

## B. TRENDS IN THE MASSACHUSETTS DELIVERY SYSTEM

# B.1 MIX OF PROVIDERS FOR INPATIENT CARE

In the Commission’s 2013 report, we found that the Massachusetts health care system is characterized by the use of higher-intensity care settings for both inpatient and outpatient hospital-based services.<sup>1</sup> In this section, we focus on inpatient care patterns. Inpatient spending accounts for nearly one-fifth of personal health care expenditures in Massachusetts, and Massachusetts uses inpatient care to a greater extent than other states, with 10 percent more discharges per capita after adjusting for the age of the population.<sup>1</sup> Because data and methods for examining this category of spending are well-established, we are able to use it to begin an analysis of care delivery flows and patterns.

Inpatient hospitalizations cover a variety of types of patient needs across service categories including medical, surgical, delivery, and mental health service categories. Medical discharges comprise over 50 percent of all inpatient discharges in the state, surgical discharges 23 percent, deliveries 17 percent, and mental health discharges represent seven percent.<sup>1</sup> This breakdown varies by payer type (Figure B1).

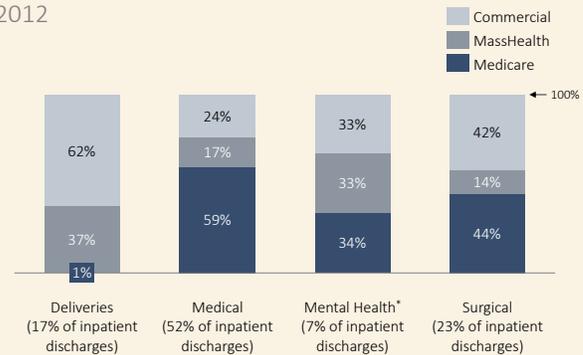
Massachusetts’s higher rate of hospitalization is concentrated among medical discharges. The state’s higher hospitalization rate represents an additional 15 discharges per 1,000 persons annually, and nearly two-thirds of these additional discharges are in the medical service category (Figure B2).

In aggregate, Massachusetts hospitals handle inpatient cases that are of comparable complexity to the national average, with the average case mix index in the state one percent lower than the U.S. average.<sup>2</sup> Data suggest opportunities to handle some of these cases in outpatient settings and avoid hospitalizations. For Medicare benefi-

ciaries age 65-74, Massachusetts’ admissions for ambulatory care-sensitive conditions – admissions that may be indicative of insufficient outpatient management – are 9 percent greater than the national average.<sup>3</sup> Massachusetts has made progress in this area over the last few years, but still lags the median state (Figure B3).

**Figure B.1: Discharges by payer type<sup>†</sup> for inpatient service categories**

Percent of inpatient discharges\* in each service category, 2012

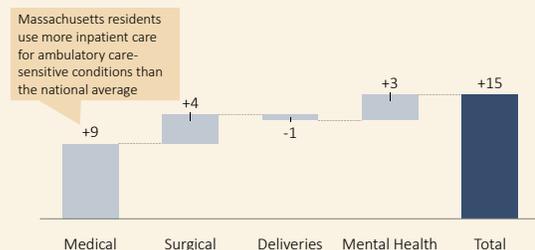


\* Discharges in general acute care hospitals. Excludes discharges in psychiatric, specialty non-acute, and chronic care hospitals.

† Payer mix for discharges in general acute hospitals. Psychiatric hospitals do not report number of discharges by payer type.

SOURCE: Massachusetts Health Data Consortium; HPC analysis

**Figure B.2: Breakdown of difference in discharges between Massachusetts and U.S. by inpatient service category**



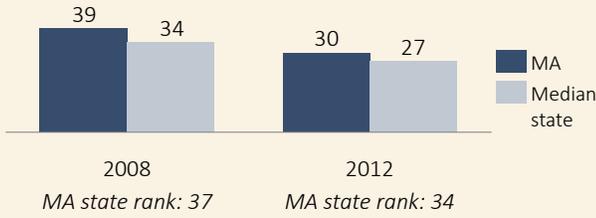
\* Discharges in general acute care hospitals. Excludes discharges in psychiatric, specialty non-acute, and chronic care hospitals.

SOURCE: Healthcare Cost and Utilization Project, Kaiser Family Foundation, HPC analysis

<sup>1</sup> This figure only includes mental health discharges in general acute care hospitals; this excludes psychiatric, specialty non-acute, and chronic care hospitals.

