusetts (\$4,340 over \$16,953) and 26% nationally (\$3,962 over \$15,022). Data from the 2012 Medical Expenditure Panel Survey.

18 The average deductible per Massachusetts employee with single family coverage increased 39% from 2009 to 2011; the average deductible for family coverage increased by 44%. The national average for each grew only 23% and 26%, respectively. Data from the 2012 Medical Expenditures Panel Survey.

19 This section presents data on a per member per month (PMPM) basis. For aggregate payer and market sector, as well as more detailed PMPM data, refer to the Data Appendix.

20 Adjusted premiums by market sector are reported in the Data Appendix.

**Figure 8: Premiums PMPM by Payer (2009-2011)**

Note: Premiums post-MLR rebates; member months exclude self-funded employer groups.

Source: Oliver Wyman analysis of data from Massachusetts payers for resident and non-resident insured lives.

## Chapter Two: Health Payer Use of Health Care Funds

Health care payers use the premiums they receive to pay for enrollee medical expenses. They also retain a portion to cover general administrative expenses, reserves, commissions, contributions to surpluses and profits, premium taxes, and medical management expenses. Payers are required to provide rebates to certain enrollees in the event they spend less than a specified portion of collected premiums on medical expenses.<sup>21</sup> This chapter provides detail on retention and medical loss ratios, baseline descriptions of the prevalence of alternatives to fee-for-service payment methods, and health plan quality performance.

### **Key Findings:**

- Payer Retention
  - Between 2010 and 2011, the proportion of premium revenue retained by reporting payers increased by 20.8%.
  - In total, nearly half of retention dollars for the reporting payers went to the category of administrative expenses that includes information technology expenditures.
- Payer Spending
  - Statewide Total Medical Expenses (TME) increased 3.8% from 2010 to 2011, to \$414 per member per month (PMPM). The increase was driven primarily by hospital and physician services.
- Alternative Payment Methods (APMs)
  - In Massachusetts in 2012, fee-for-service (FFS) was still the dominant payment method, accounting for 64% of commercial payer enrollee health service payments.
    - In 2012, health care services for 35% of commercial payer enrollees were coordinated by a physician group paid using a global budget/payment method, which occurred only within HMO-type insurance products.
    - Blue Cross Blue Shield of Massachusetts (BSBS) led the state in the implementation of APMs in 2012, with 49% of its payments made under global budget/payment arrangements.
- Payer Performance on Quality Measures
  - Overall, Massachusetts payer performance on selected quality measures continued to meet or exceed national performance in recent years.

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21 Under the Patient Protection and Affordable Care Act, federal Medical Loss Ratio (MLR) minimums are 85% for large groups and 80% for small groups and individuals. In Massachusetts, the requirement for small groups and individuals is even higher at 88%. Under Massachusetts law, if a payer's medical expense is below these requirements, the payer must issue rebates to the employers and employees they insure. Note that group size definitions may differ between federal and state law.

## I. Premium Revenue Not Used on Member Medical Expenses (Retention)

The data presented in this chapter, unless otherwise noted, includes six Massachusetts payers, representing 84% of the Massachusetts commercial market.<sup>22</sup>

Because medical spending growth was slower than premium growth between 2009 and 2011, there was a significant increase in retention rates (the part of premiums not used on member medical expenses). For the six Massachusetts payers, reported retention increased by more than 20% each year, between 2009 and 2011, to \$1.17 billion (Table 1). Increased retention rates may be due, in part, to medical expense projections (on which premium rates may be set) that were higher than actual medical expenses.<sup>23</sup>

**Table 1: Retention by Payer (2009-2011)**

Payers	Retention (in millions)			Change	
	2009	2010	2011	2009-2010	2010-2011
BCBS	\$410.94	\$441.45	\$518.68	7.4%	17.5%
HPHC	\$167.03	\$220.11	\$276.09	31.8%	25.4%
Tufts	\$104.45	\$148.01	\$199.80	41.7%	35.0%
Fallon	\$55.30	\$92.77	\$83.45	67.8%	-10.0%
HNE	\$37.37	\$46.84	\$51.80	25.3%	10.6%
NHP	\$21.62	\$21.99	\$43.26	1.7%	96.8%
<b>Total</b>	<b>\$796.72</b>	<b>\$971.16</b>	<b>\$1,173.08</b>	<b>21.9%</b>	<b>20.8%</b>

Note: Premiums post-MLR rebates

Source: Oliver Wyman analysis of data from Massachusetts payers for resident and non-resident insured lives.

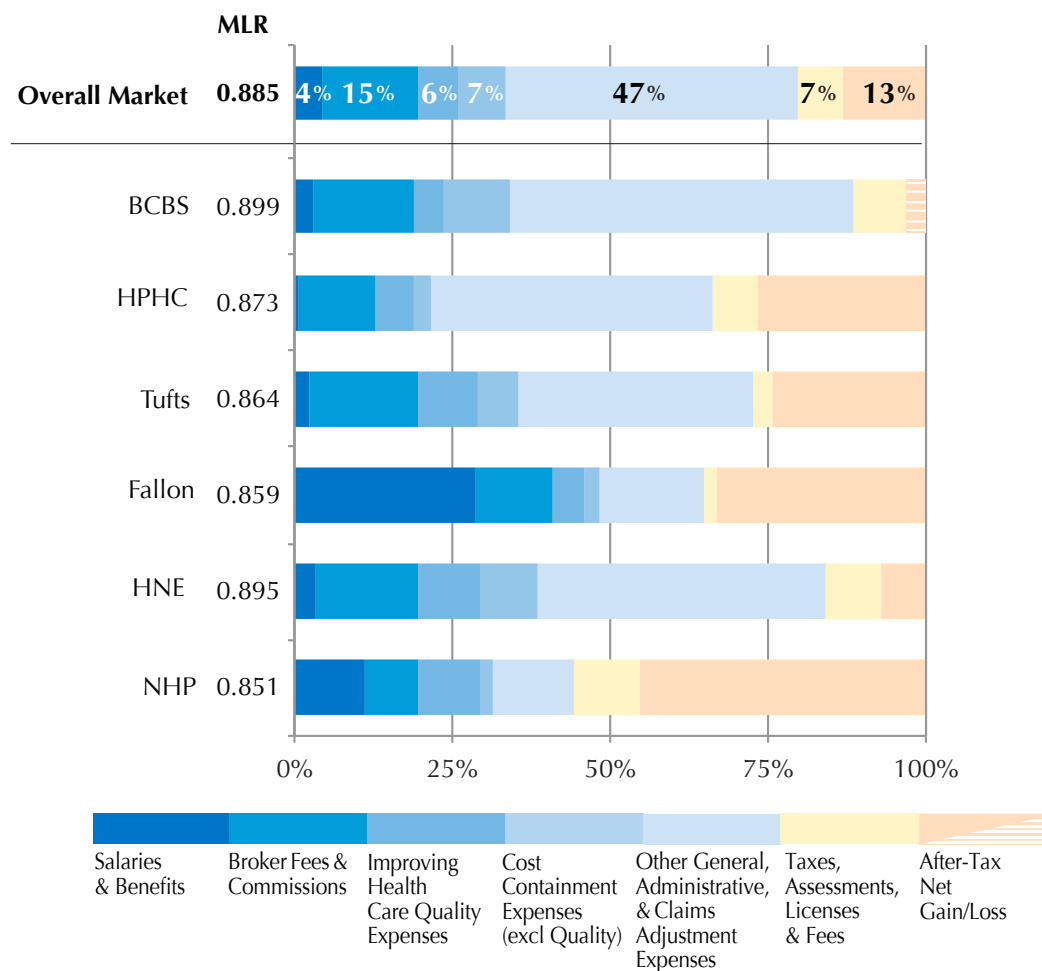
Figure 9 presents the distribution of retention dollars, as reported by payers in 2011. Approximately half of retention dollars from the six payers were used for Other Administrative and Claims Adjustment Expenses that included Information Technology spending, 15% went to Broker Fees & Commissions, and 13% to After-Tax Net Gain.<sup>24</sup> However, the retention distribution varied significantly by payer; several payers reported net gains exceeding 25%, while BCBS reported a net loss in 2011.<sup>25</sup>

22 Payers included: Blue Cross Blue Shield of Massachusetts; Fallon Health and Life Assurance Co.; Harvard Pilgrim Health Care; Health New England, Inc.; Neighborhood Health Plan; and Tufts Health Plan. United Healthcare of New England was excluded from this analysis due to data concerns. Overall market share is based on 88% of TME reporting membership, which represents 95% of the total market.

23 Wasik, John. "Why Medical Spending May Finally Flatten Out", The Fiscal Times. July 24, 2013. <http://www.thefiscaltimes.com/Columns/2013/07/24/Why-Medical-Spending-May-Finally-Flatten-Out.aspx#page1> (Accessed: August 12, 2013).

24 Definitions for these categories can be found in the Technical Appendix.

25 These data are based on filings with the Center for Consumer Information & Insurance Oversight (CCIIO). They are consistent with trends identified by the Massachusetts Division of Insurance, although there are some differences based on definitions and other reporting differences. Data is post-MLR rebates.

**Figure 9: Payer Retention Decomposition Post-MLR Rebates (2011)<sup>26</sup>**

Note: BCBS reported a net loss after rebates for 2012 of \$18.8 million.

Source: Oliver Wyman analysis of submitted federal CCIIO data for six payers listed; weighted average of the six payers shown for "Overall Market."

Figure 9 also indicates each payers' Medical Loss Ratio (MLR), as reported to the Center for Consumer Information and Insurance Oversight (CCIIO), which reflects the approximate amount a payer spends on enrollees' medical spending, adjusted for certain factors.<sup>27</sup> In 2011, MLR ranged from nearly 90% for BCBS to just over 85% for NHP. A higher MLR generally indicates that more premium revenue is spent on enrollee medical care.

<sup>26</sup> MLR and retention decomposition data from payer submitted federal CCIIO data for six payers shown, as analyzed by Oliver Wyman; MLRs may not fully reconcile with those reported by payers to Massachusetts Division of Insurance for rebate purposes.

<sup>27</sup> MLR, per Massachusetts Division of Insurance, is defined as the sum of a payer's incurred medical expenses, their expenses for improving health care quality, and their expenses for deductible fraud, abuse detection, and recovery services, divided by the difference of premiums minus taxes and assessments.

## Division of Insurance Financial Summary Reports Show Retention Trends

Division of Insurance Financial Summary data provide additional Massachusetts payer retention information. Total, for all commercial payers in Massachusetts:

- Administrative Expenses increased by \$110 million (10%) from 2010 to 2012, while payers' Incurred Claims remained steady at \$9 billion.
- Net income for payers grew from \$20 million in 2010 to \$160 million in 2011 to \$210 million in 2012.
- DOI reported average weighted MLRs, for the entire Massachusetts commercial marketplace, fell from 91.2% in 2010 to 89.4% in 2012.

Select Division of Insurance Financial Summary data definitions can be found in this report's Technical Appendix.

