MASSACHUSETTS
HEALTH POLICY COMMISSION

Select Findings:
2016 Cost Trends Report

January 11, 2017

Key statistics from the 2016 Cost Trends Report

HPC Key Findings

4.1%
total health care expenditure growth between 2014 and 2015

6.0%
commercial health care spending per person in MA in excess of national average

30%
portion of income a typical family of 3 at three times the federal poverty level pays for health insurance premiums, copayments, and deductibles

$20,400
annual health insurance premium plus cost-sharing for typical family in MA in 2015

8.8%
per capita growth in commercial prescription drug spending, not factoring rebates

87%
growth in opioid related emergency department visits between 2011 and 2015

21%
approximate percent of commercial health care spending attributable to prescription and medical drugs combined in 2015

24.4%
rate of non-recommended imaging for lower back pain per 100 eligible cases

22.8%
portion of behavioral health related emergency department visits with a length of stay of more than 12 hours

4X
growth in percent of prescriptions with no cost sharing among women between 2012 and 2014 (3.2% to 13.4%)

+11,000
change in the number of inpatient admissions in Massachusetts in 2015 after 3 years of declines of over 20,000 per year

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Statutory mandate for HPC's annual Cost Trends Report

Section 8g of Chapter 224 of the Acts of 2012

The commission shall compile an **annual report concerning spending trends and underlying factors**, along with any **recommendations for strategies to increase the efficiency of the health care system**. The report shall be based on the commission's analysis of information provided at the **hearings** by providers, provider organizations and insurers, **registration data** collected under section 11, **data collected by the Center for Health Information and Analysis** under sections 8, 9 and 10 of chapter 12C and **any other information the commission considers necessary to fulfill its duties under this section**, as further defined in regulations promulgated by the commission. The report shall be submitted to the chairs of the house and senate committees on ways and means and the chairs of the joint committee on health care financing and shall be published and available to the public not later than December 31 of each year. The report shall include **any legislative language necessary to implement the recommendations**.

Data inputs

- **Hearings**
- **Registration data**
- **CHIA data**
- **Any other information necessary to fulfill duties**

Required outputs

- **Annual report concerning spending trends and underlying factors**
- **Recommendations for strategies to increase efficiency**
- **Legislative language necessary to implement recommendations**

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Presentation themes and potential areas for recommendations

Themes

Spending and the delivery system

- Spending trends
- Affordability of care
- Prescription drug spending

Opportunities to improve quality and efficiency

- Avoidable hospital utilization
- Post-acute care
- Variation in spending by primary care provider group

Progress in aligning incentives

- Alternative payment methods
- Demand-side incentives

Select findings from the 2016 Cost Trends Report

Themes

Spending and the delivery system

Opportunities to improve quality and efficiency

Progress in aligning incentives

- **Spending trends**
- **Affordability of care**
- **Prescription drug spending**

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Massachusetts healthcare spending growth

Background

- After years of high growth in annual healthcare spending throughout the 2000s, Massachusetts spent more than any other state on health care per person in 2009
  - Medicare spending per capita was **9%** higher
  - Commercial premiums were **13%** higher

- Since 2012, the state (through the HPC) annually establishes a health care cost growth benchmark, as measured by growth in total health care expenditures (THCE) per capita. This target is based on projections of the state's long-term economic growth and has been set at **3.6%** annual growth through 2017

- Since 2012, the actual growth rates in THCE were:
  - 2012-2013: **2.4%**
  - 2013-2014: **4.2%**
  - 2014-2015 preliminary: **4.1%**

- Overall, between 2012-2015, the average growth rate in TCHE was **3.57%**

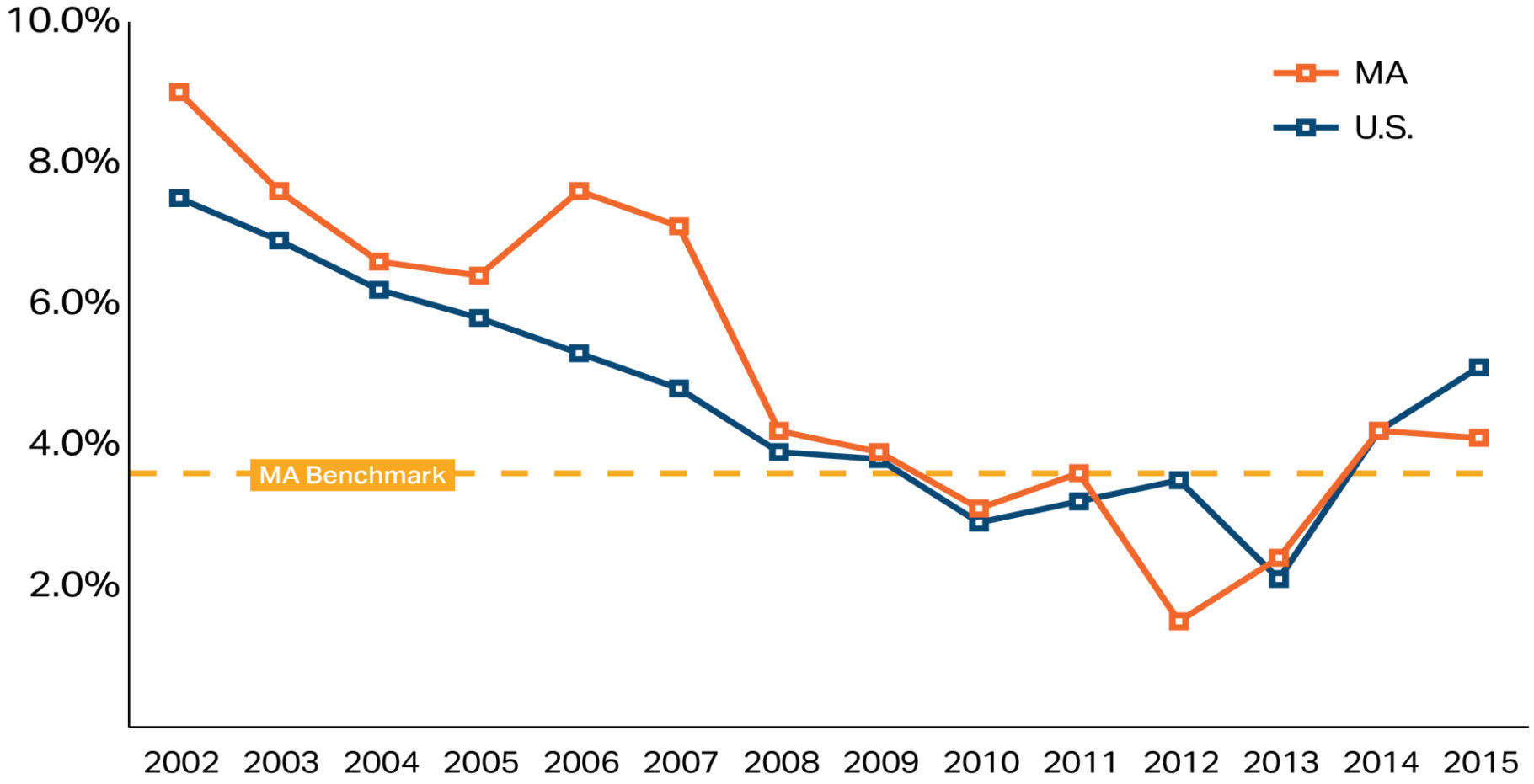
Growth in prescription drug spending, among other factors, contributed to exceeding the benchmark in 2015

Sector/spending category	Drivers of growth beyond benchmark rate, 2014-2015
Commercial	• Prescription drugs (**8.9%** growth, not factoring rebates)
Medicare (FFS)	• Prescription drugs (**10.9%** growth, not factoring rebates) • Home health care (**6.6%** growth)
MassHealth	• Prescription drugs (**9.1%** growth, not factoring rebates) • Long term services and supports (LTSS), particularly spending on home and community-based services
Other	• Medicare enrollment growth (Original Medicare, One Care and Senior Care Options) • Net cost of private health insurance

Note: Prescription drug figures under MassHealth include MCO, PCC and FFS spending only and exclude PACE, SCO and One Care. Prescription drug figures exclude impact of rebates. Growth figures provided are per member or per enrollee (Medicare drug spending is per Part D enrollee)
Sources: HPC analysis of Center for Health Information and Analysis 2016 Annual Report and July 2016 Enrollment Trends Report

Since 2009, total healthcare spending growth in Massachusetts has been near or below national growth

Annual growth in per capita healthcare spending, MA and the U.S., 2002-2015

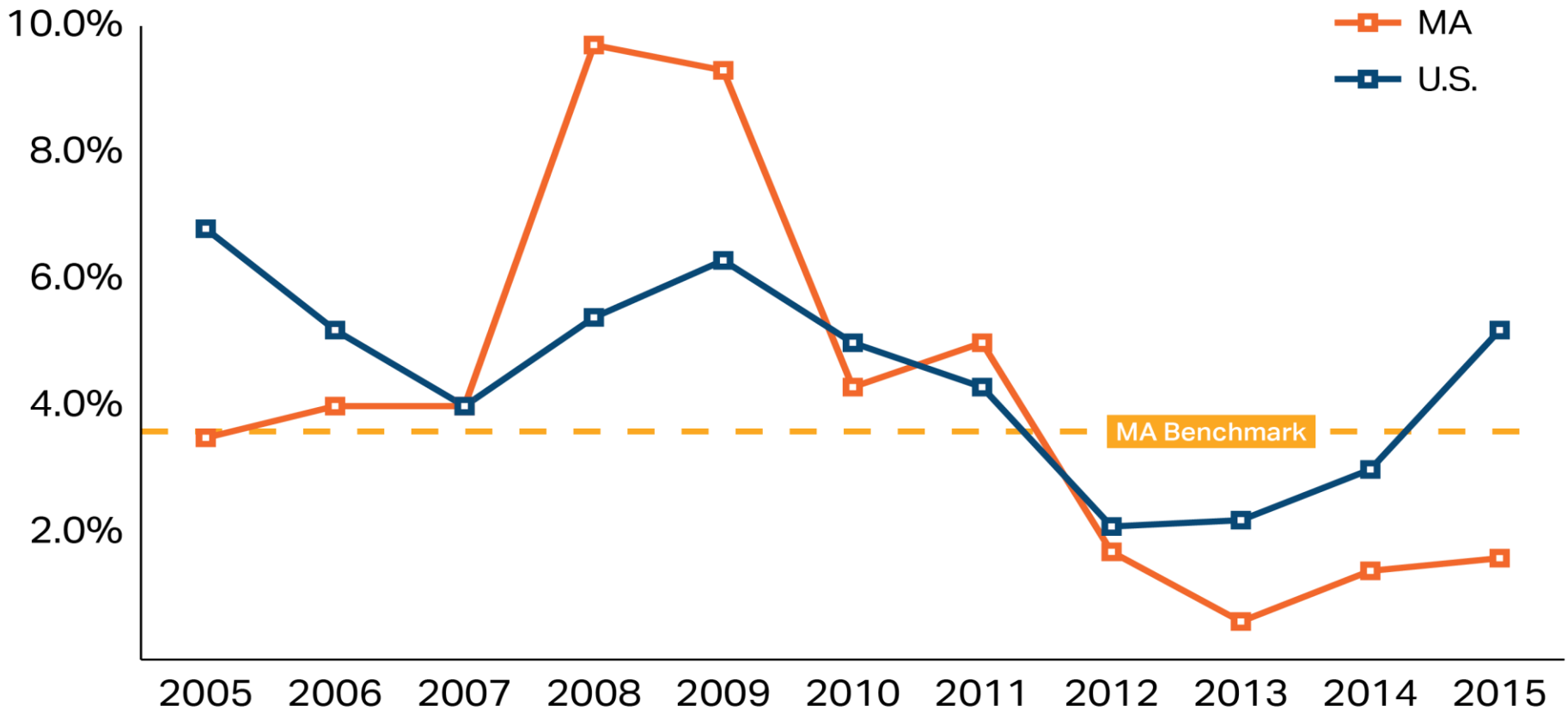


Note: U.S. data includes Massachusetts.