**Figure B.3:** Hospital admissions for ambulatory care-sensitive conditions among Medicare beneficiaries

Inpatient admissions per 1,000 persons



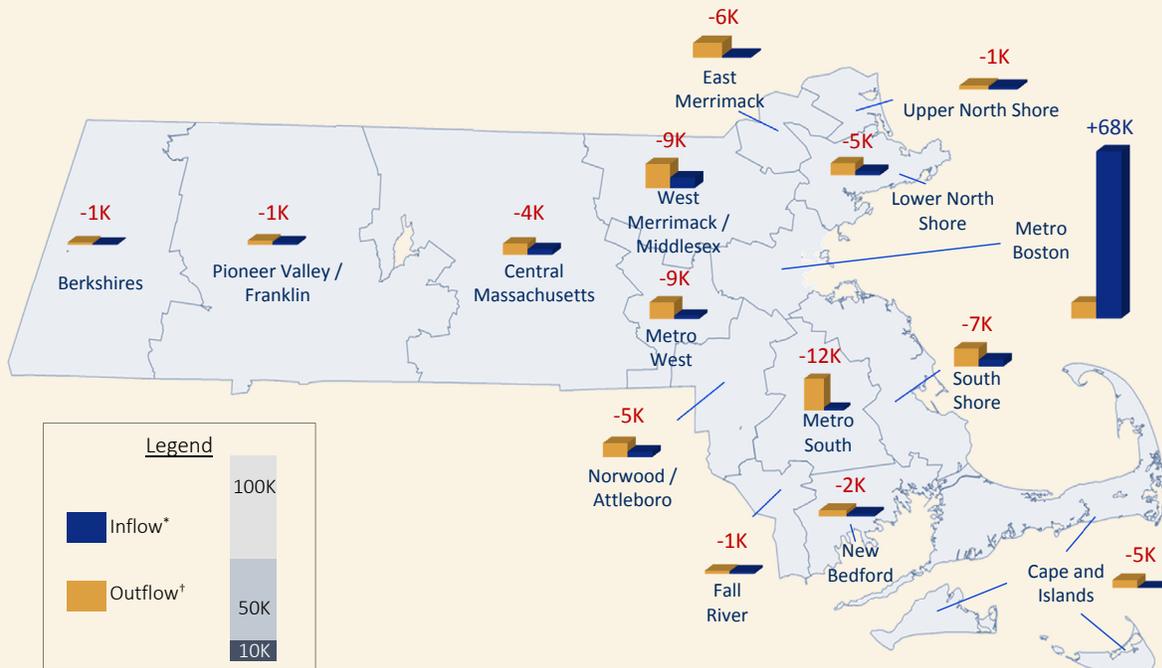
SOURCE: Commonwealth Fund Health System Data Center

In addition to using inpatient settings more often for care, Massachusetts residents receive a higher proportion of their inpatient care at major teaching hospitals than do people elsewhere in the U.S.<sup>ii</sup> The Commission’s 2013 report noted that Massachusetts Medicare patients used major teaching hospitals for 40 percent of their inpatient discharges, compared with a 16 percent nationally.<sup>1</sup> These hospitals receive higher rates of payment, on average, than community hospitals.<sup>4</sup>

While patients and referring providers are able to choose among a variety of hospitals for certain types of care, for other types of care choice may be more limited, such as when patients seek emergency care or when they are transferred to another acute hospital. Still, 40 percent of all discharges and 46 percent of discharges from major teaching hospitals are both non-emergency<sup>iii</sup> and non-transfer hospitalizations. This suggests a considerable scope of inpatient care for which there may be a choice of providers. Choice may be influenced by the preferences of the patient and of the referring provider, making it important to facilitate value-based decision making for both parties. Consistent with the aims of Chapter 224, Massachusetts payers are working to provide greater information and incentives for consumers to make value-based choices through price and quality transparency and through tiered network insurance products. Chapter 224 also encourages payers to adopt APMs that can provide financial incentives for primary care providers to make more value-based referrals. Payers should continue to advance these aims.

**Figure B.4:** Inflow and outflow of inpatient discharges across regions in Massachusetts

Number of inpatient discharges for non-transfer, non-emergency volume, 2012



\* Discharges at hospitals in region for patients who reside outside of region

† Discharges at hospitals outside of region for patients who reside in region

SOURCE: Center for Health Information and Analysis; HPC analysis

<sup>ii</sup> We use the Medicare Payment Advisory Commission (MedPAC) definition of major teaching hospital. Major teaching hospitals are those that train at least 25 residents per 100 hospital beds. The Commission’s 2013 report noted that 23 percent of acute hospitals in Massachusetts were in major teaching hospitals, compared with 5 percent nationally.