Note: Full definitions and descriptions can be found at: [www.mass.gov/ocabr/docs/doi/legal-hearings/211-149.pdf](http://www.mass.gov/ocabr/docs/doi/legal-hearings/211-149.pdf)

## II. Payer Expenditures on Member Health Care Services

The member health service expenditure data presented in this chapter, unless otherwise noted, includes ten Massachusetts payers, representing approximately 95% of the Massachusetts' commercial market.<sup>28</sup>

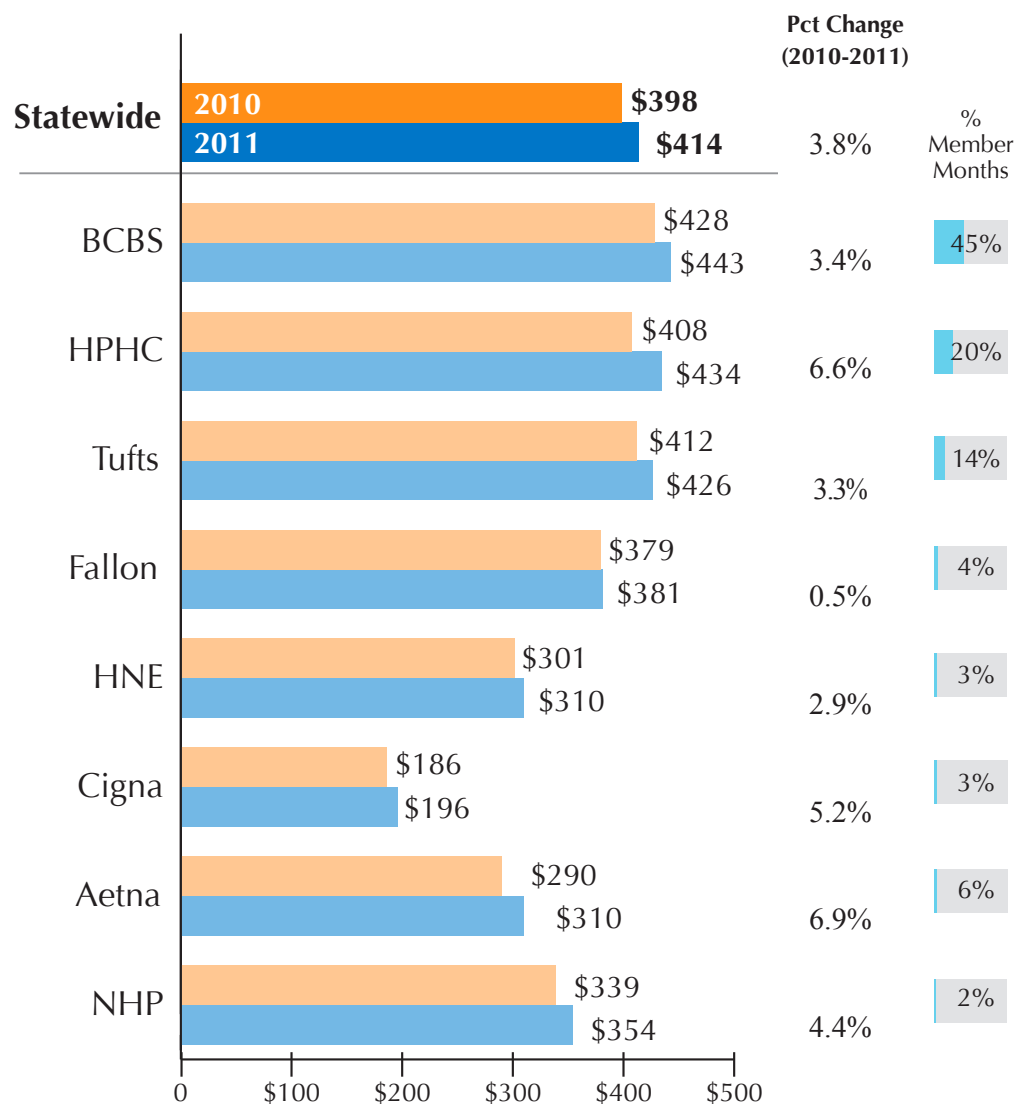
### Total Medical Expenses

Total Medical Expenses (TME) represents the full amount paid to providers for health care services delivered to a payer's covered enrollee population (payer and enrollee cost-sharing payments combined). TME covers all categories of medical expenses and all non-claims related payments to providers, including provider performance payments. Statewide commercial TME increased 3.8% to \$414 PMPM in 2011. Preliminary estimates suggest an increase in TME between 2011 and 2012 may be lower (+2.0%).

### Commercial Payer TME

TME and TME growth rates vary by commercial payers. In both 2010 and 2011, the three payers with the largest market shares (Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), and Tufts Health Plan (Tufts)) had the highest TME. HPHC had the largest growth in TME among these top three payers (6.6%) in 2011 (Figure 10).

28 Payers included: Aetna Health Plan, Blue Cross Blue Shield of Massachusetts, Celticare, Connecticut General Life Insurance Company (Cigna), Fallon Health and Life Assurance Company (Fallon), Harvard Pilgrim Health Care, Health New England, Inc., Neighborhood Health Plan, Tufts Health Plan, and Unicare; United Healthcare of New England was excluded from this analysis due to data concerns. Total Medical Expense (TME) data are reported for full claims and partial claims member months, by primary care physician group for managed care members and by member zip code for all Massachusetts members.

**Figure 10: Commercial Payer TME PMPM (2010-2011)**

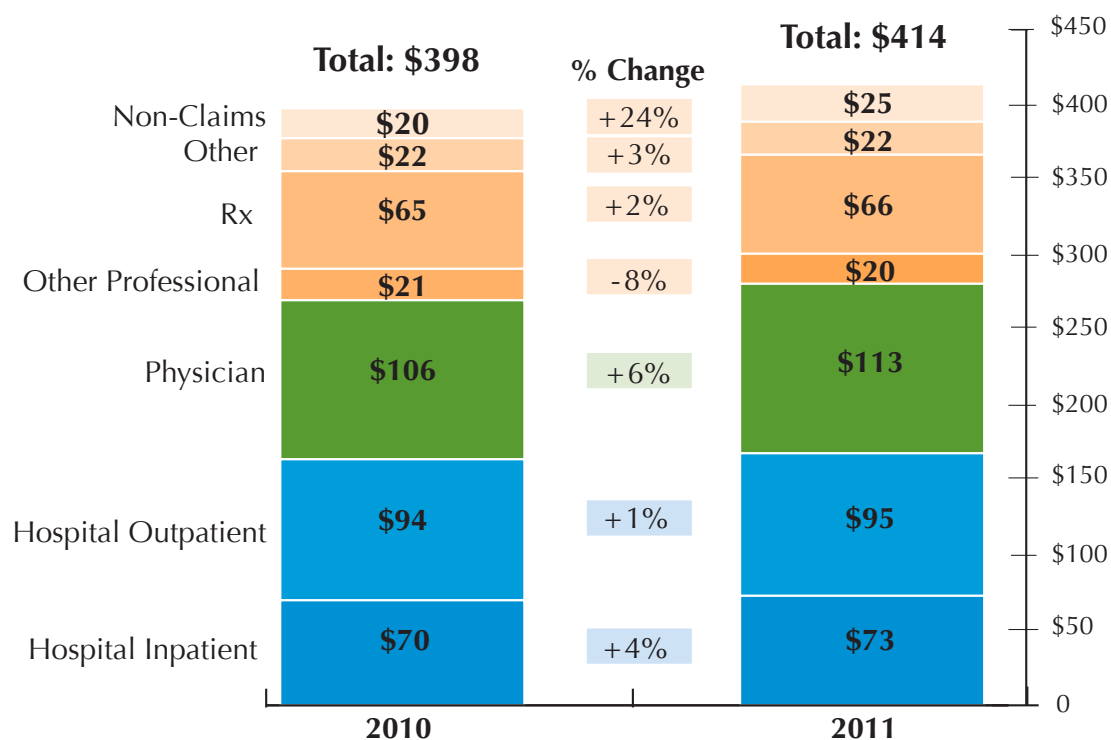
The payers' preliminary 2012 estimates show slower growth for the top three payers. NHP was the only commercial payer to project a decline in TME from 2011 to 2012 (-4.1%).

### Distribution of Commercial Payer Expenditures by Service Category

Nearly three-quarters of TME was used to pay for hospital, physician, and non-claims service categories. Spending for hospital services alone accounted for approximately 41% (Figure 11).

Non-claims payments are made to physician groups and hospitals for quality performance, global budget financial settlements, and other purposes. These payments grew 24% between 2010 and 2011. While growth in this category was significantly larger than growth in other categories, this service category accounted for only 6% of overall TME in 2011 (\$25 PMPM). The growth in non-claims payments between 2010 and 2011 may suggest an increase in provider payments based on quality and/or financial performance.

**Figure 11: Statewide Proportion of Commercial TME by Service Category (2010-2011)**





### III. Provider Payment Methods

Fee-for-service (FFS) continues to be the primary payment arrangement between health care payers and providers. However, both nationally and in Massachusetts, the use of alternatives to FFS-based payment methods has been promoted to encourage more integrated, cost efficient, and higher quality care.<sup>29</sup> Measuring the prevalence of different payment methods in Massachusetts allows for greater understanding of the current health care payment system and provides a baseline for future reports.

#### Commercial Insurance Enrollees and Spending by Payment Method<sup>30, 31</sup>

##### *Fee-for-service (FFS) Payments*

In 2012, 64% of commercial insurance enrollees' care, representing nearly 61% of spending (\$8.9 billion), was paid for using FFS payment methods (Figure 12).

Under the FFS model, health care providers are reimbursed by payers at negotiated rates for individual services delivered to patients. A variety of FFS methods exist, including some that incorporate financial performance incentives for providers.<sup>32</sup>

##### *Global Budget/Payment Method*

Health care services for 35% of commercial insurance enrollees - and nearly 39% of payments (\$5.7 billion) - in 2012 were coordinated by a physician group that was paid using a global budget/payment method. Payers reported that in 2012 these global budget/payment methods were used exclusively within HMO-type insurance products, in which enrollees were required to select a primary care physician to coordinate their care.

Global budgets/payments are payment arrangements made between payers and providers that establish spending targets to cover all of the expected costs for health care services to be delivered to a specified population during a stated time period. Global budget/payment arrangements may shift some financial risk from payers to providers. In these cases, if costs exceed the budgeted amounts, providers may absorb those costs, subject to negotiated risk sharing agreements.<sup>33</sup> Conversely, providers may share in, or retain, the savings if costs are lower than the budgeted amounts and health care quality performance targets are met.

29 *Recommendations of the Special Commission on the Health Care Payment System* (July 2009). Report available at: <http://www.mass.gov/chia/docs/pc/final-report/final-report.pdf> (Accessed August 6, 2013).

30 Alternative Payment Method data was collected pursuant to M.G.L. c. 12C, Section 8 and 957 CMR 2.00 for the eleven largest commercial health care payers as determined by the Center based on Massachusetts health care payments. Payers include: Aetna Health, Blue Cross Blue Shield of Massachusetts, CeliCare Health Plan, Connecticut General Life Insurance Company (Cigna), Fallon Health and Life Assurance Company, Harvard Pilgrim Health Care, Health New England, Inc., Neighborhood Health Plan, Tufts Associated Health Maintenance Organization, Inc., UniCare Life and Health Insurance Company, United Healthcare Insurance Company.