Sources: Centers for Medicare and Medicaid Services National Healthcare Expenditure Accounts, Personal Health Care Expenditures Data, and State Healthcare Expenditure Accounts (U.S. 2002-2015 and MA 2002-2009); Center for Health Information and Analysis Annual Report THCE Databook (MA 2009-2015)

In recent years, commercial spending growth in Massachusetts has been consistently lower than national growth

Annual growth in commercial health insurance premium spending from previous year, per enrollee



Notes: U.S. data includes Massachusetts. Center for Health Information and Analysis data are for the fully-insured market only.
Sources: Centers for Medicare and Medicaid Services, State and National Healthcare Expenditure Accounts, Private Health Insurance Expenditures and Enrollment (U.S. and MA 2005-2009); Center for Health Information and Analysis Annual Reports (MA 2009-2015)

Despite recent lower growth, spending per person in Massachusetts remains 6-7% higher than U.S. averages

Massachusetts per person spending in excess of U.S. averages, 2014 and 2015

	Overall	Inpatient hospital	Outpatient hospital	Physician	Post-acute care	Prescription drugs
Original Medicare (FFS)	6%	19%	24%	-9%	18%	1%

Commercial

- Milliman, Inc. (claims-based), 2014
  - **6%** overall (statewide)
    - **9%** Boston-area
- U.S. Agency for Healthcare Research and Quality (survey of employers), 2015
  - **6.5%** family premiums
  - **9.3%** single premiums

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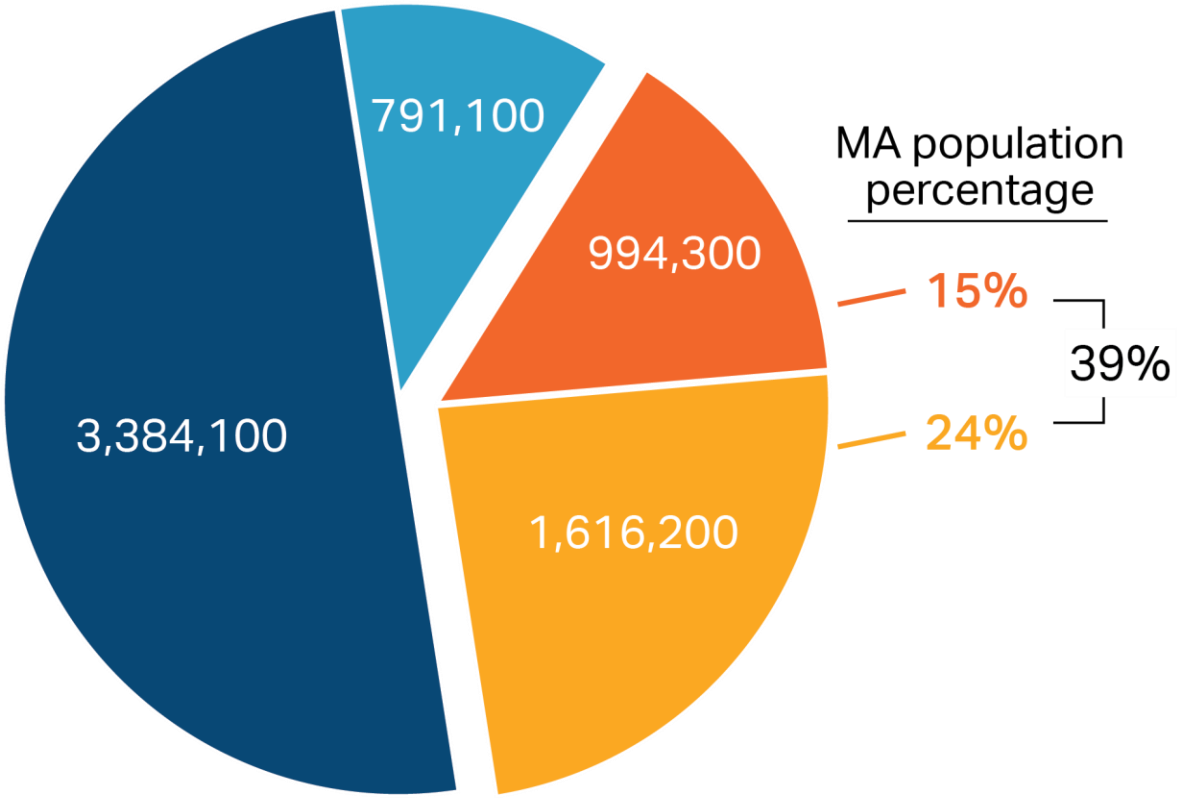
Sources: Centers for Medicare and Medicaid Services 2016 (Medicare); Milliman, Inc., 2014 and Agency for Healthcare Research and Quality Medical Expenditure Panel Survey, 2015 (commercial)

Massachusetts has a considerable portion of residents at low to middle income levels

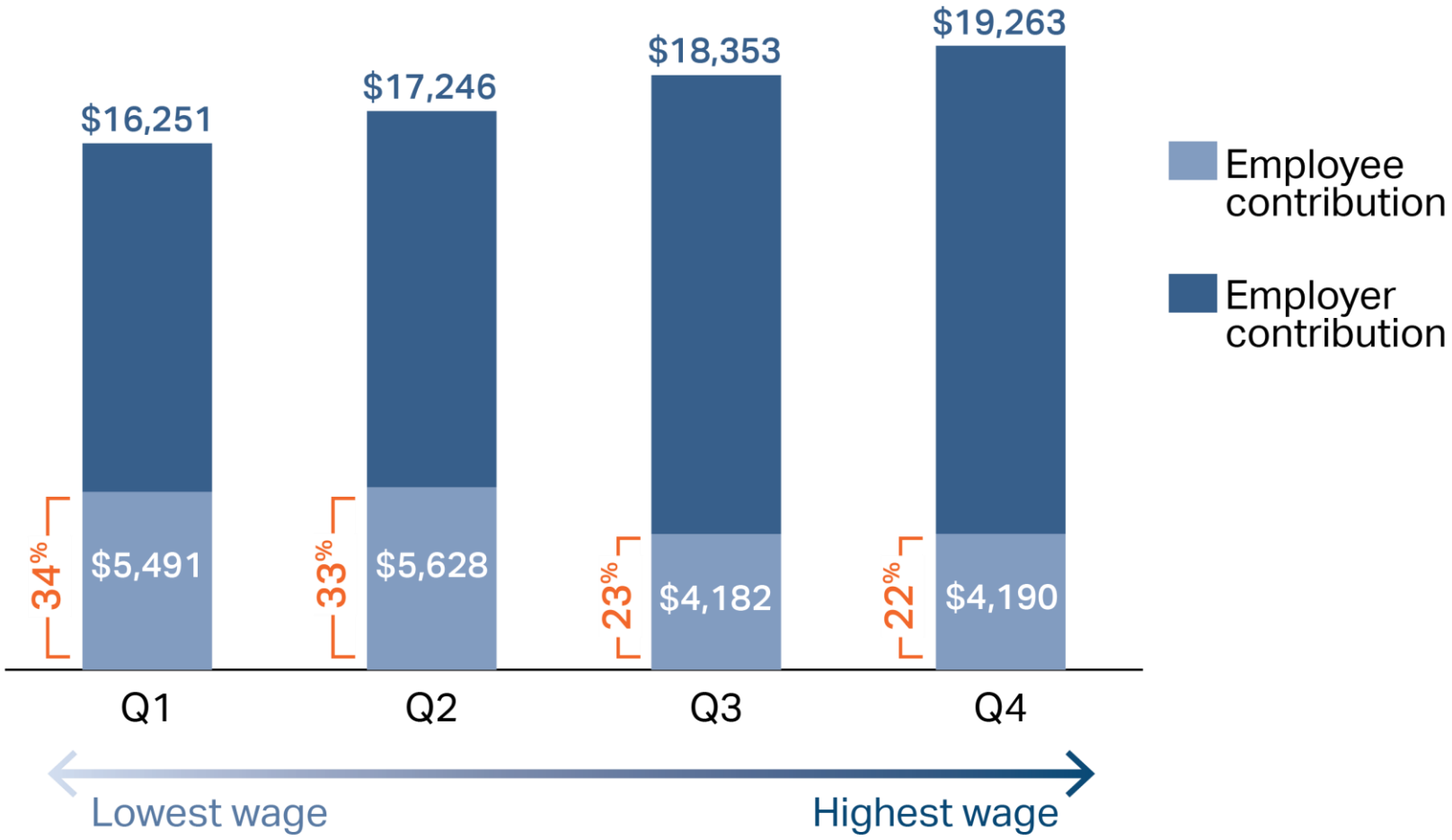
Number of state residents at each household income level, 2015



Note: Dollar values are for a family of two adults and one child.
Source: Current Population Survey as reported by Kaiser Family Foundation

On average, health insurance premiums in Massachusetts are relatively similar for low- and high-wage employers, but the employee share is greater among lower-wage employers