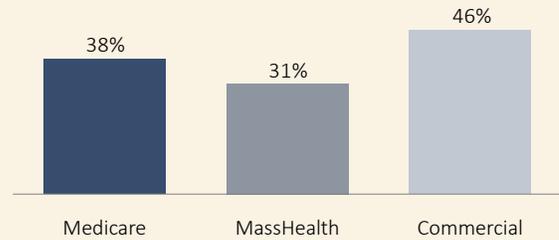
<sup>iii</sup> Defined as discharges that were not admitted from the ED and without an ED visit in their record.

Choice of hospital is often influenced by geographic proximity. In some cases, a major teaching hospital may be the nearest hospital for patients and may therefore provide local care, such as in the Metro Boston region, in which 11 of the 16 general acute hospitals are major teaching hospitals. However, in a large number of cases, patients leave their home region to receive care at a hospital in another region. These flows of patients outside their home region result in a net outflow of patients from most regions and a net inflow of patients to Metro Boston (**Figure B4**). Similar patterns are observed for each inpatient service category (medical, surgical, deliveries, and mental health discharges) and for DRGs representing both secondary and tertiary levels of care.

However, these patterns vary based on patient characteristics. Patients with commercial insurance are more likely to leave their home region for care than patients with Medicare or MassHealth coverage (**Figure B5**). Moreover, the likelihood of obtaining care outside of a patient’s home region varies with the median income of the patient’s community; residents of communities where the median income is over \$100,000 per year are more than twice as likely to leave their region for care as residents of communities where median income is below \$35,000 per year (**Figure B6**).

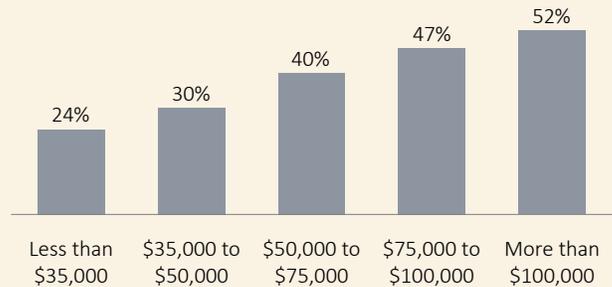
**Figure B.5: Inpatient care received outside of home region by payer type**

Percent of non-emergency, non-transfer inpatient discharges for payer type, 2012



**Figure B.6: Breakdown of difference in discharges between Massachusetts and U.S. by inpatient service category**

Percent of inpatient discharges for community income group\*, 2012



\* Community income is estimated as the median household income for the patient’s zip code

NOTE: Rates are adjusted for age, sex, payer group, distance from hospitals, distance from Metro Boston, and major diagnostic category. Analysis excluded individuals below 18 years of age, residents of Metro Boston, discharges with an ED visit in their record, and transfers from other acute hospitals.

SOURCE: Center for Health Information and Analysis; Census Bureau; HPC analysis

# B.2 CONCENTRATION OF INPATIENT CARE

## Levels of concentration

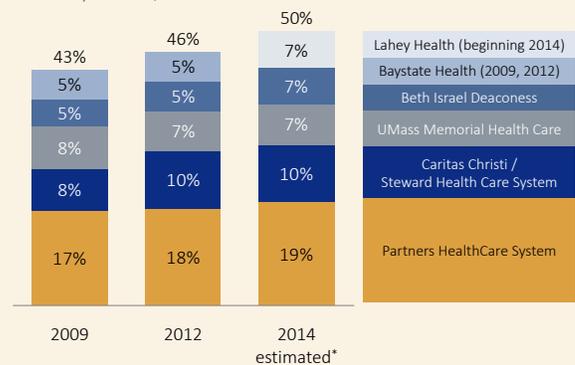
The increasing concentration of care in Massachusetts has been well-documented. In 2009, the five health systems with the greatest share of inpatient care comprised 43 percent of all inpatient discharges; based on the care hospitals delivered in 2012, acquisitions closed in 2013 and 2014 would increase the share held by the five largest systems to 50 percent of all inpatient care in the state (Figure B7). Concentration of commercial inpatient care among large systems was even higher in each year (Figure B8). Moreover, these systems often also command higher commercial payment rates. Approximately 80 percent of health care spending for acute hospitals and physicians was paid to providers with relative prices above the state median relative price in 2011 and 2012.<sup>5</sup>

Analysis of concentration at the level of specific service lines can be informative, alongside measures of concentration of broader service categories. Markets can vary by service line. For some types of specialized tertiary or quaternary care, relatively few hospitals offer services. For example, inpatient care for burns is highly concentrated, as few hospitals have burn units. Service lines also differ in the degree to which care is planned or delivered in emergency situations and by the level of payment for care in the service line. Characteristics of different service lines may be associated with higher or lower levels of concentration. For example, in 2012, 57 percent of commercial deliveries were concentrated in five systems, with Partners HealthCare System accounting for more deliveries than the next four systems with highest delivery volume combined (Figure B9).