31 For more information please refer to the Technical Appendix.

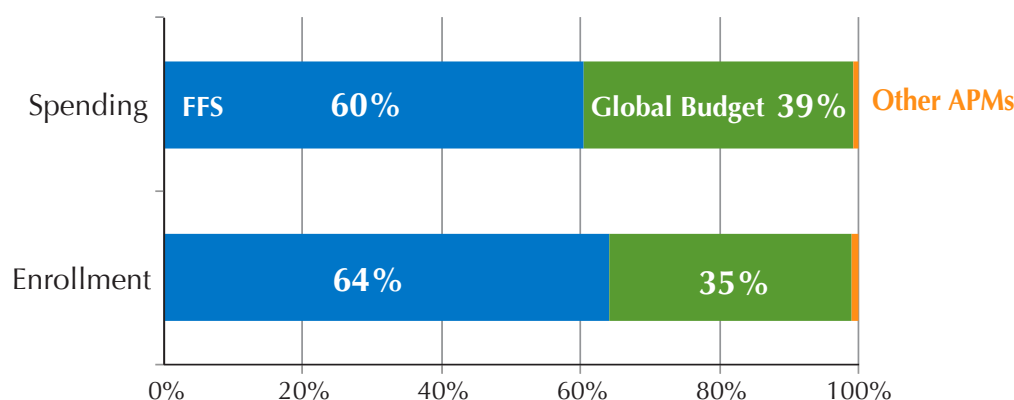
32 FFS arrangements may include: Diagnoses Related Group payments; per-diem payments; fixed procedure code-based fee schedules; claims-based payments adjusted for performance measures; discounted charges-based payments; and Pay for Performance incentives that accompany FFS payments.

33 Providers that assume downside risk will be subject to Division of Insurance regulation as Risk Bearing Provider Organizations.

It is important to note that within the framework of a global budget/payment arrangement with a physician group or hospital, payments to service providers are generally made on a FFS basis.<sup>34</sup> Also, global budgets/payments methods as defined here do not consider the extent of risk, if any, borne by the managing physician group. It is difficult to capture levels of risk, as there is currently no standardized approach to risk classification or reporting.<sup>35</sup>

There was significant variation between payers in the proportion of their enrollees covered and the level of payments made under Alternative Payment Methods (APMs) in 2012. BCBS, the largest payer in Massachusetts, reported that payments for the care of more than 44% of its membership and 49% of its payments were made under global budget/payment arrangements, far exceeding any other payer (Figure 13).

**Figure 12: Payer Spending and Enrollment by Payment Type (2012)**



Note: Enrollment shown by payer reported member months

34 Global budget/payment mechanisms generally establish a cost target for a population of patients managed by a contracting physician group. As patients use services, the servicing providers are generally paid using FFS payments. As part of the settlement process, the total costs of caring for the managed patient population are compared to the target amounts and may be adjusted as necessary to reflect changes in population health status and performance on health care quality targets, and risk sharing arrangements in determining the settlement payments. In some cases large physician groups may be paid on a capitated basis.

35 Risk sharing arrangements can vary significantly, which complicates the classification of risk parameters. See Attorney General's 2013 Cost Trends Report: <http://www.mass.gov/ago/docs/healthcare/2013-hcctd.pdf> (Accessed August 6, 2013).

### *Bundled Payments*

Commercial payers in Massachusetts did not report any use of a bundled payment method in 2012. Bundled payments are a method of reimbursing providers, or a group of providers, for providing multiple health care services associated with defined “episodes of care” (i.e. colonoscopy, pregnancy and delivery, pneumonia treatments, etc.) for a patient or set of patients. These payments may include services developed based on clinical guidelines, severity adjustments to account for the general health status of a patient and comorbidities, and even designated “profit” margins and allowances for potential complications.<sup>36</sup>

Payers were required to report payment methods using a hierarchy<sup>37</sup> that ranged from the most comprehensive alternative payment method to the least. It is not known whether this hierarchy may have masked the reporting of less comprehensive payment methods. If the bundled payment approach has not yet been adopted in Massachusetts, it may be due to payer focus on adopting other alternative payment methodologies or the perceived complexity of developing such bundled payment arrangements.

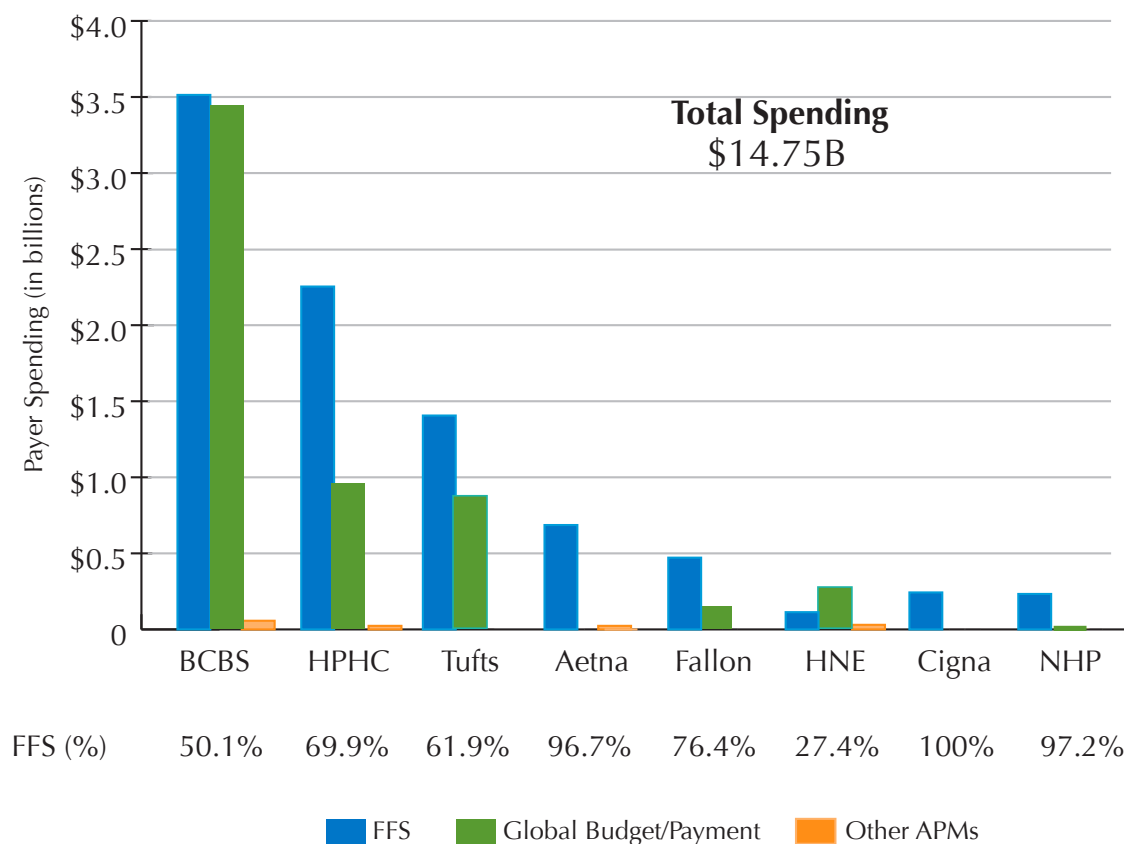
### *Limited Budgets*

Limited budgets accounted for approximately 1% of payer spending (\$128 million) in 2012. Limited budgets are payment arrangements where payers and providers, either prospectively or retrospectively, agree to pay for a specific set of services to be delivered by a single provider. This could include, for instance, capitated payments for primary care or oncology services. Limited budgets also shift some financial risk from payers to providers.

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36 Bundled payments have been highlighted by the Commonwealth for their cost saving potential. Section 64 of Chapter 288 of the Acts of 2010 directed the Center’s predecessor agency, the Division of Health Care Finance and Policy (Division), to undertake activities intended to foster the adoption of bundled payments among health care payers and providers in Massachusetts. The Division released a report on bundled payments, outlining their potential for cost savings, available here: <http://www.mass.gov/chia/docs/r/pubs/11/bundled-payments-report-02-2011.pdf>. (Accessed August 13, 2013).

37 The payment method hierarchy is: global budget/payment, followed by limited budget, bundled payment, and then other, non-FFS based payment methods. The remaining is fee for service.

**Figure 13: Payer Spending by Payment Type (2012)**

Notes: United is not included due to data concerns; Unicare and Celticare not shown due to low dollar volume.

### *Other, Non-FFS-based Methods*

Health care services for less than 1% of commercial payer enrollees in 2012 was paid using a form of APM reported as “Other,” that was not based on a FFS model and also did not easily fit into any of the aforementioned categories. For instance, this category includes care management payments made to providers participating in the Patient Center Medical Home Initiative.

## IV. Health Plan Performance on Selected Quality Measures

A health plan's ability to provide accessible, effective care to its enrollees supports efforts to improve health outcomes, improve the health of the population, and address health care cost growth in the state. The Healthcare Effectiveness Data and Information Set (HEDIS)<sup>38</sup> is a collection of measures used to assess how well a plan is implementing policies and programs to ensure its enrollees receive accessible, effective preventive care and treatment.

While health plan performance on a single measure does not represent the overall quality of care provided to a plan's enrollees, scores on these measures can be used to compare a plan's results to other health plans and to state and national benchmarks. This section examines plan performance on five HEDIS measures. The reported measures were selected as representative of performance in three different HEDIS domains of care. Detailed performance reporting on other measures is provided in the Data Appendix.

In general, health plan performance on these quality measures meets or exceeds national benchmarks. There are no clear correlations between these quality measures and either premium costs or total medical expenditures.

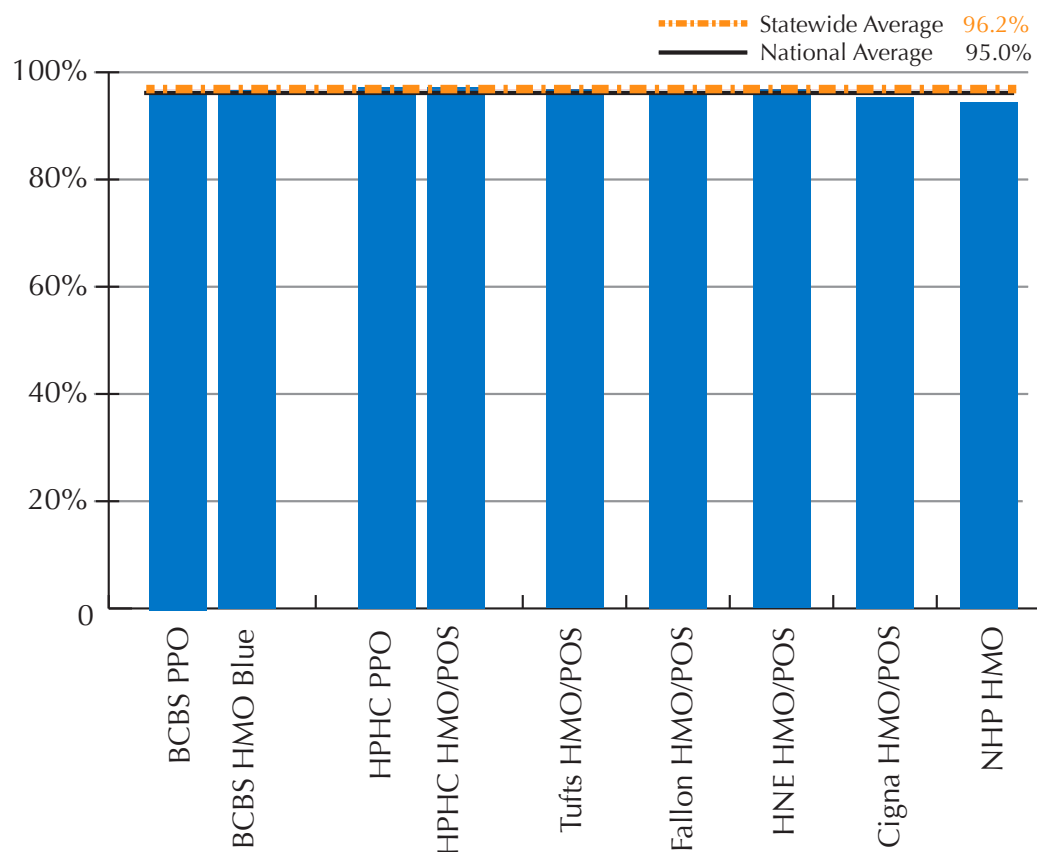
### Access/Availability of Care

Massachusetts health plan performance was in line with the national average. There was also little variation across plans on two HEDIS measures used to evaluate adults' and childrens' access to primary care practitioners and preventive care, a key indicator of health care access. The measures evaluate the proportion of enrollees that had the recommended preventive care visits; higher rates indicate greater access to preventive care.