Average family premiums and employee contributions, by wage quartile, 2015

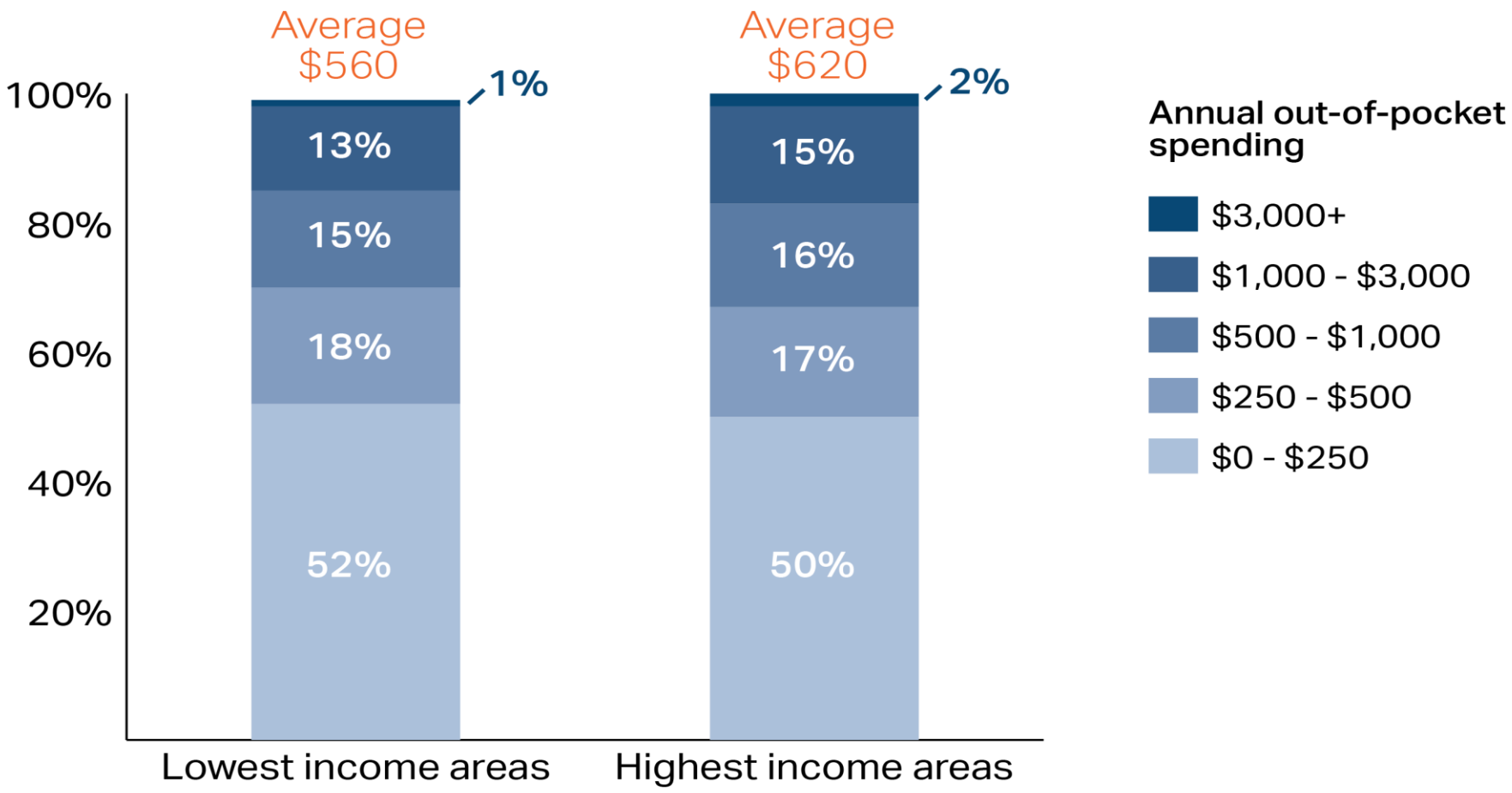


Average premium plus typical cost sharing was **$20,400** in 2015 while the average wage was **$64,116**

Source: Agency for Healthcare Research and Quality Medical Expenditure Panel Survey, 2015; Executive Office of Labor and Workforce Development 2015 Massachusetts Workforce and Labor Area Review

Out-of-pocket healthcare spending is relatively similar for residents in low and high income areas

Percent of residents, by annual out-of-pocket spending, 2014



Notes: Spending includes only out-of-pocket spending within insurance benefits (e.g. copays and deductibles) and is conditional on having non-zero spending. Lowest income areas represent the quartile of zip codes in the state with the lowest household median income. Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care. Data do not include spending outside of health insurance such as dental care, over-the-counter medications, or privately-paid mental health visits.
Source: HPC analysis of Massachusetts All-Payer Claims Database, 2014

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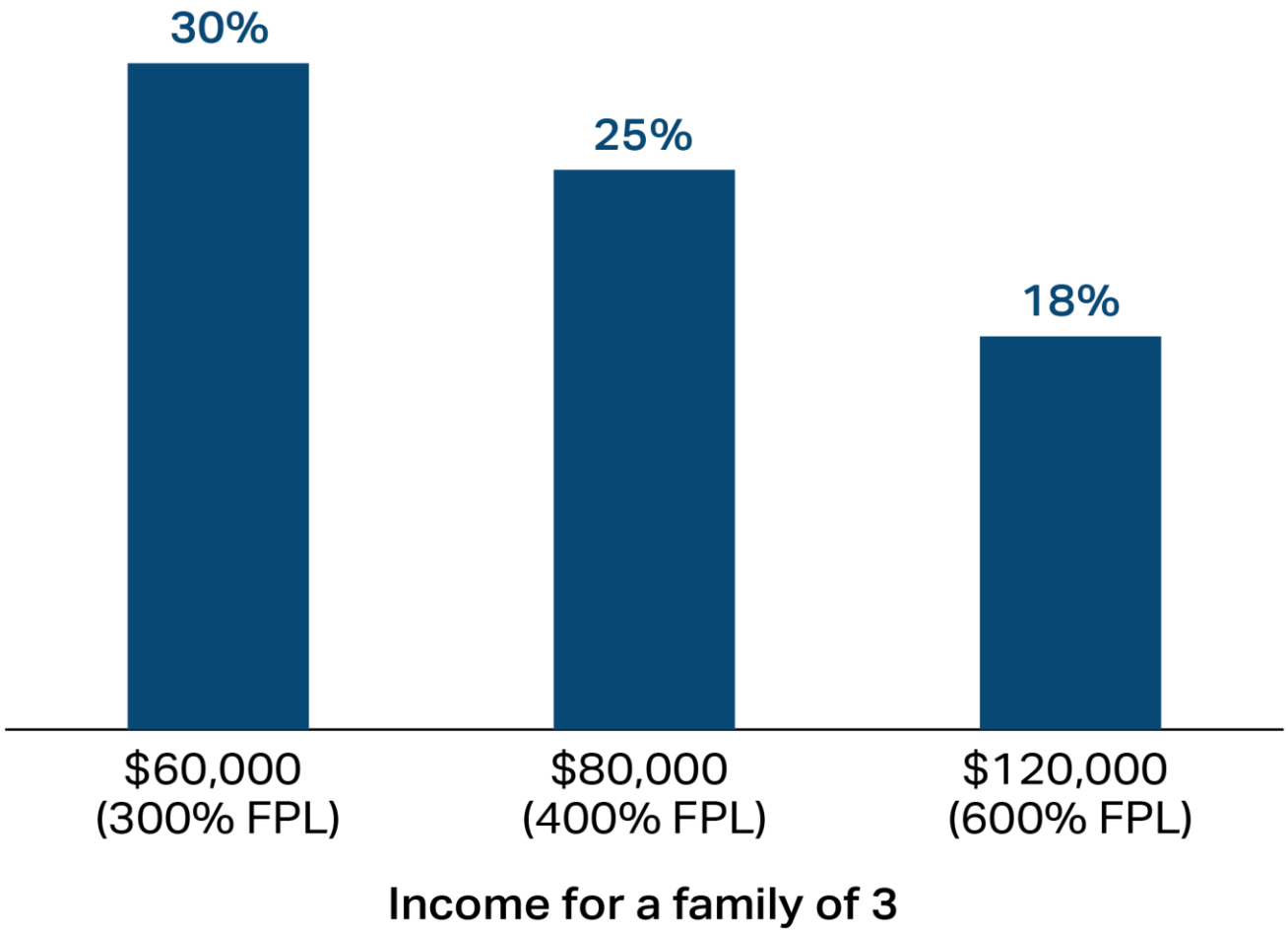
Massachusetts residents with low to middle incomes face a high burden of healthcare costs relative to income

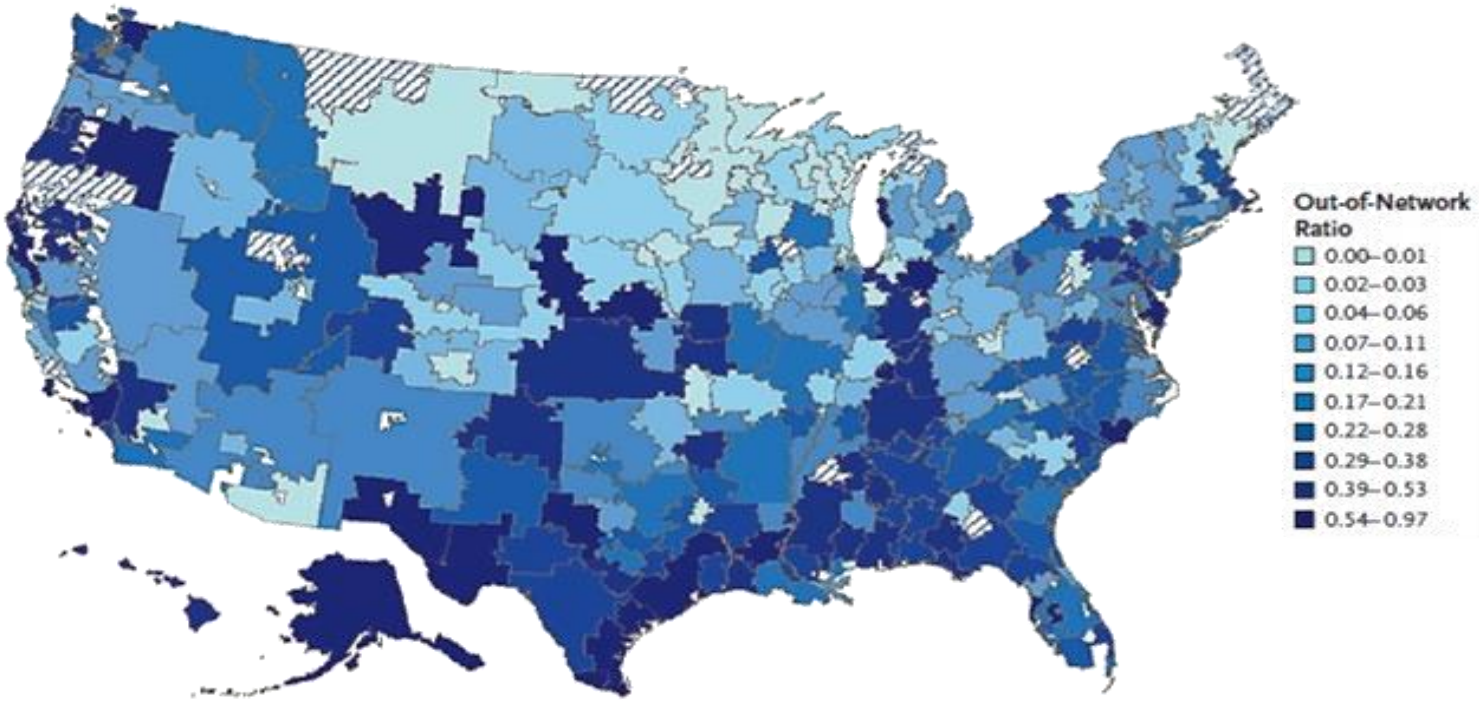
Total healthcare spending relative to income for a family with employer-based coverage, 2015