In addition to differences by service line, patterns of concentration vary by region. Different systems have lead-

**Figure B.7: Concentration of inpatient care in Massachusetts**

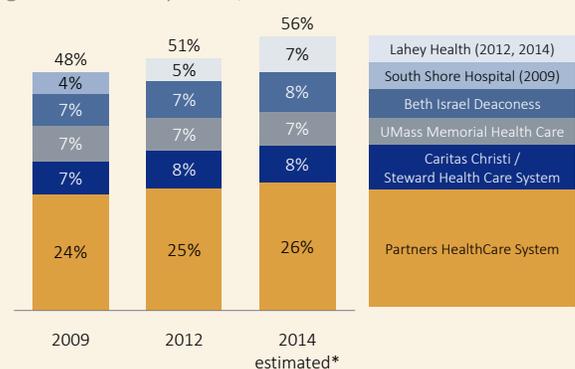
Share of total inpatient discharges held by five highest volume systems, 2009-2012



\* 2014 data not yet available. Based on applying systems established by 2014 (including 2013 Partners HealthCare acquisition of Cooley Dickinson and 2014 Lahey Health acquisition of Winchester hospital) to 2012 inpatient discharge data  
SOURCE: Center for Health Information and Analysis; HPC analysis

**Figure B.8: Concentration of commercial inpatient care in Massachusetts**

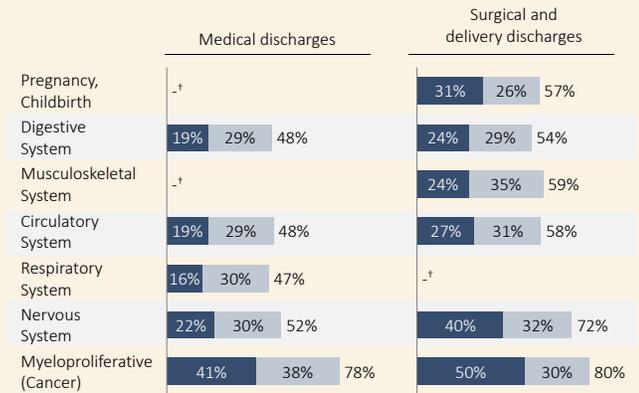
Share of commercial inpatient discharges held by five highest volume systems, 2009-2012



\* 2014 data not yet available. Based on applying systems established by 2014 (including 2013 Partners HealthCare acquisition of Cooley Dickinson and 2014 Lahey Health acquisition of Winchester hospital) to 2012 inpatient discharge data  
SOURCE: Center for Health Information and Analysis; HPC analysis

**Figure B.9: Concentration of commercial inpatient discharges by diagnostic area**

Percent of commercial inpatient discharges at 5 highest-volume hospital systems in each diagnostic area\*, 2012



\* Diagnostic areas shown were selected as high-volume and/or high-expenditure service lines

† Not shown because of low volume of discharges of this type

SOURCE: Center for Health Information and Analysis; HPC analysis

ing share in different parts of the state. For example, Partners has the leading commercial share in the Boston region and neighboring areas, while the Southcoast Health System and UMass Memorial Health Care system receive the majority of commercial discharges in Fall River and Central Massachusetts, respectively (Table B1).

Concentration of hospital services is well-known, but fewer data have been available on the extent of concentration of physician services. CHIA found that aggregate payments for physician care exhibited levels of concentration similar to those for hospital care.<sup>5</sup> More detailed analyses of the extent of concentration of physician services is an area of interest for the Commission; transparency in this area will be improved by use of new data sets, such as the APCD and the Registration of Provider Organizations (RPO) database.<sup>iv</sup>

Provider consolidation has been ongoing for the past two decades in Massachusetts and has continued in recent years. In Massachusetts, between 1990 and today, 80 percent of current acute hospitals were involved in some form of consolidation.<sup>1</sup> Beyond hospitals, other types of provider organizations are also exploring a variety of new corporate, contracting, and clinical arrangements, documented in notices of material change submitted to the Commis-

<sup>iv</sup> The Commission is tasked with developing a comprehensive database of provider organization structure, composition, and size through the registration of provider organizations (RPO). RPO will provide an informational foundation to support monitoring of the health care system, like assessing health care capacity and needs, evaluating the performance of different organizational models in the state, and providing a map of relationships among providers. The program is expected to launch in the fall of 2014.

sion.<sup>v</sup> Between April 2013 and June 2014, the Commission received 25 notices from provider organizations pursuing material changes to their operations or governance, including six acute hospital acquisitions (Table B2).