For adults, the Massachusetts average score (96%) was in line with the national average (95%) (Figure 14). Among the health plans examined, there was little variation; performance ranged from 94% (Neighborhood Health Plan (NHP)) to 97% (HPHC PPO). On the children's access measure, the average scores were between 97% and 99%. For the seven payers analyzed, scores exceeded national averages and, in all age ranges for children, every product scored above 95% on these measures.

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38 The domains of care measured by the HEDIS are: Effectiveness of Care; Access/Availability of Care; Experience of Care; and Utilization and Relative Resource Use. Data are from the National Committee for Quality Assurance 2012 Quality Compass, which reports on performance in calendar year 2011.

**Figure 14: Percent of Adult Enrollees Who Had a Preventive Care Visit in Past Three Years (2011)**

Source: National Committee for Quality Assurance

## Effectiveness of Care

As a measure of health plan effectiveness, HEDIS assesses effective use of imaging studies in the diagnosis and treatment of low back pain (Figure 15). This measure evaluates the percentage of adult enrollees with a primary diagnosis of low back pain who did not undergo an imaging study<sup>39</sup> within 28 days of their diagnosis; a higher rate of non-imaging indicates treatment of low back pain that is more consistent with expert recommendations.<sup>40</sup>

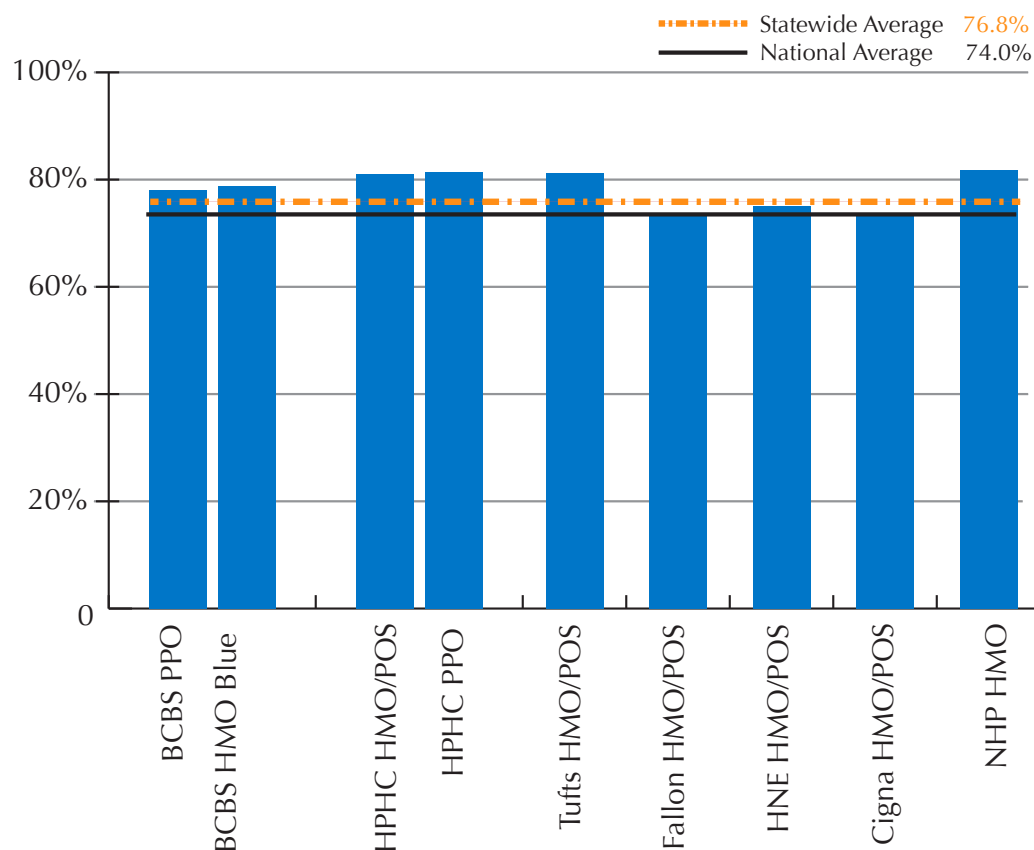
<sup>39</sup> Imaging study is defined as x-ray, magnetic resonance imaging (MRI) or computed tomography (CT) scan.

<sup>40</sup> According to the American College of Radiology, uncomplicated, acute back pain is a non-threatening condition and most patients return to their usual activities within 30 days; low back pain does not warrant an imaging study. American College of Radiology. ACR appropriateness criteria: <http://www.acr.org/~media/ACR/Documents/AppCriteria/Diagnostic/LowBackPain.pdf> (Accessed August 6, 2013).

Massachusetts health plan average performance on this measure was three percentage points above the national average (77% and 74%, respectively). Performance ranged from 74% at Connecticut General Life Insurance Company (Cigna), to 82% at NHP. Though Massachusetts health plans' performance exceeded the national average, there may be opportunities for health plans to promote use of recommended treatment guidelines among their affiliated providers.

**Overall Massachusetts payer performance on selected quality measures continued to meet or exceed national performance.**

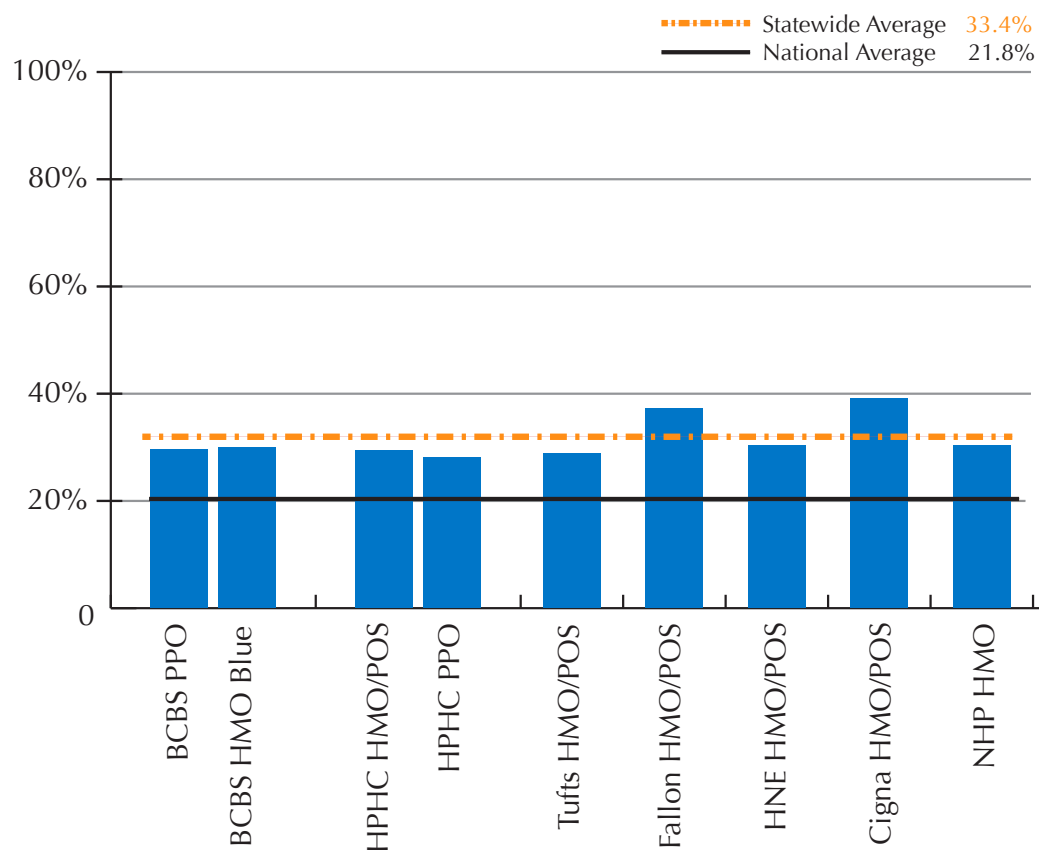
**Figure 15: Percent of Patients That Did Not Receive Imaging Studies for Low Back Pain (2011)**



Source: National Committee for Quality Assurance

HEDIS also assesses appropriate prescription of antibiotics as a measure of health plan effectiveness by evaluating the percentage of adult enrollees with a diagnosis of acute bronchitis who were not prescribed an antibiotic (Figure 16). In most cases, a higher rate on this measure indicates more appropriate treatment of acute bronchitis.<sup>41</sup> The statewide average performance of 33% was 11 percentage points above the national average (22%). There was, however, wide variation in performance across Massachusetts health plans (HPHC PPO 28% versus Cigna at 39%). As with use of imaging studies, Massachusetts health plans perform well compared to the national benchmark, but this measure highlights an area in which providers and health plans can strive to provide care that is more in line with current clinical guidelines and recommendations.

**Figure 16: Percent of Adult Patients with Acute Bronchitis Not Prescribed Antibiotics (2012)**



Source: National Committee for Quality Assurance

41 According to the Agency for Healthcare Research and Quality, the prescription of antibiotics for adults with acute bronchitis is not indicated in clinical guidelines if the patient does not have a comorbidity or other infection for which antibiotics may be appropriate: <http://www.qualitymeasures.ahrq.gov/content.aspx?id=38860> (Accessed August 6, 2013).



## Utilization and Resource Use

An all-cause hospital readmission measure is used to evaluate effective health plan resource use. This measure reports the ratio of actual hospital readmissions to the readmissions expected for a health plan based on the characteristics of its enrollees. All health plans in this analysis performed better than expected on this measure.

Interventions aimed at reducing hospital readmissions are a point of growing interest among payers, providers and federal and state policymakers. Performance on this measure can continue to inform health plan quality improvement and provider performance incentive programs, as well as support consumer and health plan purchaser decision-making.

## Chapter Three: Health Care Payments to Providers and Systems

In recent years, providers have been consolidating into provider systems. Massachusetts has recently adopted legislation that provides mechanisms to oversee the changing dynamics of the health care marketplace, as well as to monitor overall health care spending and the impact that provider consolidation may have on the market.<sup>42</sup> Examining payments made by payers to individual and system health care providers is important for increasing transparency in the health care payment system and informing cost containment policies.

This chapter focuses on commercial payments made to acute hospitals and physician groups since, as discussed in Chapter Two, these service groups accounted for more than 70% of total spending on member medical expenses.

### *Key Findings:*

- Provider Payment Distribution
  - The majority of Massachusetts commercial payments went to high priced providers.
    - In recent years, higher priced providers (top 50%) received approximately 80% of the payments made to acute hospitals and physician groups.
    - Further, the highest priced 25% of providers received over 50% of commercial payments.
- Provider System Payment Concentration
  - System-affiliated providers, acute hospitals, and physician groups received more than two-thirds of commercial payments made to providers in Massachusetts in 2011.
    - Providers affiliated with Partners HealthCare System (Partners) received the largest proportion of total acute hospital and physician group payments from commercial payers, at 28%.
    - Partners received approximately one-third of total commercial payments to acute hospitals, another third went to all other hospital systems combined, and the remaining third was paid to all hospitals unaffiliated with a system.