Note: FPL= federal poverty level. Calculation assigns premium (including employer and employee contribution) for lowest-wage quartile employers (from private health insurance premium slide) to the 200% FPL family, the second highest-quartile to the 400% FPL family and the highest-quartile premium to the 600% FPL family. Cost sharing is assigned as a fixed proportion of the total premium using total cost sharing as reported by the Center for Health Information and Analysis. Calculations do not account for tax deductibility of employer-sponsored health insurance premiums or spending on health care outside of covered benefits.
Source: HPC analysis of Agency for Healthcare Research and Quality Medical Expenditure Panel Survey, 2015

Out-of-network charges can also burden patients and impact spending

Proportion of ED visits at in-network facilities that involved out-of-network physicians



- A 2016 study published in the *New England Journal of Medicine* showed that of ED visits at in-network hospitals, **22%** involved out-of-network physicians
  - Eastern MA was above the national average while the Worcester area was below
- Out-of-network emergency physicians charged an average of **798%** of Medicare rates
- These costs are borne by both patients and insurers
- Massachusetts policy makers are exploring the topic of out-of-network billing

Notes: ED= emergency department. A recent MassHealth policy change caps Managed Care Organization (MCO) reimbursements for out-of-network non-emergency services at 100% of MassHealth fee-for-service rates. The Special Commission on Provider Price Variation is considering out-of-network billing issues in the scope of its ongoing work, which could result in policy action.

Source: Zack Cooper & Fiona Scott Morton, Out-of-Network Emergency-Physician Bills – An Unwelcome Surprise, New England Journal of Medicine 375, 1915-18 (2016)

Prescription drug spending

Background

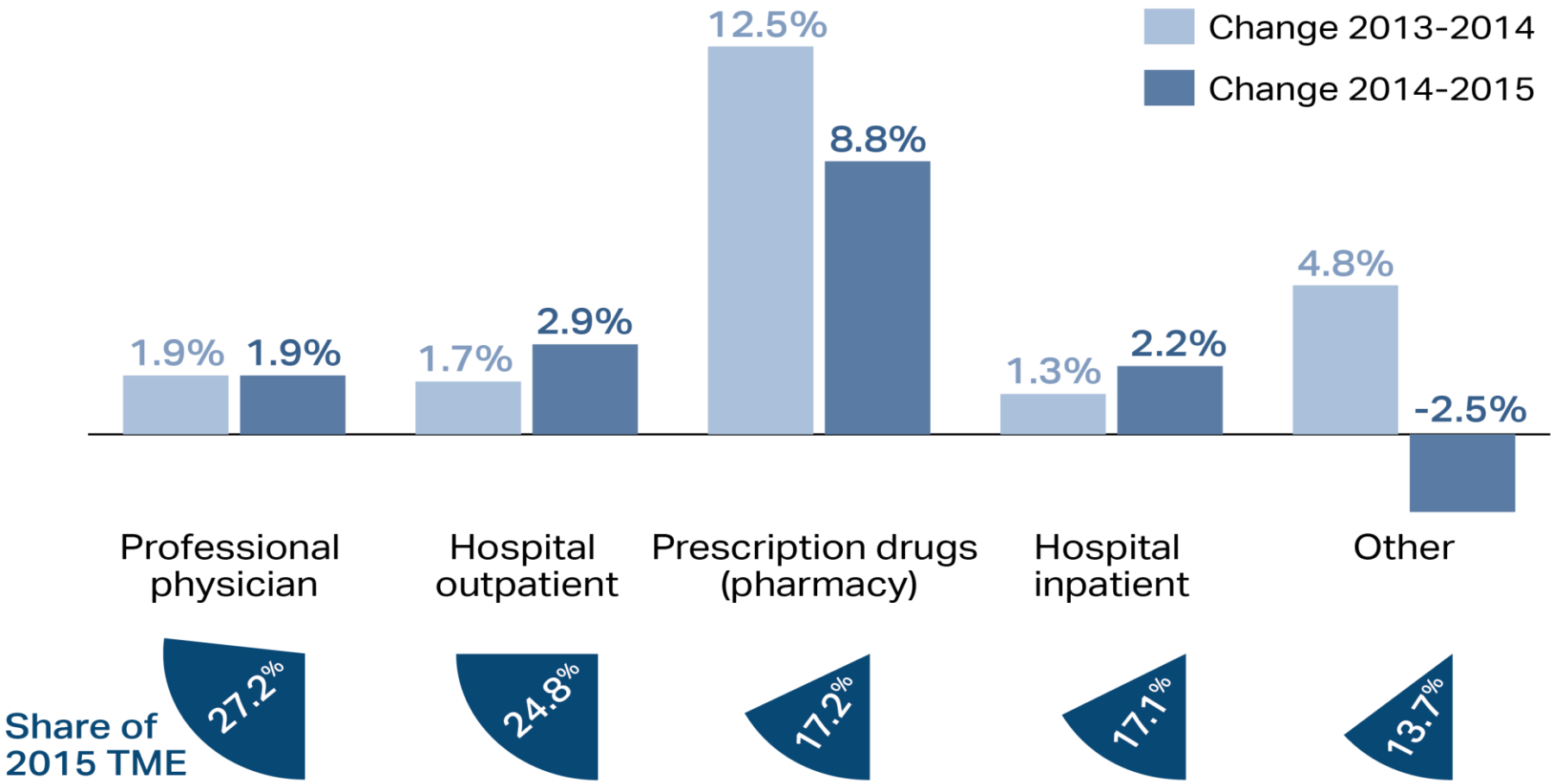
- For the second year in a row, prescription drug spending in Massachusetts exceeded historical growth rates (**10.2%** in 2015 and **13.5%** in 2014)
  - This growth is consistent with national trends
  - The entry of new high-cost drugs, price growth for existing drugs, and a low level of patent expirations remained the largest contributors to drug spending growth in 2015
- Commercial prescription drug spending grew **8.8%** per capita in 2015, down from **12.5%** in 2014
- The estimates above do not factor rebates, which affect both level and trend
  - AGO reports that commercial* per capita prescription drug spending growth in 2015 was two percentage points lower net of rebates: from **8.2%** to **6.1%**
- Even including rebates, growth in prescription drug spending exceeded spending growth in all other commercial categories of service

*Note: Analysis only includes five Massachusetts health plans.

Source: Office of the Attorney General. Examination of Health Care Cost Trends and Cost Drivers Pursuant to G.L. c. 12C, § 17. Boston (MA) : Office of the Attorney General; 2016 October 7

Among major spending categories, prescription drugs have the highest growth rate

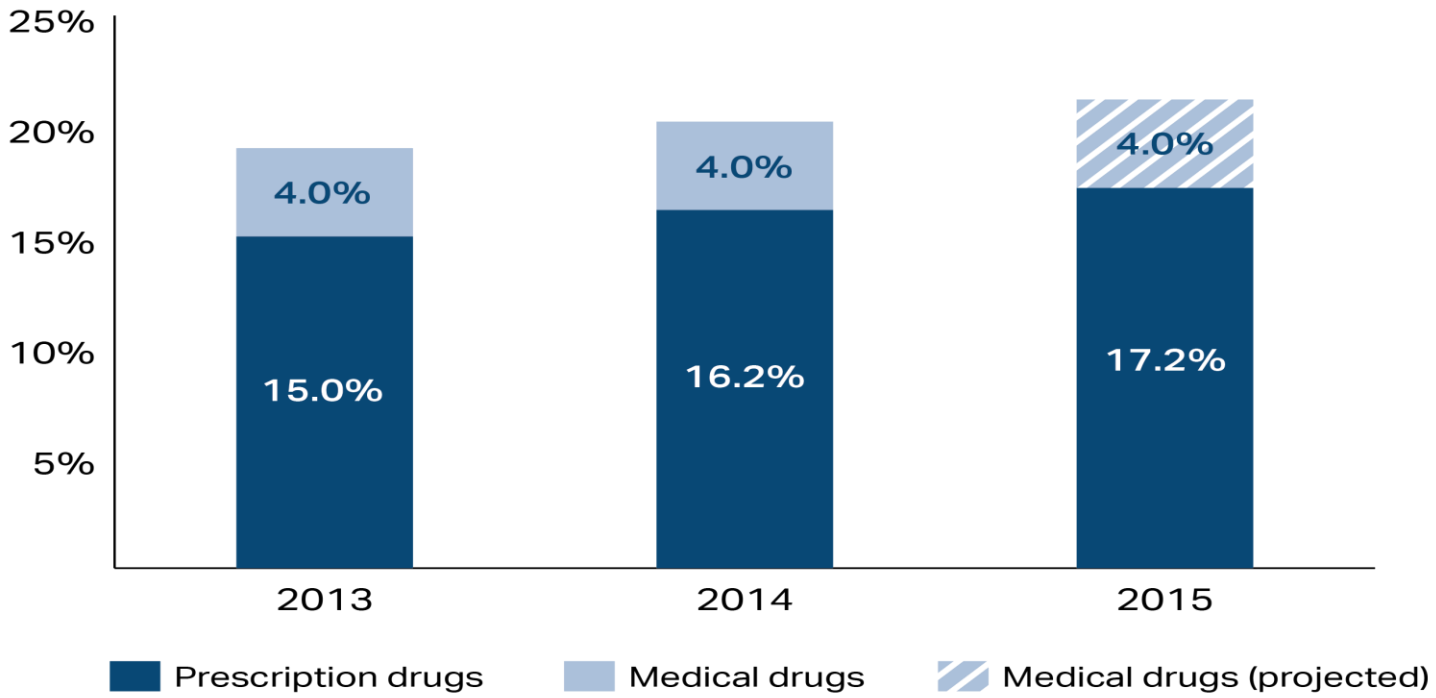
Growth in commercial spending categories and proportion of total TME, 2013-2015



Note: TME= total medical expenses. Prescription drug figures exclude impact of rebates.
Source: HPC analysis of Center for Health Information and Analysis 2016 Annual Report TME Databook

Medical and prescription drug spending combined comprise over 20% of commercial health spending in Massachusetts

Percent of commercial healthcare spending, by drug benefit type, 2013-2015



- Medical drugs are administered by providers (e.g. chemotherapeutic agents, flu vaccine)
- Medical drug spending grew **4%** per capita from 2013 to 2014, with ~ **6%** annual per capita growth from 2011 to 2014
- Combined medical and prescription drug spending represents a growing share of total health spending

Note: 2015 medical drug spending data is estimated based on 2013 and 2014 share of spending. Figures exclude impact of rebates.