**Table B.1: Systems with leading share of commercial inpatient discharges by region, 2012**

Region	System with leading share	Share of commercial discharges	Share for system with second-highest share
Berkshires	Berkshire Health System	69%	11%
Cape and Islands	Cape Cod Health Care	58%	19%
Central Massachusetts	UMass Memorial Health Care	52%	19%
East Merrimack	Steward Health Care System	26%	24%
Fall River	Southcoast Health System	66%	18%
Lower North Shore	Partners HealthCare	46%	38%
Metro Boston	Partners HealthCare	46%	16%
Metro South	Steward Health Care System	27%	16%
Metro West	Partners HealthCare	36%	21%
New Bedford	Southcoast Health System	71%	11%
Norwood/Attleboro	Partners HealthCare	33%	27%
Pioneer Valley/Franklin	Baystate Health	49%	19%
South Shore	South Shore Hospital	39%	20%
Upper North Shore	Anna Jaques Hospital	41%	18%
West Merrimack/Middlesex	Circle Health	20%	18%

SOURCE: Center for Health Information and Analysis; HPC analysis

<sup>v</sup> Chapter 224 establishes a process under which the Commission reviews material changes in the provider marketplace. Provider organizations proposing material changes to their operations or governance structure are required to submit a notice of material change (MCN) to the Commission. The Commission reviews the MCN and determines whether to initiate a cost and market impact review (CMIR) on the transaction. The CMIR is a multi-factor review that examines the likely impact of the transaction on cost, quality, and access to care. Based on the findings of the CMIR which are presented in preliminary and then final reports, the Commission may refer the transaction to the attorney general's office for further investigation or action.

The Commission's Cost and Market Impact Reviews (CMIRs) are comprehensive evaluations of material changes for their cost, quality, and access impacts. Past CMIRs have highlighted both potential harms and potential benefits of provider changes for cost trends. These reviews have found cost impacts that range from cost-increasing, through increased physician prices and greater rates of referral to higher-priced academic medical centers, to cost-saving, through projected re-direction of referrals from higher-priced academic medical centers to lower-priced hospital settings.<sup>6,7</sup> The notices of material changes reported to the Commission highlight a variety of models for corporate, contracting, and clinical affiliations, and the Commission will continue to study their impact on cost, quality, and access.

**Table B.2:** Types of transactions in notices of material change received Apr 2013 - June 2014

Type of transaction	Number	Percent of total
Physician group affiliation or acquisition	8	32%
Acute hospital acquisition	6	24%
Clinical affiliation	4	16%
Change in ownership or merger of owned entities	3	12%
Acquisition of post-acute provider	2	8%
Formation of contracting entity	2	8%

SOURCE: HPC analysis

# B.3 ALTERNATIVE PAYMENT METHODS

In the 2013 report, we described the growth of new models for accountable care delivery supported by alternative payment methods (APMs) that established new incentives in place of the fee-for-service payment system. While various approaches to APMs exist, in Massachusetts, the predominant method is to set a global budget for a provider organization, with savings below the budget and costs in excess of the budget shared between the payer and the provider organization.<sup>1</sup>

Chapter 224 established goals for both public and private payers to reduce the use of fee-for-service payments and implement APMs to the maximum extent feasible.<sup>8</sup> When the legislation was passed in 2012, payers and providers had already begun to make some progress to implement these payment methods. Massachusetts’ State Innovation Model grant, awarded in 2013, is also designed to further the adoption of APMs. Among commercial payers, penetration of APMs has expanded, although payment methods vary significantly in their structure and level of risk sharing. Continued progress in developing methods that align incentives and improve outcomes will require sustained effort by public and private payers, providers, and other stakeholders.

### 2012 baseline: coverage of alternative payment methods

In 2012, 29 percent of members and beneficiaries across public and private payers in Massachusetts were covered under APMs (Figure B10).<sup>vi</sup>

For Medicare, global budget models gained significant penetration in both the Original Medicare and Medicare Advantage segments, with 18 percent of Original Medicare beneficiaries aligned with a Medicare ACO and with 45 percent of Medicare Advantage beneficiaries covered by

<sup>vi</sup> For the purpose of these estimates, we consider APMs based on the definition used in CHIA’s 2013 report on Alternative Payment Methods in the Massachusetts Commercial Market. This definition includes global budget, limited budget, bundled payment, and other non-fee-for-service models. Pay-for-performance incentives accompanying fee-for-service payments are not included in these estimates.