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<sup>42</sup> Pursuant to M.G.L. c. 6D, established under Chapter 224 of the Acts of 2012, the Health Policy Commission is responsible for conducting (1) performance improvement plans of health care entities and (2) market impact reviews of provider organizations that affect the Commonwealth's ability to achieve the annual health care cost growth benchmark.

- Provider Price Variation
  - Wide variation existed in prices paid by commercial payers to hospital and physician group systems.
  - Partners and Berkshire Health System had acute hospital price levels in 2012 that were higher than the network median price across all payers' networks
  - Steward HealthCare and Circle Health had lower than network median acute hospital relative price levels among most payers.
  - Physician groups that were associated with Partners and Atrius Health had relative price levels that were significantly higher than the network median price levels across most payers in 2011.
  - Academic Medical Centers generally had higher prices than other hospital types across all payers' networks in recent years.
- Health Status Adjusted Total Medical Expense (TME)
  - Partners was the only physician group system examined that had a health status adjusted TME above the network average physician group TME in the top three payers' networks (Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), and Tufts Health Plan (Tufts)) in 2010 and 2011.
  - Health Alliance with Physicians (UMass) was the only physician group examined that had health status adjusted TME below the network average across the three largest commercial payers' networks in 2010 and 2011.
- Quality of Care
  - Massachusetts provider systems perform consistently well relative to national standards on measures assessing quality of hospital processes of care, patient experience, and patient safety indicators.

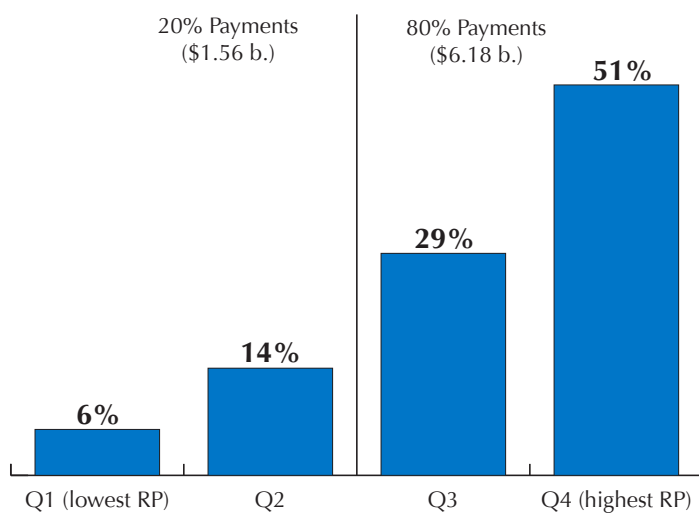
## I. Distribution of Payments among Providers by Price Level

Overall payments from payers to providers in the Massachusetts health care market were highly concentrated among the highest priced network providers during 2011 and 2012. The providers with prices in the top 25% of each payer's network received more than half of total payments made to providers.

The vast majority of payments to hospital and physician groups go to the providers that have negotiated the highest prices. This reflects the fact that the highest price providers in many cases are the largest providers with the greatest service volume. Reducing the growth of overall costs will depend in part on achieving cost reductions in these facilities and systems.

In 2012, 80% of total hospital and physician group payments were paid to providers with prices above the network median (Figure 17, Figure 18).<sup>43</sup> More than 50% of total payments were paid to the highest priced providers. The lowest 25% of providers by price level received only 6% of payments.

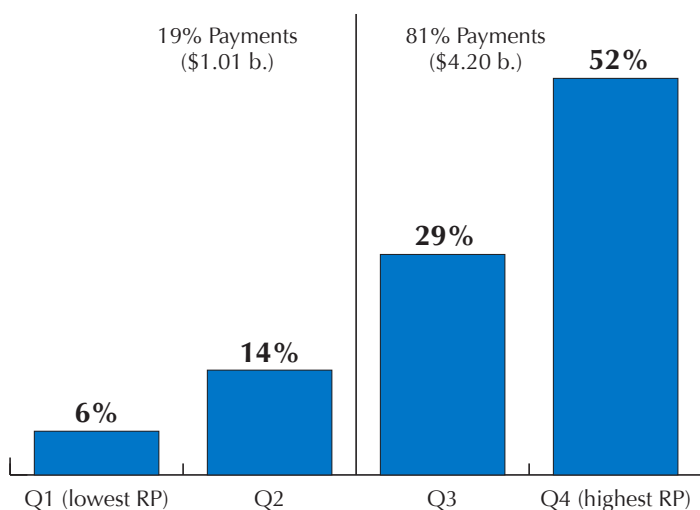
**Figure 17: Distribution of Total Hospital Payments by Relative Price Quartile (2012)<sup>44</sup>**



**The providers with prices in the top 25% of each payer's network received over half of total payments in 2011 and 2012.**

<sup>43</sup> An additional \$0.84 billion was paid to physicians not included in the relative price data because these physicians were paid based on a standard fee schedule.

<sup>44</sup> Hospitals were grouped into quartiles by their relative price values. The highest priced quartile includes hospitals that were in the top 25 percentile of relative price values within each payer's network.

**Figure 18: Distribution of Total Physician Group Payments by Relative Price Quartile (2011)<sup>45</sup>**

Note: Percentages may not sum to one hundred due to rounding

**In 2012, 80% of total hospital and physician group payments were paid to providers with prices above the network median.**

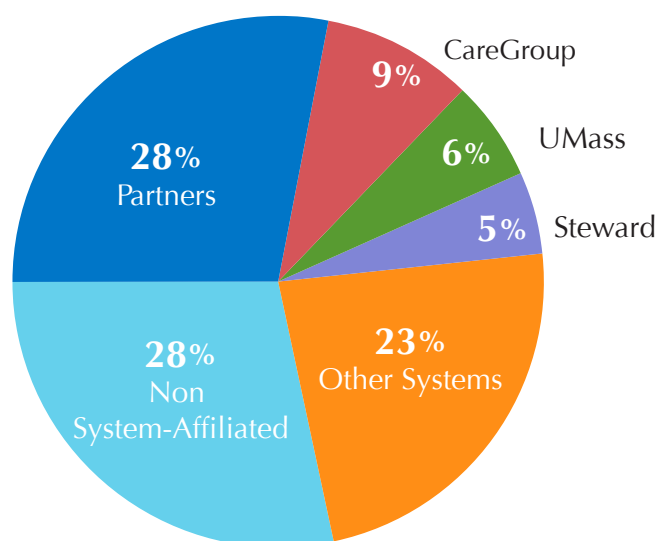
<sup>45</sup> Figure 18 includes only payments made to the physician groups that were included in the relative price calculation after thresholds were applied, as defined in 957 CMR 2.00. An additional \$0.84 billion was paid to individual physicians and groups for which relative prices were not reported. Physician groups were grouped into quartiles by their relative price values. The highest priced quartile includes physician groups that were in the top 25 percentile of relative price values within each payer's network. Percents may not sum to 100 due to rounding.

## II. Concentration of Payments among Providers and Systems

### Acute Hospitals and Physician Groups

The concentration of payments to high-price providers is related to the overall concentration of the provider market. System-affiliated providers - acute hospitals and physician groups - received more than two-thirds of commercial payments made to providers in Massachusetts in 2011 (Figure 19).<sup>46</sup>

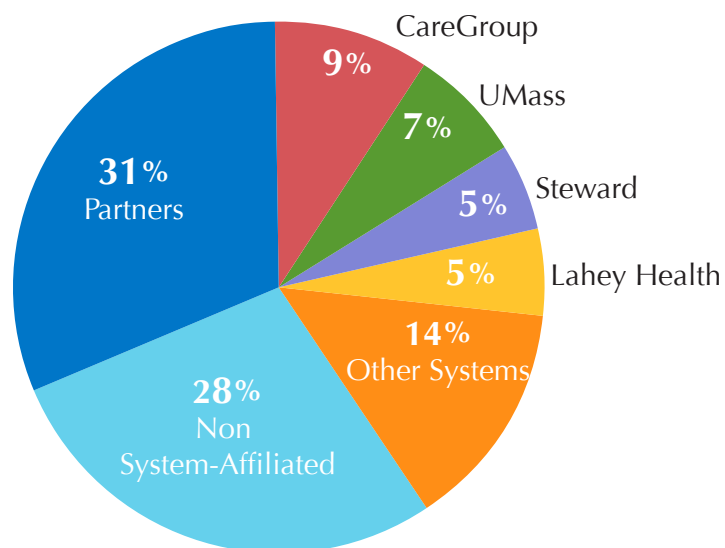
**Figure 19: Proportion of Total Reported Acute Hospital and Physician Payments by System (2011)**<sup>47</sup>



Providers affiliated with Partners received the largest proportion of total acute hospital and physician group payments from commercial payers, at 28%. Partners received more than three times the payments made to the provider system that received the second largest proportion of total payments, CareGroup, the next largest provider system. Atrius Health accounted for approximately 5% of total payments, which is notable because, unlike all other systems examined, it includes no hospital affiliates.

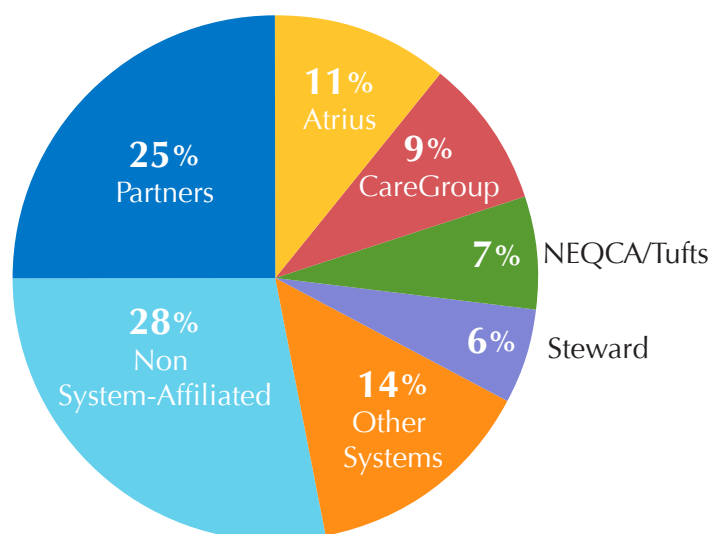
<sup>46</sup> For this analysis, providers meeting one of the following criteria are classified as systems: (1) an entity that includes two or more acute hospitals that report to the Center as separate financial institutions and the physician groups affiliated with these hospitals; (2) physician group entities not included in (1) that received a large proportion (5% or more) of total commercial payments to physicians and the hospitals affiliated with these physician groups. Groups affiliated with individual specialty hospitals were not treated as a system. Data for 2012 is presented for hospital groups, and 2011 data for physician groups, as this is the most recent data available. Data for 2011 is presented when the two groups are combined.

<sup>47</sup> Analysis was based on 2012 system affiliations. Celticare was excluded from this analysis because of data concerns.

**Figure 20: Proportion of Total Reported Acute Hospital Payments by System (2012)**

Overall, 72% of all acute hospital payments from nine reporting commercial payers were made to system-affiliated hospitals in 2012. Non-system affiliated hospitals accounted for the remaining 28% of total payments in 2012. Hospitals affiliated with Partners received about a third of the total hospital payments in 2012, which was more than three times higher than total payments to hospitals affiliated with CareGroup at 9%.<sup>48</sup>

<sup>48</sup> For more information on acute hospitals and system payments, see Data Appendix.