Source: HPC analysis of Massachusetts All-Payer Claims Database, 2012-2014 (medical drug spending) and Center for Health Information and Analysis Annual Report TME Databooks (prescription drug spending)

From 2012-2014, total drug spending increased while average cost sharing declined

Average spending and cost sharing for generic and branded drugs, per member per year, 2012-2014

	Generic dugs		Branded drugs	
	Average spending (PMPY)	Average cost sharing (PMPY)	Average spending (PMPY)	Average cost sharing (PMPY)
2012	$349	$126	$829	$93
	+10%	-6%	+23%	-13%
2013	$353	$118	$853	$85
2014	$384	$117	$1,018	$81

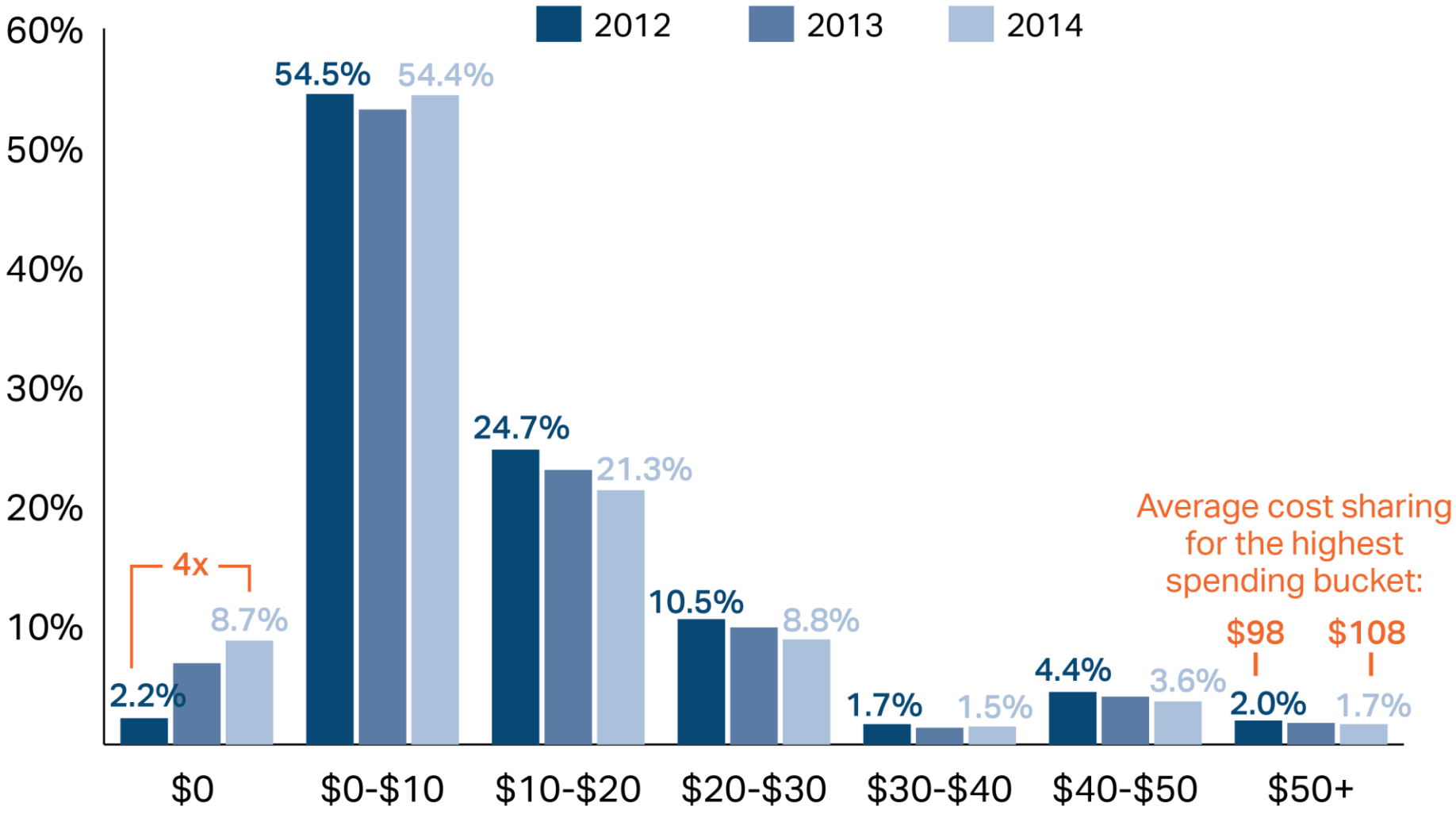
During this time period, the Affordable Care Act (ACA) prohibited payers from imposing patient cost sharing – copayments or coinsurance – on many preventative drugs

Notes: PMPY= per member per year. Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care who use the prescription drug benefit at least once in the calendar year. Figures exclude impact of rebates.

Source: HPC analysis of Massachusetts All-Payer Claims Database, 2012-2014

From 2012-2014, the proportion of drugs with no cost sharing increased

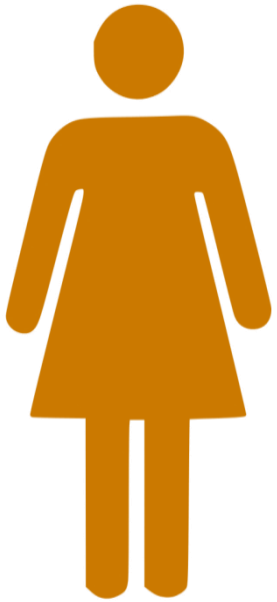
Percent of claims, by cost sharing amount, 2012-2014



Notes: Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care. Includes only commercial users of the pharmacy drug benefit. Figures exclude impact of rebates.

Source: HPC analysis of Massachusetts All-Payer Claims Database, 2012-2014

From 2012-2014, cost sharing on prescription drugs decreased substantially for women, due in large part due to the ACA



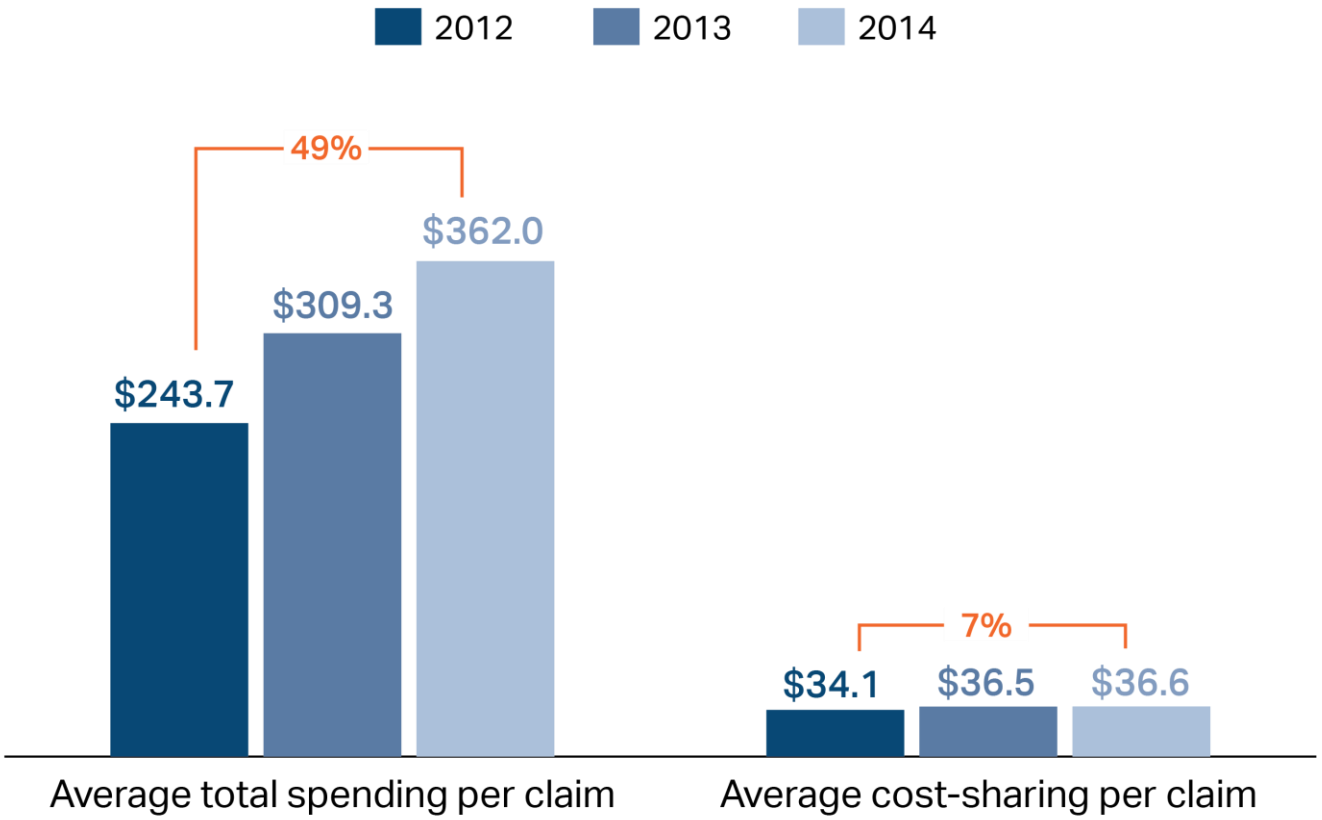
Year	Women: Percent of claims with $0 cost sharing	Men: Percent of claims with $0 cost sharing
2012	3.2%	0.9%
2013	10.7%	1.6%
2014	13.4%	2.4%

- Many contraceptive methods are included under the ACA's mandatory coverage
- Average annual cost sharing particularly dropped for women from 2012 to 2014 – a **14%** decline ($205 to $176) versus a **4%** decline for men ($202 to $193)

Notes: PMPY= per member per year. Data include privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care who use the prescription drug benefit at least once in the calendar year. Figures exclude impact of rebates.
Source: HPC analysis of Massachusetts All-Payer Claims Database, 2012-2014

From 2012-2014, EpiPen prices increased rapidly, though generally without an impact on cost sharing

Average spending and cost sharing on Mylan's EpiPen, per claim, 2012-2014



However, in 2014 a small portion of the Massachusetts commercial population paid most or all of EpiPen's cost out-of-pocket – **2.9%** paid more than $100 and **1.3%** paid more than $300

Notes: Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care who use the prescription drug benefit at least once in the calendar year. Figures exclude impact of rebates.