**Table B.3: Provider organizations participating in Medicare ACO programs**

*Pioneer ACOs*

- Atrius Health
- Beth Israel Deaconess Care Organization (BIDCO)
- Mount Auburn Cambridge Independent Practice Association (MACIPA)
- Partners HealthCare
- Steward Integrated Care Network

*Medicare Shared Savings Program ACOs - 2012 cohorts*

- Physicians of Cape Cod ACO, Inc.
- Jordan Community ACO (DBA Beth Israel Deaconess Hospital - Plymouth)
- Harbor Medical Associates, PC (participating in Advance Payment Model)
- Circle Health Alliance, LLC
- Coastal Medical, Inc.

*Medicare Shared Savings Program ACOs - 2013 cohort*

- Total Accountable Care Organization (DBA Collaborative Health ACO)
- Accountable Care Organization of New England, LLC
- Pioneer Valley Accountable Care, LLC
- Lahey Clinical Performance Accountable Care Organization, LLC
- Southcoast Accountable Care Organization, LLC
- Cape Cod Health Network ACO
- Winchester Community ACO
- Accountable Care Clinical Services PC

SOURCE: Centers for Medicare & Medicaid Services

a plan using APMs. Massachusetts provider organizations have been leaders in participating in the two Medicare ACO programs – the Medicare Shared Savings Program (MSSP) and the Pioneer ACO Model – with five MSSP ACOs and five Pioneer ACOs in 2012. By the end of 2013, an additional eight Massachusetts provider organizations had signed up as MSSP ACOs, and APMs covered approx-

imately 40 percent of Original Medicare beneficiaries (see **Table B3 and B4**).<sup>9</sup>

In 2012, MassHealth members were covered under a number of different types of APMs. Medicaid MCOs reported that nearly one-fourth of members are covered under some type of APM.<sup>10</sup> The Patient-Centered Medical Home Initiative (PCMH) included infrastructure payments, a per member per month payment for medical home activities, and a shared savings arrangement for participating primary care practices for patients covered by MCOs or the PCC program.

In the commercial insurance population, CHIA found that APMs covered approximately one-third of members.<sup>5</sup> The commercial risk contracts included in this estimate

**Table B.4: Summary of APM penetration by payer**

Beneficiaries/members covered by APMs\*, 2012

Commercial	Percent of HMO members covered by APM	HMO members as percent of total members	Percent of members covered by APMs
BCBS	80%	56%	45%
HPHC	38%	80%	30%
THP	54%	67%	36%
All other	29%	63%	18%
<b>Total</b>	<b>54%</b>	<b>63%</b>	<b>34%</b>

Medicare	Percent of total lives covered by APMs
Original Medicare	18%
Medicare Advantage	45%
<b>Total</b>	<b>24%</b>

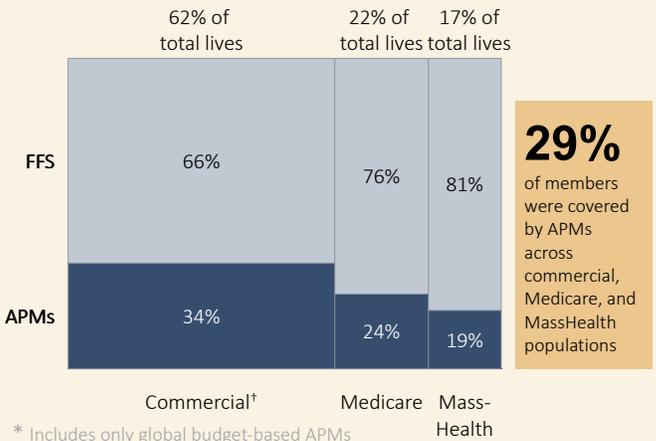
Medicaid	Percent of total lives covered by APMs
PCC	12%
MCO	24%
<b>Total (PCC and MCO)</b>	<b>19%</b>

\* Includes only global budget-based APMs

SOURCE: Centers for Medicare & Medicaid Services; Center for Health Information and Analysis; MassHealth; HPC analysis