**Figure 21: Proportion of Total Reported Physician Payments by System (2011)**

Concentration among physician groups alone was somewhat less pronounced than concentration of the combined physician-hospital systems. Physician groups associated with Partners received one-quarter of total payments to physician groups in 2011, followed by Atrius Health at 11%,<sup>49</sup> CareGroup at 9% and New England Quality Care Alliance (NEQCA), affiliated with Tufts Medical Center, with 7% of total physician group payments.

<sup>49</sup> Payments to physicians or physician groups that did not meet the relative price reporting thresholds (as defined in 957 CMR 2.00) were included in the “unaffiliated” category.

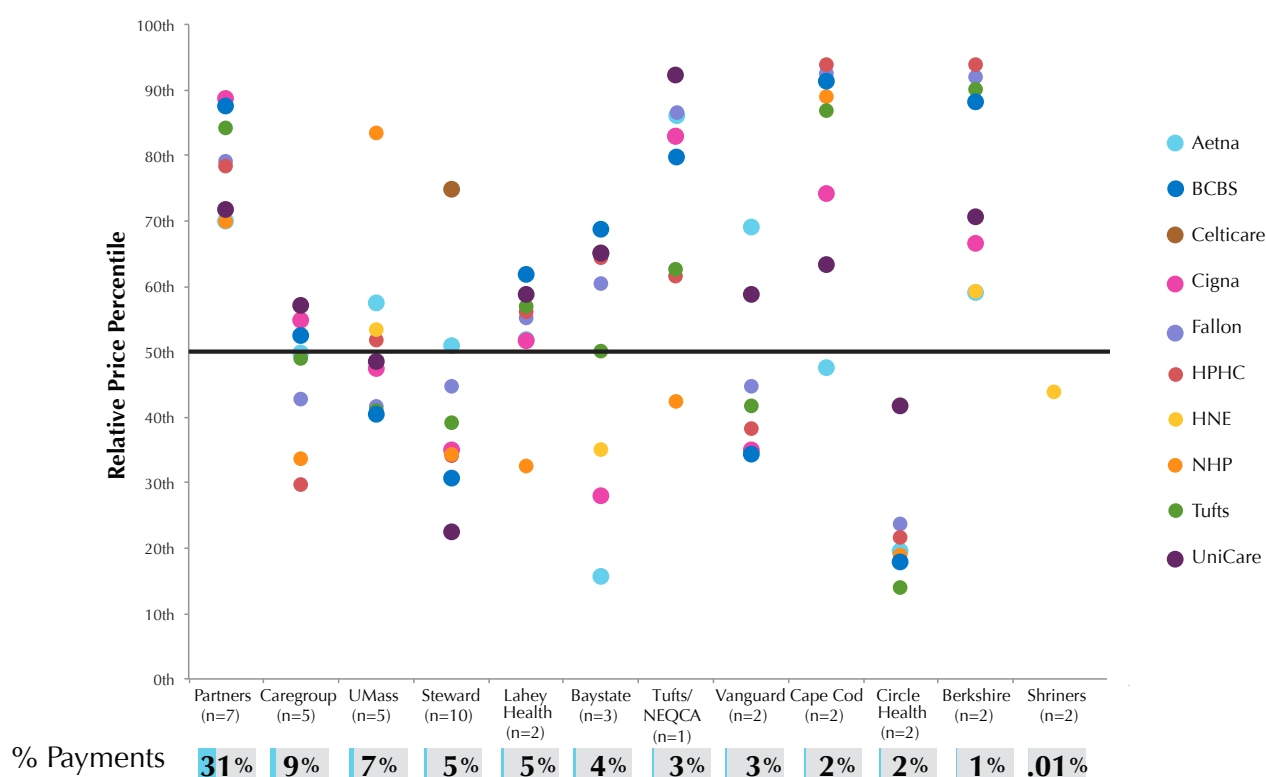


### III. Hospital and Physician Group Price Variation

Relative price is a standardized pricing measure that accounts for differences among provider service volume, service mix and insurance product types in order to allow comparison of negotiated price levels. Provider price variation is determined by examining differences between providers' relative prices within a payer's network.<sup>50</sup>

Partners and Berkshire Health Systems had hospital price levels in 2012 that were higher than the network median price across all payers' networks, as seen in Figure 22. Cape Cod Health System and Tufts Medical Center - NEQCA had higher hospital price levels in most payers' networks in 2012. The hospitals associated with Cape Cod Health System and Berkshire Health Systems are large providers in their regions. Steward HealthCare and Circle Health had lower than average relative price levels among most payers.

**Figure 22: Composite Relative Price Percentile (Blended RP) by Hospital System (2012)<sup>51</sup>**



<sup>50</sup> Blended relative price values (i.e. inpatient and outpatient relative prices weighted by payment distribution) within a payer's network were used for this analysis. For more information on relative prices and provider price variation in Massachusetts, see Technical Appendix. For information on the Center's prior year reporting on relative prices and provider price variation in Massachusetts, see *Health Care Provider Price Variation in the Massachusetts Commercial Market: Results from 2011* (February 2013). Available at <http://www.mass.gov/chia/docs/r/pubs/13/relative-price-variation-report-2013-02-28.pdf> (Accessed August 1, 2013).

<sup>51</sup> In order to analyze relative prices and payment levels across each system, a composite relative price was developed for each system within each payer network. Because each relative price value is network-specific, system relative price values were converted into percentiles within each payer's network, and then a simple average of the percentiles was taken to produce a consolidated percentile across networks. This consolidated percentile indicates, on average, whether a system had payer price levels above or below the average relative price percentile of other systems. The relative price percentile of each provider was derived from blended relative price values (i.e. inpatient and outpatient relative prices weighted by payment distribution) within a payer's network.

A simple average of the percentiles was used since weighting hospital relative prices by another metric, such as revenues a provider receives, would undermine the methodology used to calculate relative prices, which neutralizes the effects of provider service volume, service mix, and payer product mix.

As previously reported, Academic Medical Centers (AMCs) generally had higher network prices than other types of hospitals across all payers' networks (Figure 23). Higher prices were also associated with teaching hospitals, specialty hospitals, geographically isolated hospitals, and those affiliated with larger health care systems. Community hospitals and disproportionate share (DSH) hospitals tended to have lower network prices across all payers.

**Figure 23: Relative Price Average Percentile (Blended RP) by Hospital Characteristic by Payer (2012)<sup>52</sup>**



Physician groups that were associated with Partners and Atrius Health, the two largest physician group systems based on total commercial payments, had relative price levels that were significantly higher than the network median price levels across most payers in 2011.

<sup>52</sup> A Teaching Hospital is defined as having at least 25 full-time equivalent medical school residents per one hundred inpatient beds.

Academic Medical Centers (AMCs) are a subset of teaching hospitals. AMCs are characterized by (1) extensive research and teaching programs and (2) extensive resources for tertiary and quaternary care, and are (3) principal teaching hospitals for their respective medical schools and (4) full service hospitals with a case mix intensity greater than 5% above the statewide average.

A Geographically isolated hospital is defined as a sole acute hospital within a 20 mile radius.

A Disproportionate Share (DSH) hospital is a hospital with 63% or more of patient charges attributed to Medicare, Medicaid, and other government payers, including Commonwealth Care and the Health Safety Net.

The remaining acute hospitals that were not Specialty hospitals were designated as Community hospitals.

**Figure 24: Composite Relative Price Percentile by Physician Group System (2011)<sup>53</sup>**

<sup>53</sup> Data for physician groups was reported only for large physician groups (36,000 or more member months).

## IV. Health Status Adjusted Total Medical Expenses by Physician Group

Total Medical Expenses (TME) of a managing physician group measures the total per member per month health care spending of members whose health plans require the selection of a primary care physician associated with a physician group. Thus, physician group TME reported by each payer contains exclusively managed care member information (e.g. the enrollees of HMO products).

Physician group TME represents the full amount paid to all providers for health care services (payer expenses and enrollee cost-sharing payments combined). TME covers all categories of medical expenses and all non-claims related payments to providers.<sup>54</sup> In this section, TME is adjusted to account for variation due to differences in the health status of covered enrollees, in order to compare across physician groups within a payer's network.<sup>55</sup>

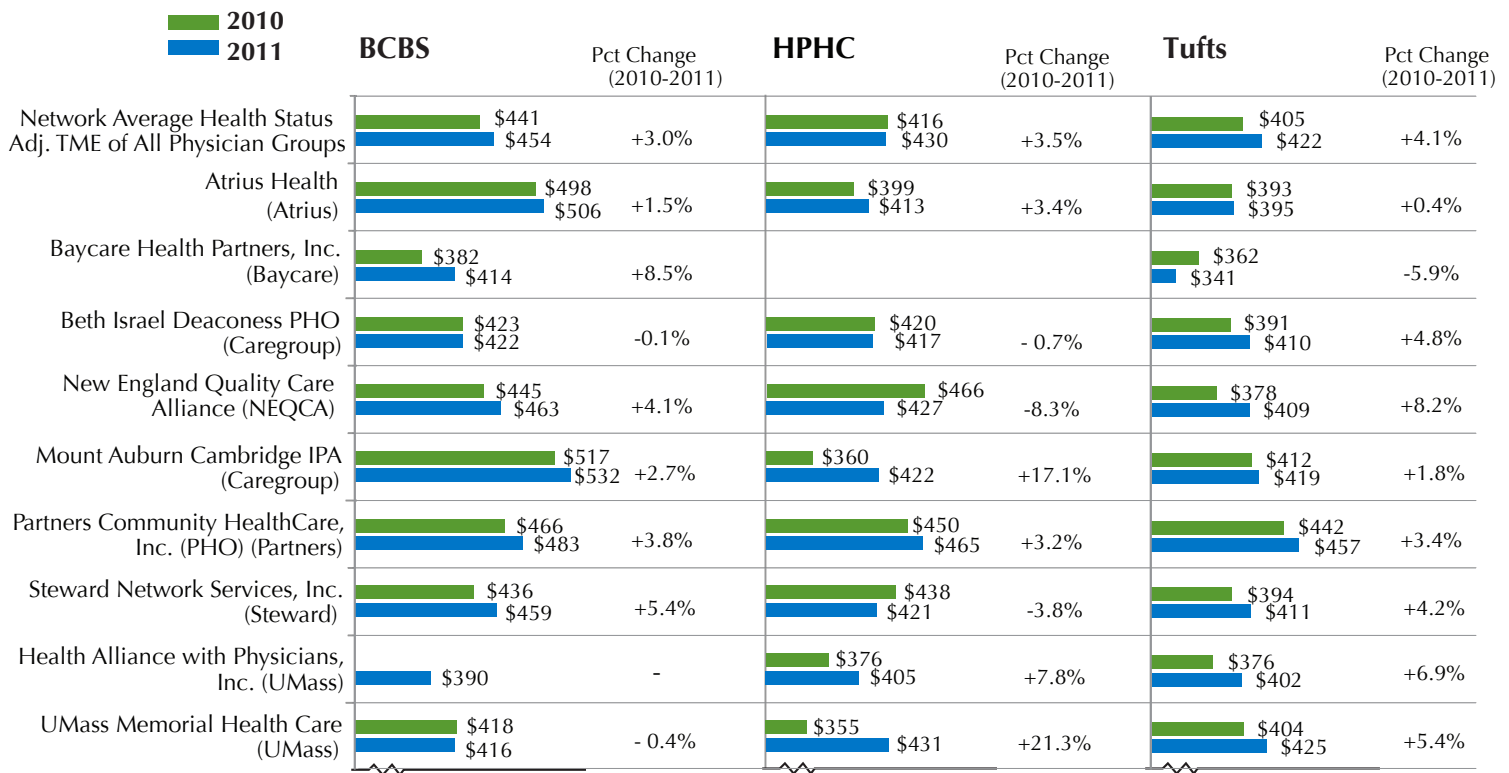
Among the physician groups examined,<sup>56</sup> Partners was the only physician group that consistently had a health status adjusted TME above the network average in all payers' networks (Figure 25). Health Alliance with Physicians (UMass) was the only physician group examined that had health status adjusted TME below the network average across the three largest commercial payers' networks.