Source: HPC analysis of Massachusetts All-Payer Claims Database, 2012-2014

Select findings from the 2016 Cost Trends Report

Themes

Spending and the delivery system

Opportunities to improve quality & efficiency

Progress in aligning incentives

Avoidable hospital utilization

Post-acute care

Variation in spending by PCP group

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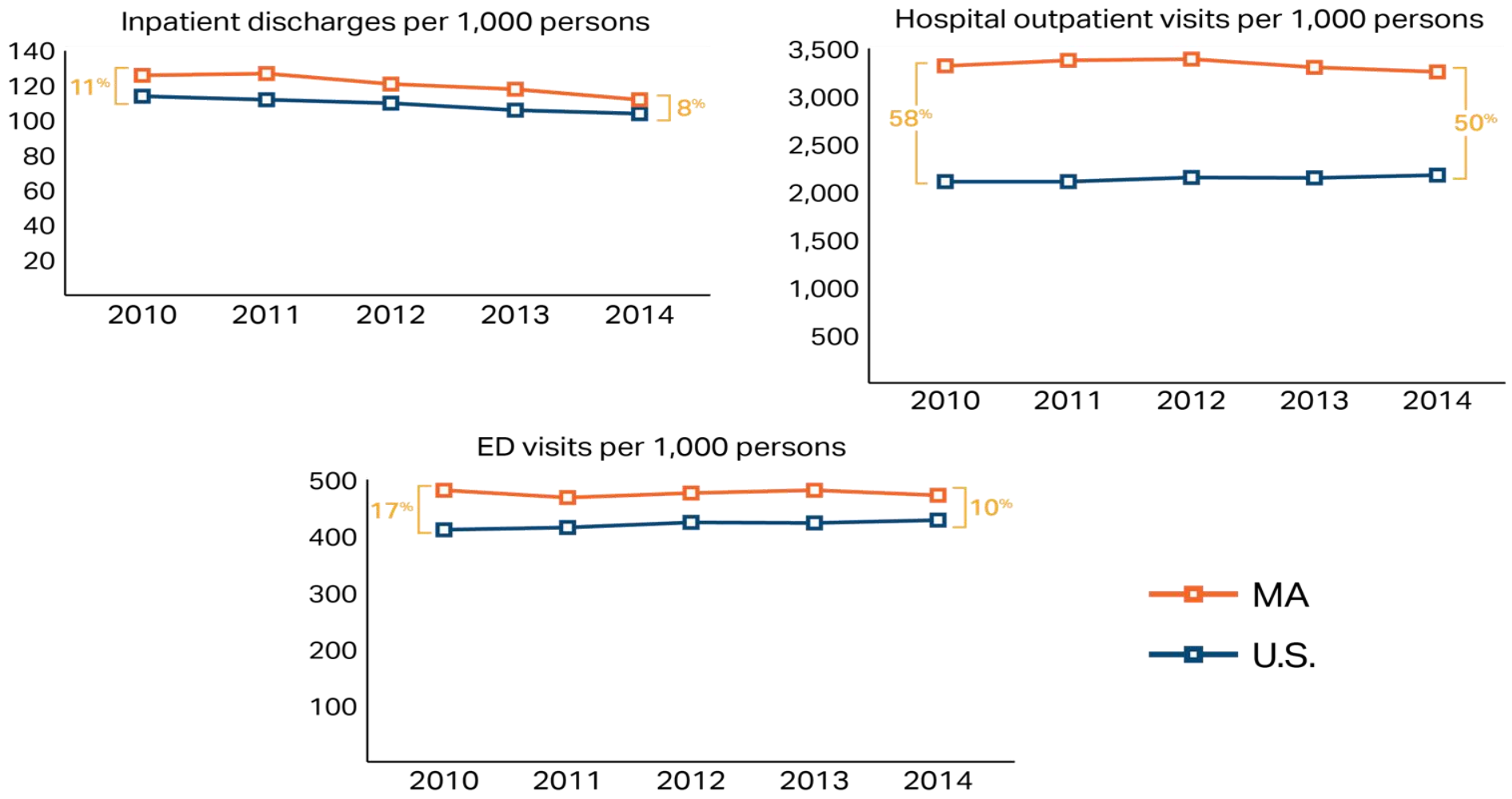
Background

- Hospital and PAC use in Massachusetts continues be higher than the nation overall
- Compared to the U.S. average, in 2015 Medicare spent **19%** more on inpatient hospital services, **24%** more on outpatient hospital services, and **18%** more on PAC* for Massachusetts enrollees
- The HPC has previously identified opportunities to improve quality and enhance efficiency in this category (e.g. reducing readmissions, avoidable ED visits)

*Note: Includes home health and skilled nursing facilities.

Hospital use in Massachusetts remains higher than national averages

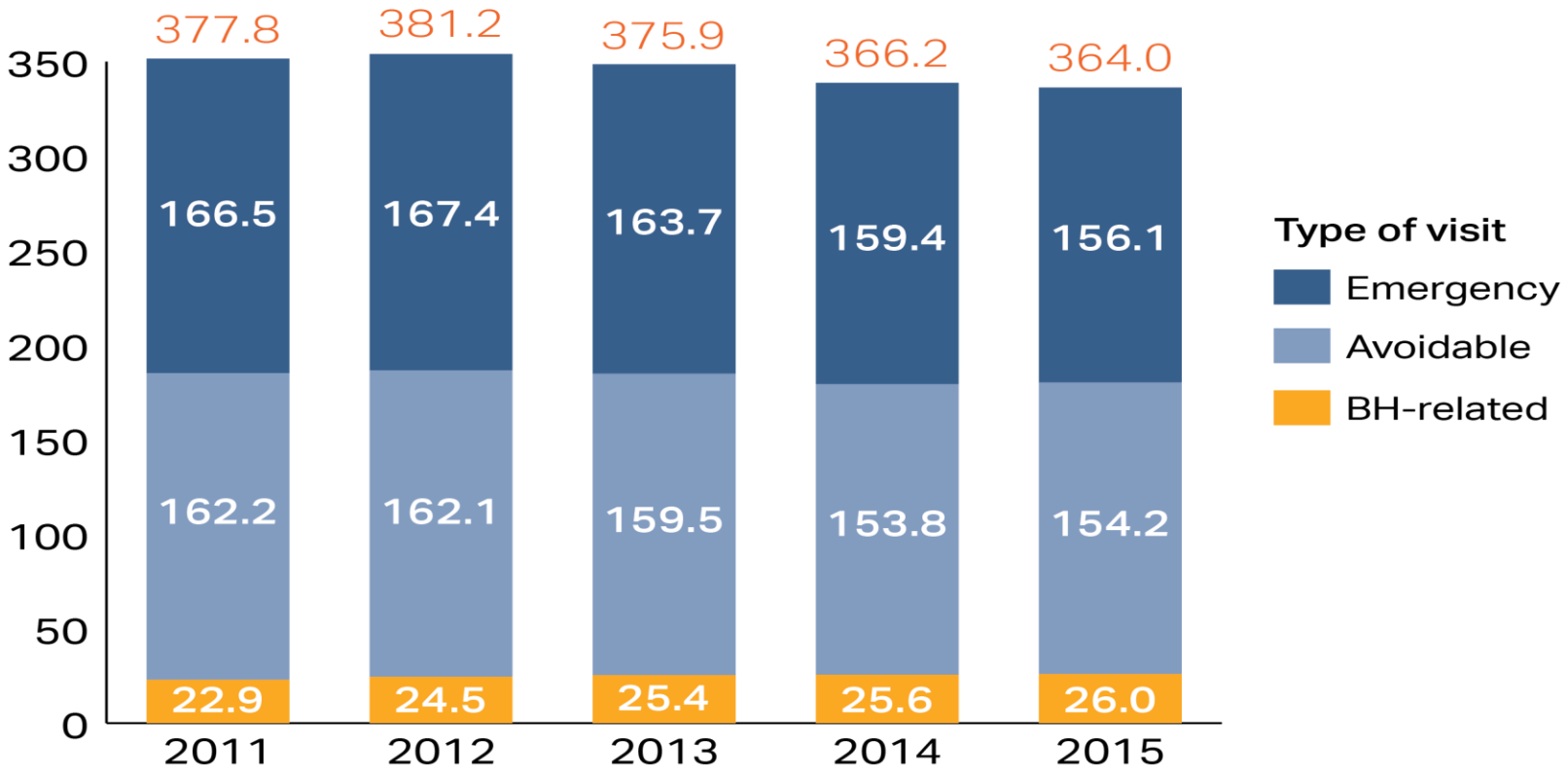
Hospital use in MA and U.S., per 1,000 population, 2010-2014



Note: ED= emergency department.
Source: Kaiser Family Foundation analysis of American Hospital Association data, 2010-2014

While ED visits have declined overall, behavioral health-related visits have increased steadily

ED visits by category, per 1,000 population, 2011-2015



The growth in BH-related ED visits was in part due to increases in opioid-related ED visits, which grew **87%** from 2011 to 2015

Notes: ED= emergency department; BH= behavioral health. The total ED rate (in orange above the bars) includes all categories of ED visits, including unclassed ED visits which are not shown here. Unclassified visits increased 5.7% during this time period. Definition of ED categories based on NYU Billings Algorithm categorization of a patient's primary diagnosis and are mutually exclusive. BH ED visits includes any discharge with a primary mental health, substance use disorder, or alcohol-related diagnosis code. Emergency visits include the Billings categories of emergency and emergent, ED care preventable; avoidable visits include the Billings categories of non-emergent and emergent, primary care treatable. Some non-Massachusetts residents are included in the number of ED visits. In 2015, 4% of all ED visits in Massachusetts were made by non-Massachusetts residents.
Source: HPC analysis of Center for Health Information and Analysis Emergency Department Database, 2011-2015