**Figure B.10: APM coverage by payer type**

Percent of members/beneficiaries covered by APMs\*, 2012



SOURCE: Centers for Medicare & Medicaid Services; Center for Health Information and Analysis; MassHealth; HPC analysis

vary widely, as has been described in prior Massachusetts reports. Structural differences in these contracts include level of risk sharing, quality measures and incentives, the services covered under the contract, whether the risk extends to fully-insured and self-insured members, and requirements for stop-loss insurance. For example, levels of risk sharing range from shared savings to full risk structures. In shared savings (upside-only) arrangements, providers may earn a portion of a budget surplus, but are not at financial risk for any budget deficit. Under partial risk models, providers are responsible for a portion of budget surplus or deficit, which varies by contract. Under full risk arrangements, providers collect or pay 100 percent of any budget surplus or deficit.<sup>11</sup> Limited public data are available on the proportion of risk contracts at each level of risk.

In addition to structural differences, contracts vary significantly by provider in budget levels, often reflecting the provider’s historic market position.<sup>11</sup> Some differences in risk contracts may appropriately reflect different provider organization and patient population profiles, while other differences are based on market factors not linked to value. Because these contracts are typically confidential and may be considered proprietary, there is limited transparency of or ability to analyze their differences.

**APM trends**

Continued progress in the transition away from fee-for-service payment requires expansion in the breadth of coverage of APMs and improvements in their implementation.

### Expansion in APM coverage

For MassHealth, expanded adoption of APMs is required under targets established by Chapter 224.<sup>vii</sup> While PCMH ended in 2014, MassHealth launched the Primary Care Payment Reform (PCPR) initiative in January 2014.<sup>1</sup> The PCPR payment model consists of a monthly capitated payment to cover a defined bundle of primary care and some behavioral health services (if selected by participants), quality incentive payments, and a shared savings/shared risk arrangement. MassHealth is also developing a Health Homes demonstration and a pediatric asthma bundled payment pilot, continuing its PACE, SCO, and One Care programs, and engaging stakeholders as it looks to implement an ACO program. MCOs have outlined plans to continue expanding their global budget models to additional providers, and to move providers from shared savings models to shared risk or full risk models. Specific to the integration of mental health services into an APM model, MassHealth's behavioral health vendor – MBHP – is working to develop a bundled payment model for inpatient behavioral health care.<sup>12</sup>

The Group Insurance Commission (GIC) is also required by Chapter 224 to move toward APMs. The GIC has initiated a program requiring plans to contract with Integrated Risk Bearing Organizations.

For the commercially insured population, expansion of APMs has faced countervailing trends. While payers have been expanding risk contracts into relationships with additional provider practices, these contracts have been limited to covering members in HMO plans, which have become less prevalent as the commercial insurance market has shifted toward greater use of PPO plans.<sup>13,viii</sup> Nonetheless, between 2009 and 2012, the rate of growth to additional provider practices exceeded the rate of decline in HMO volume, and there was net expansion of the number of consumers whose providers are paid through APMs. Data on trends through 2013 will be available later this year and will reveal whether commercial risk contracts continued to expand in the number of lives covered.

The major commercial payers continue to transition many of their mid-sized to large provider organizations

<sup>vii</sup> Chapter 224 requires 80 percent of MassHealth enrollees to be covered under APMs by July 2015.

<sup>viii</sup> In our analysis, we primarily distinguish between insurance products based on whether they require identification of a primary care provider. HMO (Health Maintenance Organization) and point-of-service (POS) product types require designation of a PCP, while preferred provider organization (PPO) and indemnity product types do not. In this section, our discussion of HMO products also applies to POS products, and our discussion of PPO products also applies to indemnity products.

away from fee-for-service arrangements to either shared savings or risk-based global agreements. By the end of 2012, Blue Cross Blue Shield of Massachusetts had established APM contracts with providers covering 80 percent of its HMO members.<sup>10</sup> While other commercial payers had a smaller proportion of their HMO members under APMs in 2012, they have signed contracts with additional providers over the past year and a half and continue to implement these methods.

For Massachusetts to fully transition away from fee-for-service payments, APMs will need to extend to PPO populations. Provider organizations have called for payers to apply global budget APMs to PPO members. Several commercial payers have testified that they intend to expand their models to PPO members, using an attribution algorithm to identify a primary care provider for those members who have not designated one.<sup>14,15,16</sup> Since some members make limited use of primary care and other members may receive their primary care from multiple providers in a given year, such attribution methods typically do not assign all members to providers, and global budget models may not reach the same coverage for PPO members as is possible for HMO members. Published results estimate that 70 to 90 percent of PPO populations with claims experience can be attributed using these algorithms.<sup>14,15</sup> Still, expansion of these models to members of PPO insurance plans will enable much broader coverage of APMs.