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54 This analysis includes the six largest Massachusetts payers based on total payments made to the largest physician groups based on payments received. Payers include: BCBS, Fallon, HPHC, Health New England, NHP, Tufts Health Plan. Physician groups include: Atrius Health, Baycare Health Partners, Inc., Beth Israel Deaconess PHO, Mount Auburn Cambridge IPA, New England Quality Care Alliance (NEQCA), Partners Community HealthCare, Inc., Steward Network Services, Inc., Health Alliance with Physicians, Inc., UMass Memorial Health Care.

55 The adjustments for health status reflect differences in age, gender, and clinical profile within a payer's membership. Health status adjustments are network-specific so that health status adjusted TME for a physician group cannot be directly compared across networks.

56 Physician groups selected for this analysis are based on their system affiliation as discussed in the payment concentration section. See footnote 46 for system assignment logic and Technical Appendix for the list of physician groups.

**Figure 25: Health Status Adjusted TME by Physician Group for Three Largest MA Payers (2010-2011)**

Note: Tufts used different versions of DxCG to adjust for health status between 2010 and 2011. Data for Baycare was not included for HPHC due to data concerns.

## V. Provider Systems Quality of Care

Health care quality measures can provide useful benchmarks for prospective patients to compare and understand provider performance, as well as for providers to inform their efforts to improve their practice and assess the impact of quality improvement interventions. This section examines differences in the quality of services across multi-hospital systems<sup>57</sup> using quality measures selected from the Massachusetts Standard Quality Measure Set (SQMS):

- Ten acute hospital processes of care measures reported by CMS;
- Ten patient experience measures which are part of the Hospital Consumer; Assessment of Healthcare Provider and Systems (HCAHPS) survey; and
- Five patient safety indicators (PSIs).<sup>58</sup>

Details on the measures and the data used can be found in the Data Appendix.<sup>59</sup>

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57 In future publications, the Center may explore trends in Massachusetts physician groups' performance on quality and efficiency indicators, as well as the variation in performance within and across provider group systems. Other reports have found that Massachusetts physician groups continue to provide high quality care relative to national trends. See *Massachusetts Health Quality Partners Quality Insights: Clinical Quality in Primary Care Report*, 2012: <http://c354275.r75.cf1.rackcdn.com/MHQP%20Clinical%20Quality%20Report%202011.pdf> (Accessed August 6, 2013).

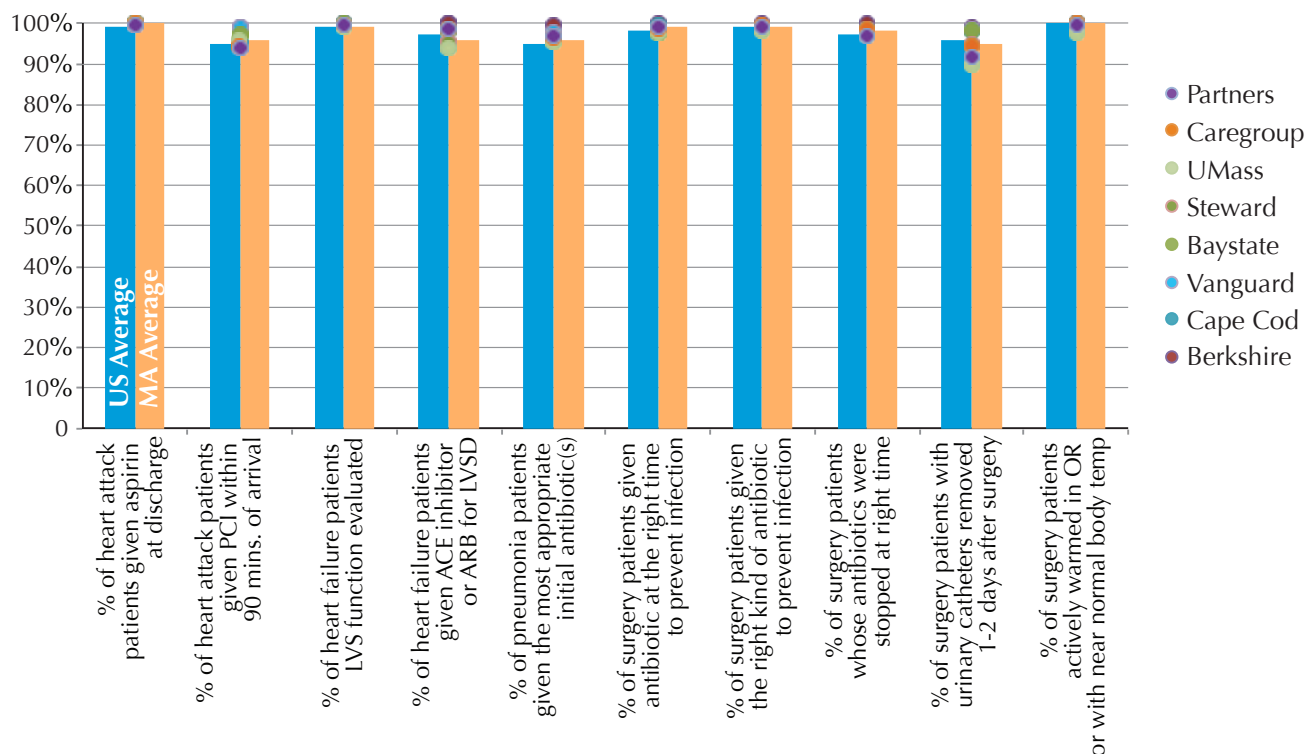
58 These 25 measures were selected because they are either publicly reported and/or currently used in at least one payer incentive program in Massachusetts.

59 Hospital systems includes: Baystate Health, Berkshire Health Systems, Cape Cod HealthCare, CareGroup, Partners HealthCare, Steward Health Care, UMass Memorial Health Care and Vanguard. Four systems included in previous analyses are not included here: Circle Health, Lahey Health, Shriners and Tufts/NEQCA.

## Acute Hospital Process of Care Measures

Process of care measures evaluate the use of evidence-based best practices for particular conditions and procedures in acute care hospital settings.<sup>60</sup> These measures gauge the frequency of the right process being completed for the right patient at the right time.

**Figure 26: Process of Care Measures by Hospital System (2011-2012)**

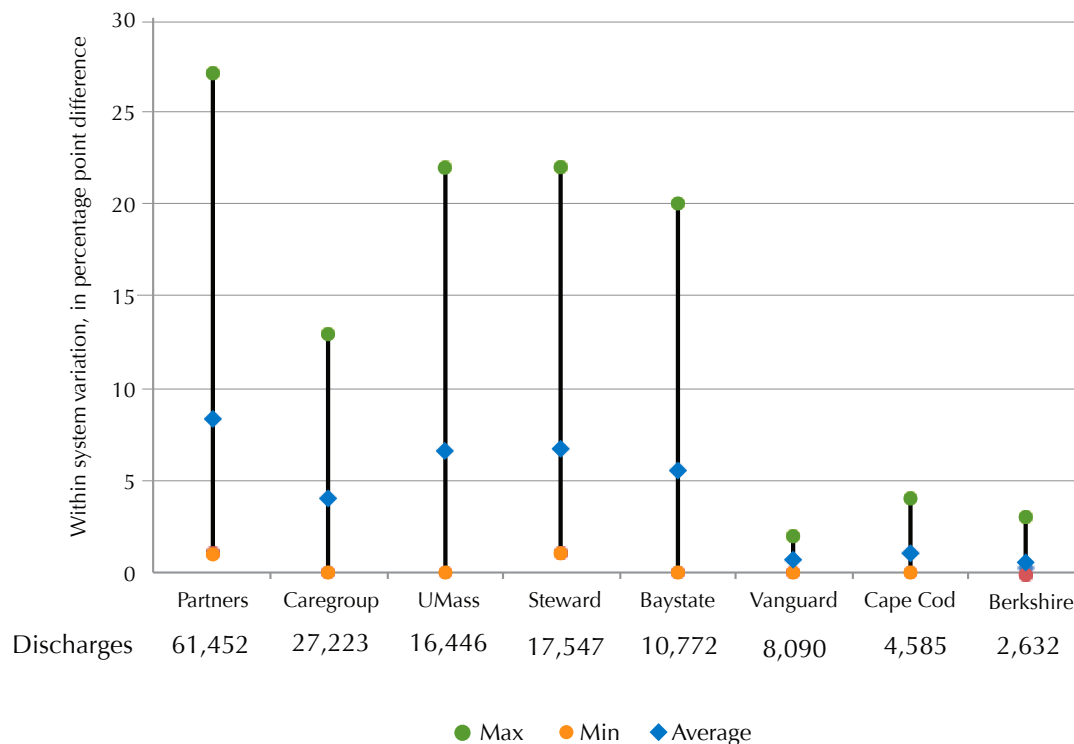


Source: The Centers for Medicare and Medicaid Services

<sup>60</sup> Data for each acute hospital process measure was collected and publicly reported by the Centers for Medicare and Medicaid Services.

Massachusetts provider systems' weighted average performance on hospital process measures ranged from 92 to 100 percent, indicating near-universal high performance in-line with or above national levels.<sup>61</sup> For each of the ten measures, all hospital systems performed within six points of the state average. Variation between the hospitals included within a provider system was higher than variation between hospital systems, and was generally related to the size of the hospital system (Figure 27).