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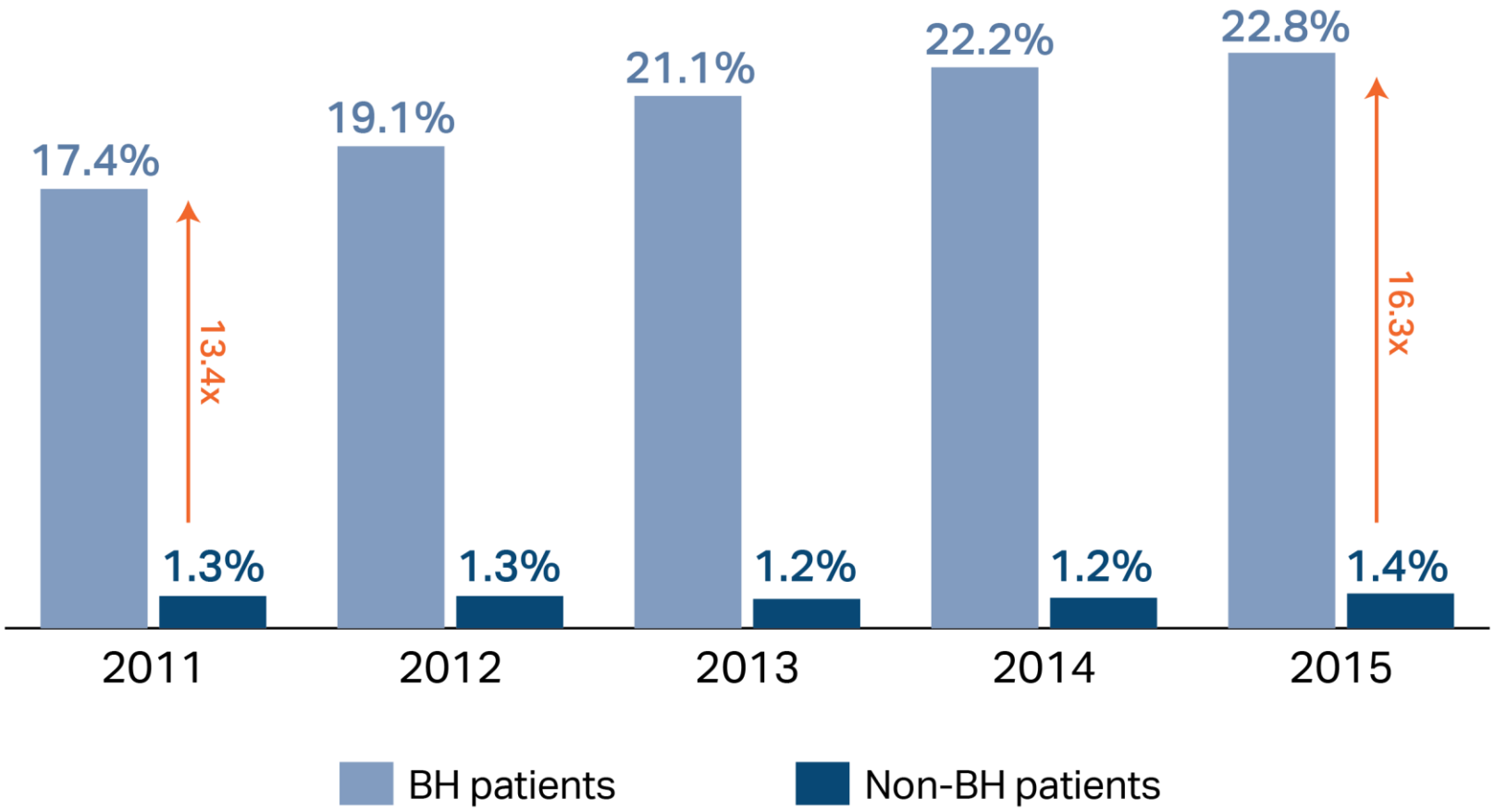
Behavioral health patients are increasingly more likely to have an extended length of stay in the ED

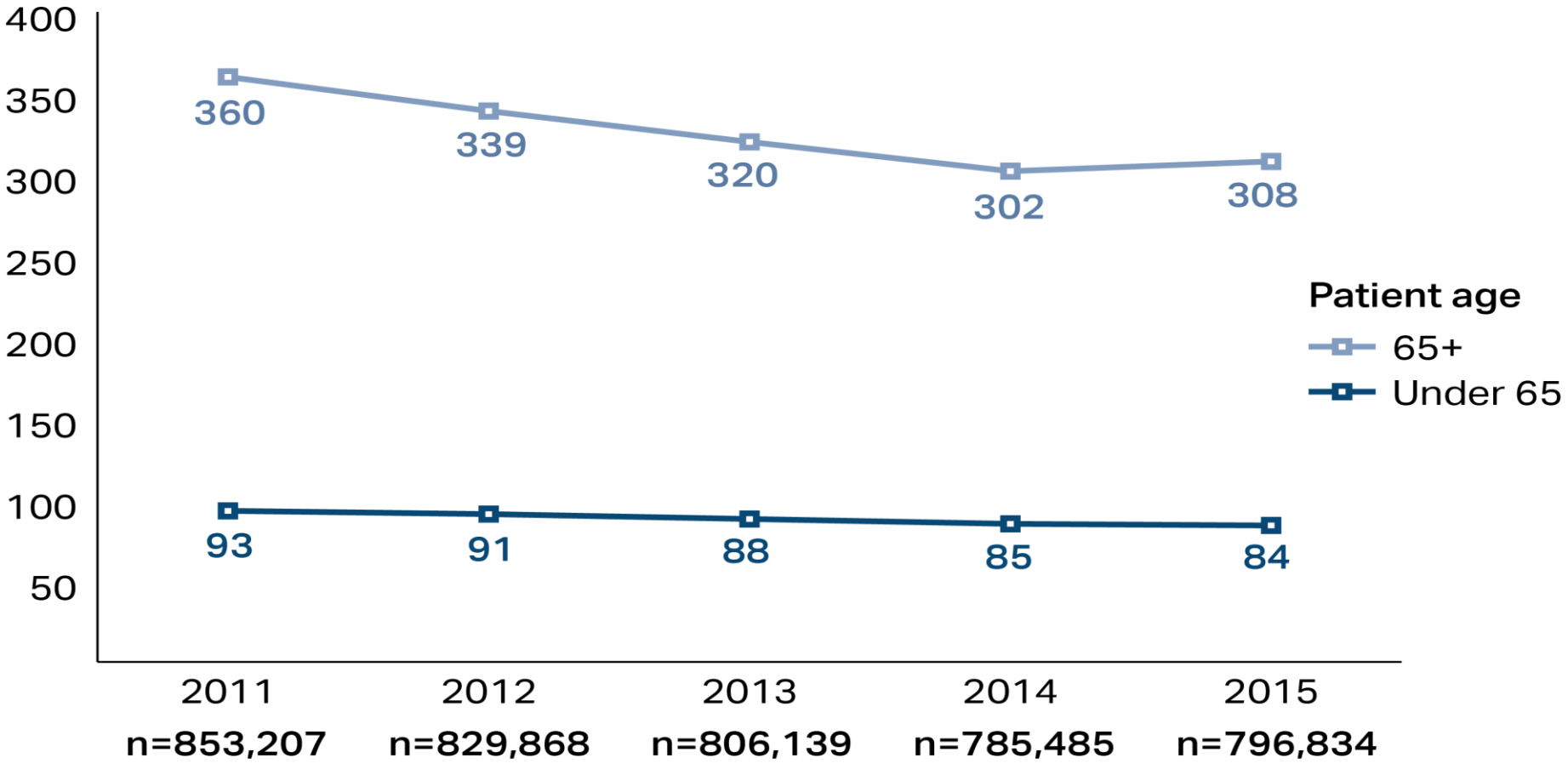
Percent of ED visits with a length of stay of more than 12 hours, by primary diagnosis type, 2011-2015



Notes: ED= emergency department; BH=behavioral health. BH ED visits identified using NYU Billings algorithm and include any discharge with a primary mental health, substance abuse, or alcohol-related diagnosis code. Length of stay is calculated as the difference between the point of registration and the point of admission or discharge.
Source: HPC analysis of Center for Health Information and Analysis Emergency Department Database, 2011-2015

After three years of annual declines of over 20,000, inpatient admissions increased in 2015, driven by patients 65 and over

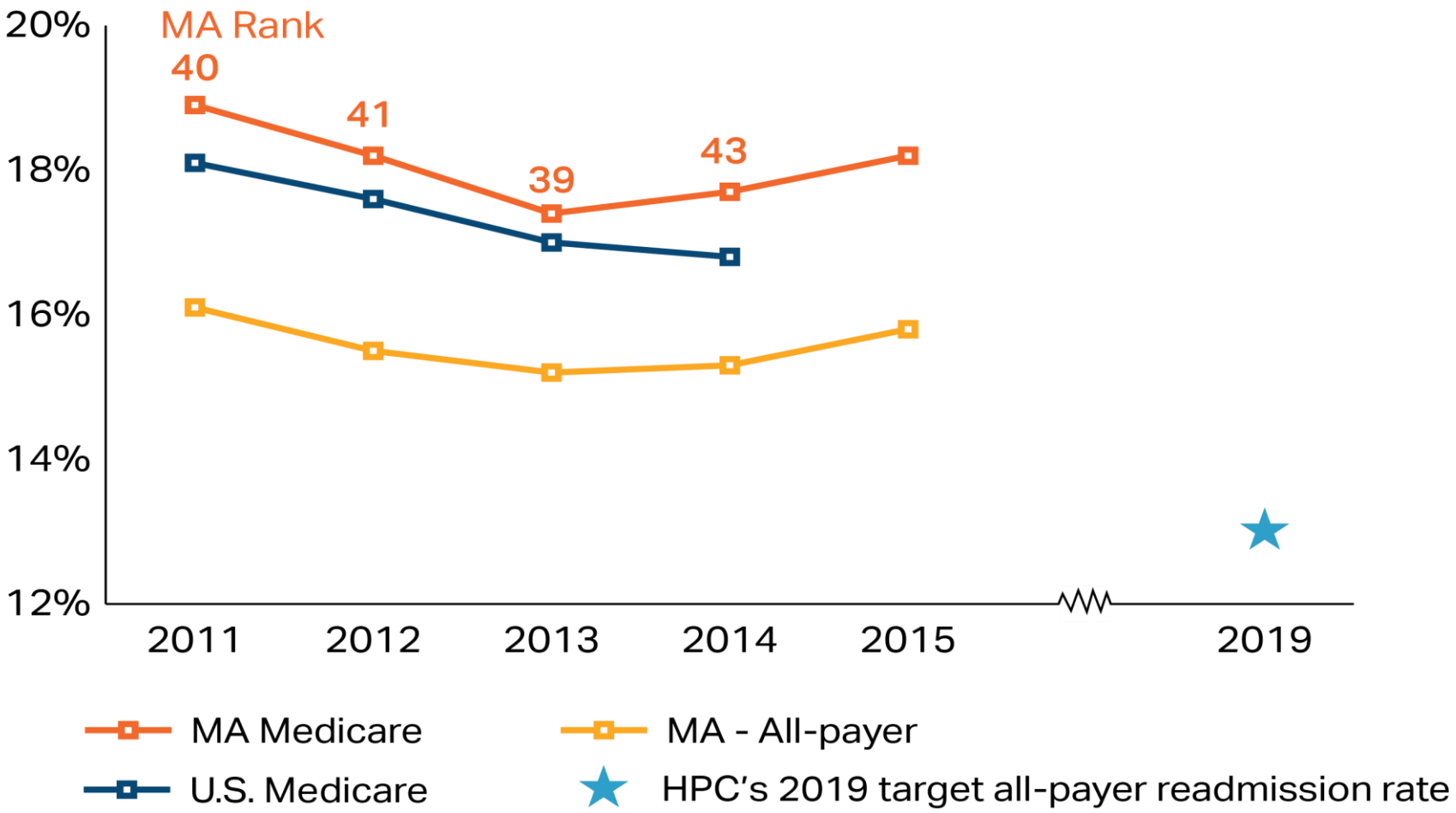
Inpatient admissions per 1,000 population, by age category, 2011-2015