Given the variety of design choices in attribution methods and the importance to provider organizations of information on the patient populations for which they are accountable, payers should engage in a transparent process to review and improve their attribution methods and should align their methods to the maximum extent feasible. The Commission will work with CHIA, payers, and providers in the fall of 2014 to understand the current state of development of attribution methods and explore opportunities to accelerate the development of aligned methods.

### Improvements in APM implementation

While progress in expanding APMs is critical, broad coverage of APMs is insufficient on its own. Improvement in the implementation of these models will be an important factor for the success of payment reform. Technical advances in implementation may include evaluation and innovation to improve models over time, alignment of models to reduce administrative complexity, and consideration of additional models beyond global budget-based models.

## WHAT TYPES OF APMs HAVE BEEN ADOPTED IN OTHER STATES?

In Massachusetts, the most common APM is a global budget-based contract that offers a shared savings, shared risk, or full risk incentive to provider organizations based on the total medical expenses of the populations they manage. While this is the most prevalent model in Massachusetts, other models have been implemented at scale in other parts of the country. Arkansas and Maryland are two other states that have pursued innovative payment and care delivery reforms.

The Arkansas Health Care Payment Improvement Initiative -- a collaborative effort between Arkansas Medicaid, Arkansas Blue Cross Blue Shield, and QualChoice -- has introduced a multi-payer, episode-based payment model that sets a bundled budget for services associated with specific episodes of care. Episodes launched to date include hip and knee replacements, pregnancy and delivery, congestive heart failure, and attention deficit hyperactivity disorder. For each episode, a Principal Accountable Provider (PAP) is attributed through claims and held responsible for the total cost of the episode, with shared savings for costs below the budget and shared risk for excess costs.

Maryland has pursued an all-payer effort -- spanning Medicaid, Medicare, and commercial payers -- to reform payment to hospitals to encourage reductions in volume and increased investment in prevention and disease management. The Total Patient Revenue (TPR) system assures hospitals a fixed amount of revenue, independent of the number of patients treated or the volume of services provided to these patients. Ten participating hospitals have received a fixed annual revenue budget; those that are able to improve their operational efficiency and/or avoid wasteful utilization can earn significant savings, while those that fail to constrain costs bear the financial risk.

In addition to these models, other public and private payers have pursued a variety of more incremental payment changes intended to tie payment to value, ranging from quality bonuses to non-payment for high-risk and low-value procedures like early elective deliveries.

As noted above, there is significant variation in the design of efficiency and quality incentives in different payer APM contracts. The effectiveness of the various risk contract structures in driving care delivery changes and the performance of different providers under these contracts has been mixed.<sup>6</sup> Moreover, limited evidence is available on the impact of various risk contract design choices on APM performance. Identifying and disseminating best practices for payment model design is an important area of work for payers, providers, and the government. The Commission will continue to review and evaluate the impact of these varied models through its annual cost trends hearings and report.

The wide range of structures illustrates the limited extent of multi-payer alignment on payment reform in Massachusetts compared to other states such as Arkansas and Maryland. There is an opportunity for increased alignment, which could reduce the administrative complexity of APMs for providers and enhance the impact of these models by creating more consistent incentives.

Opportunities to develop APMs that are not based on global budgets -- such as bundled payments -- have not gained significant traction in the commercial market, although 100 Massachusetts organizations are participating in Medicare's Bundled Payments for Care Improvement

(BPCI) demonstration program.<sup>ix</sup> Because global budget-based models assign accountability for a person's care management to the organization providing the person's primary care, care delivery organizations that do not have aligned primary care providers have a limited ability to participate in these models. Additional payment innovations should be considered to enable these kinds of providers -- such as specialist physician groups without primary care providers -- to move away from fee-for-service payment. Payers should review payment methods for non-primary care providers that have been implemented in other states, such as Arkansas' episodes of care and Maryland's total patient revenue models, to expand the scope of Massachusetts providers that are able to assume accountability for outcomes (see sidebar "**What types of APMs have been adopted in other states?**"). Commercial payers have begun to test these kinds of models. For example, Harvard Pilgrim Health Care indicated that it is developing a bundled payment model that builds a case rate for total hip and knee replacements.<sup>15</sup>

<sup>ix</sup> Bundled payments are types of APMs that establish a budget for an entire episode of care. For example, a bundled payment model for hip and knee replacements might set a total budget covering physician visits prior to and after a surgery, professional fees for the surgery, hospital payments for inpatient stays, and post-acute care.

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