**Figure 27: Variation in Performance on CMS Process Measures within Hospital Systems by Volume of Discharges (2011-2012)**



Source: The Centers for Medicare and Medicaid Services

**Performance on process of care measures was more variable within systems that had a greater share of total discharges.**

61 For care delivered between July 1, 2011 and June 30, 2012. Data from the Centers for Medicare and Medicaid Services.

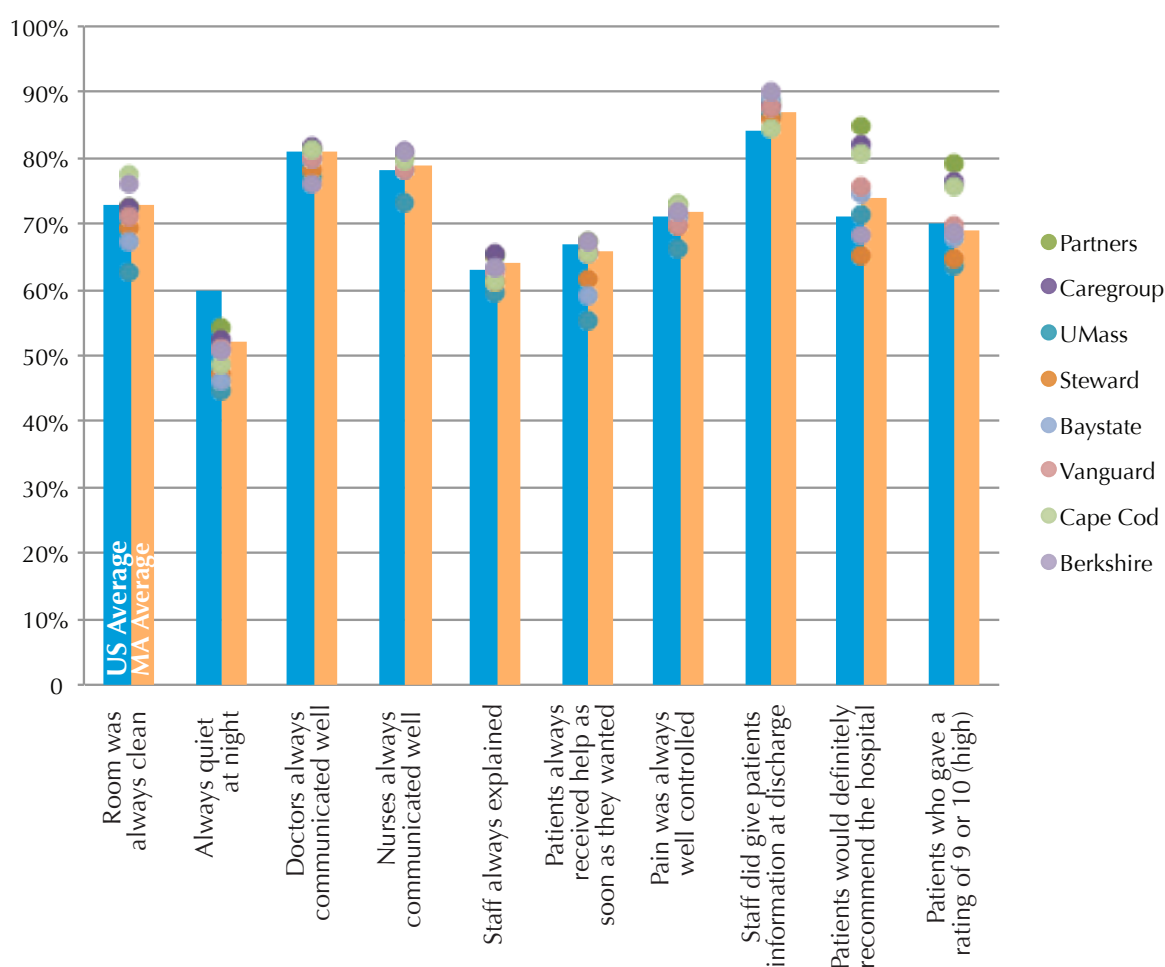


## Patient Experience Measures

Evaluating patient experience is a critical aspect of assessing health care quality. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a standardized survey used to measure patient perspectives on the care they receive in acute hospital settings.

For the ten HCAHPS measures evaluated in this report, overall performance by Massachusetts hospital systems was largely in-line with national averages (Figure 28).<sup>62</sup> Performance fell below national levels for only one measure (the hospital environment is “always quiet at night”). There was variation on the hospital patient experience measures, both across and within Massachusetts hospital systems.

**Figure 28: Hospital Patient Experience Measures (2011-2012)**



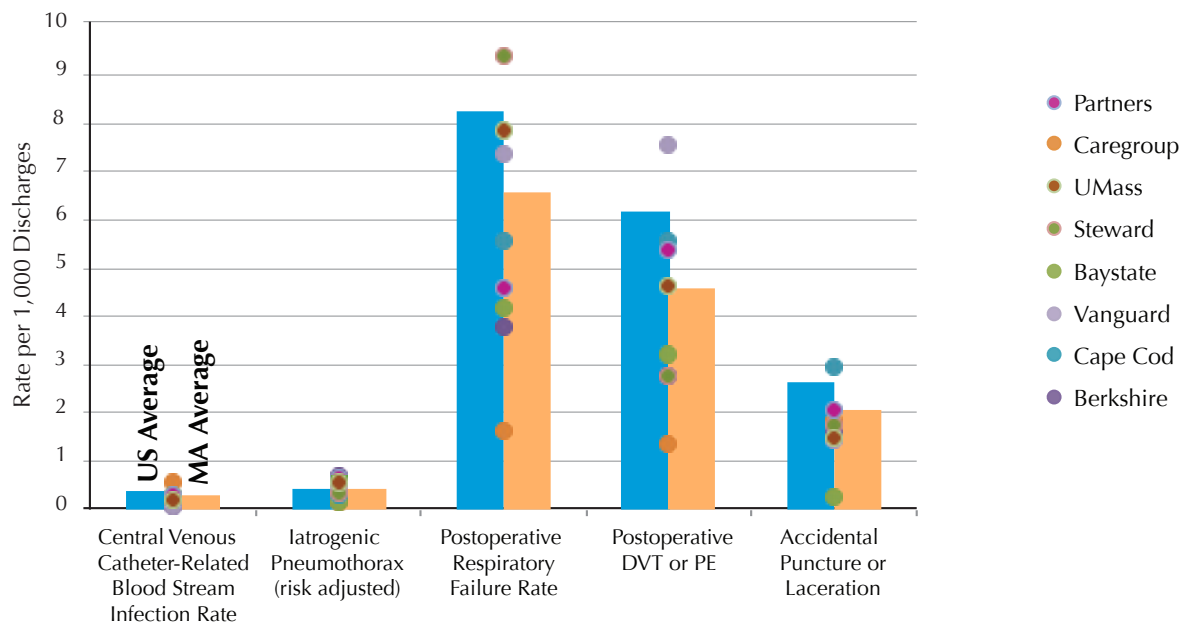
Source: Agency for Healthcare Research and Quality

62 For care delivered between July 1, 2011 and June 30, 2012. Data from the Agency for Healthcare Research and Quality.

## Patient Safety Indicators

Patient Safety Indicators (PSIs) provide information on the frequency of post-surgery and procedure complications at a given hospital. Lower PSI scores indicate lower complication frequencies, while higher scores indicate higher complication frequencies.<sup>63</sup> Massachusetts hospitals consistently scored lower (better) than the national averages (Figure 29).

**Figure 29: Patient Safety Measures by Hospital System (2010-2011)**



Source: The Agency for Healthcare Research and Quality

Although Massachusetts hospital systems performed better (lower) than the national average on these PSIs, the variation across hospital systems highlights opportunities to improve patient safety.

<sup>63</sup> Data from the Agency for Healthcare Research and Quality.

## Chapter Four: Implementation of Massachusetts Cost Containment and Health Reform Initiatives

Massachusetts has achieved near-universal health coverage since 2006, when the first phase of health care reform was implemented under Chapter 58 of the Acts of 2006, Massachusetts' landmark health care reform bill. Massachusetts recently entered into the next phase of reform when Chapter 224 of the Acts of 2012 (Chapter 224) was passed, which focuses on lowering health care costs while maintaining or increasing the quality of care delivered in Massachusetts.

The provisions under Chapter 224 were designed to promote more cost-effective, integrated, high-quality care for all of Massachusetts. Some key initiatives, which are identified below, provide mechanisms for monitoring the evolving health care market and are in various stages of implementation at the time of this report's publication. The Center for Health Information and Analysis (the Center) will continue to assess the impact of these programs on public and commercial market health care trends to increase transparency in the Massachusetts health care payment and delivery system.

### Selected Initiatives under Chapter 224 of the Acts of 2012:

**Health Care Cost Growth Benchmark:** The Health Policy Commission Board will annually establish a health care cost growth benchmark for the average growth in Total Health Care Expenditures (THCE) in the Commonwealth for the following calendar year. THCE, as determined annually by the Center, will be compared to the annual health care cost growth benchmark to determine if the state has met its health care spending target.

- **Total Health Care Expenditures (THCE):** THCE is the annual per capita sum of all health care expenditures in the Commonwealth from public and private sources, including: all categories of medical expenses and all non-claims related payments to providers, all patient cost-sharing amounts, and the net cost of private health insurance. The Center will report THCE in the summer of 2014.

**Registered Provider Organizations (RPOs):** Every provider organization that represents one or more health care providers in contracting with payers for payment of health care services must register with the Health Policy Commission (HPC) if it is a Risk Bearing Provider Organization (RBPO), or if it meets certain patient panel or revenue thresholds. RPOs will report financial and organizational information to the Center.

- **Risk Bearing Provider Organizations (RBPO):** RBPOs manage the treatment of a group of patients and bear downside risk in an alternative payment contract arrangement. RBPOs must annually certify with the Division of Insurance in order to enter into an alternative payment contract.

**Health Care Performance Improvement Plans:** In the event the percentage change in THCE exceeds the health care cost growth benchmark in the prior year, HPC must require certain payers, providers, and provider organizations to implement performance improvement plans. In addition, HPC may require the implementation of performance improvements plans for any health care entity whose increase in health status adjusted total medical expenses is considered excessive and who threatens the ability of the state to meet the health care cost growth benchmark, as determined by the Center, and any entity identified in the Center's Annual Report as exceeding the annual benchmark. The performance improvement plan must identify the causes of the entity's cost growth and must include specific strategies, adjustments, and action steps the entity proposes to implement to improve cost performance within an 18-month period.

**Cost and Market Impact Reviews:** HPC may conduct a market impact review of any provider or provider organization that submits to HPC notice of a proposed material change of its operations or governance structure if HPC finds that the change will likely have a significant impact on the Commonwealth's ability to meet the health care cost growth benchmark. Furthermore, in the event the percentage change in THCE exceeds the health care cost growth benchmark in the prior year, HPC may conduct a market impact review of any provider organization that is identified in the Center's Annual Report. Through conducting these reviews, HPC must refer to the Office of the Attorney General reports on any entity that meets certain criteria which suggest anti-competitive market behavior.

**All Payer Claims Database (APCD):** The Center acts as the sole repository for health care claims and payment data. Over time, the availability of the APCD will allow not only for a review of public payers, which was not included in this year's report, but also an increasing inclusion of all commercial payers and detailed service level analyses. The APCD will also provide new opportunities for administrative simplification.

**Alternative Payment Methods (APMs):** The Center must collect information from public and private payers engaged in alternative payment contracts. Information for private payer APMs was introduced in this report. In subsequent years, this annual report will include a review of public sector trends.

**Statewide Quality Advisory Committee (SQAC):** The Center will lead the Statewide Quality Advisory Committee (SQAC), previously organized under the Department of Public Health, to develop the uniform reporting of a Standard Quality Measure Set (SQMS) for each health care provider facility, medical group, or provider group. As the SQMS are utilized more extensively, this annual report will be able to track the quality of care delivered to Massachusetts residents.

**Consumer Price Transparency Tool:** Health plans and third-party administrators must offer a toll-free phone number and a website that allows members to obtain information on the estimated or allowed amount for a proposed admission, procedure, or service, and the estimated amount of member cost sharing (fee, copay, deductible, coinsurance, or other out of pocket amount) based on the information available at the time of the request. The estimated amounts are binding on the payer; however, members may be responsible for additional cost sharing amounts for unforeseen services provided.

**Special Commission on Provider Price Variation:** This Special Commission will convene to conduct a rigorous analysis to identify the acceptable and unacceptable factors for price variation in physician, hospital, diagnostic testing, and ancillary services. The charge for this Commission stemmed from the Special Commission on Provider Price Reform final report published in 2011. This new Commission is also directed to recommend steps to reduce price variation including a maximum reasonable adjustment to an insurer's median rate for acceptable factors for price variation.

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