Notes: Some non-Massachusetts residents are captured in the Massachusetts admissions. In 2015, non-Massachusetts residents represented 5% of all inpatient admissions.
Source: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database, 2011-2015

Massachusetts hospital readmissions began increasing in 2014 after a sustained decline

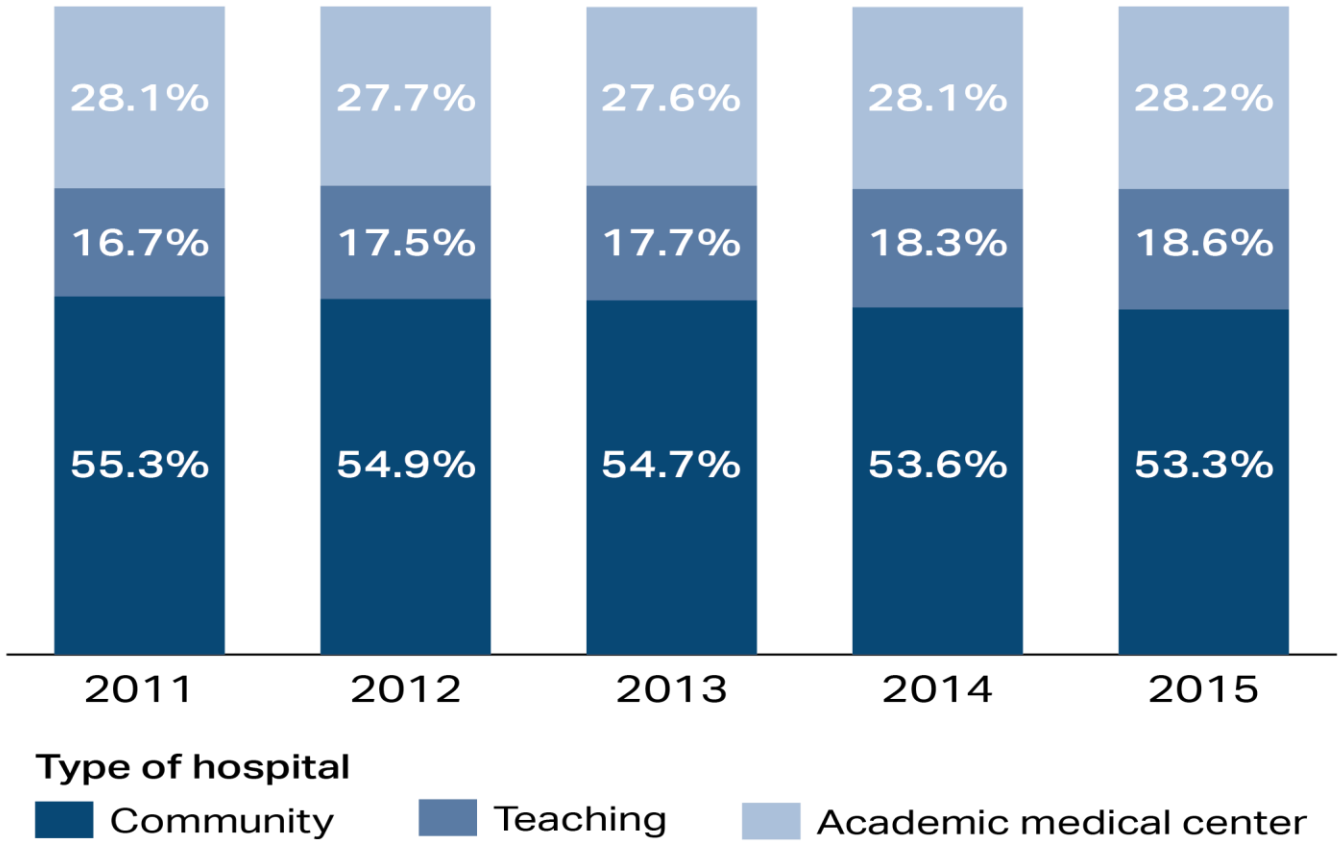
Thirty-day readmission rate, by payer, MA and the U.S., 2011-2014



Sources: Centers for Medicare and Medicaid Services (U.S. Medicare and MA Medicare 2011-2013); Center for Health Information and Analysis (all-payer and MA Medicare 2014-2015)

Inpatient care that could safely and effectively be provided in community hospitals is increasingly being provided by teaching hospitals

Share of community appropriate discharges, by hospital type, 2011-2015



Notes: Discharges that could be appropriately treated in community hospitals were determined based on expert clinician assessment of the acuity of care provided, as reflected by the cases' diagnosis-related groups (DRGs). The Center for Health Information and Analysis (CHIA) defines community hospitals as general acute care hospitals that do not support large teaching and research programs. Teaching hospitals are defined as hospitals that report at least 25 full-time equivalent medical school residents per one hundred inpatient beds in accordance with Medicare Payment Advisory Commission (MedPAC) guidelines. Academic medical centers are a subset of teaching hospitals characterized by (1) extensive research and teaching programs, (2) extensive resources for tertiary and quaternary care, (3) principal teaching hospitals for their respective medical schools, and (4) full service hospitals with case mix intensity greater than 5 percent above the statewide average.
Source: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database, 2011-2015

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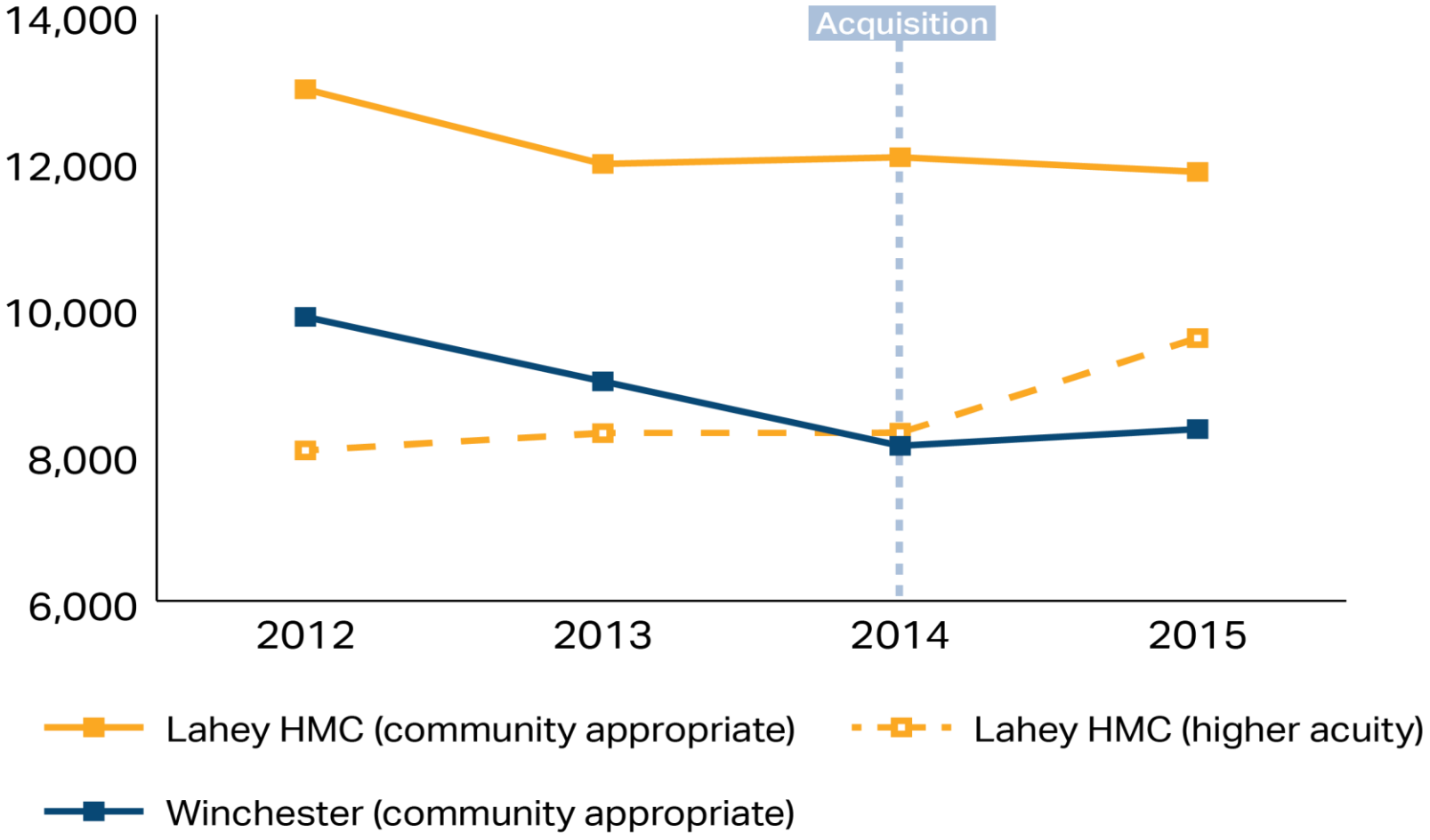
However, following Lahey's acquisition of Winchester (a community hospital) in 2014, community appropriate discharges increased at Winchester and decreased at Lahey Medical Center (a teaching hospital)

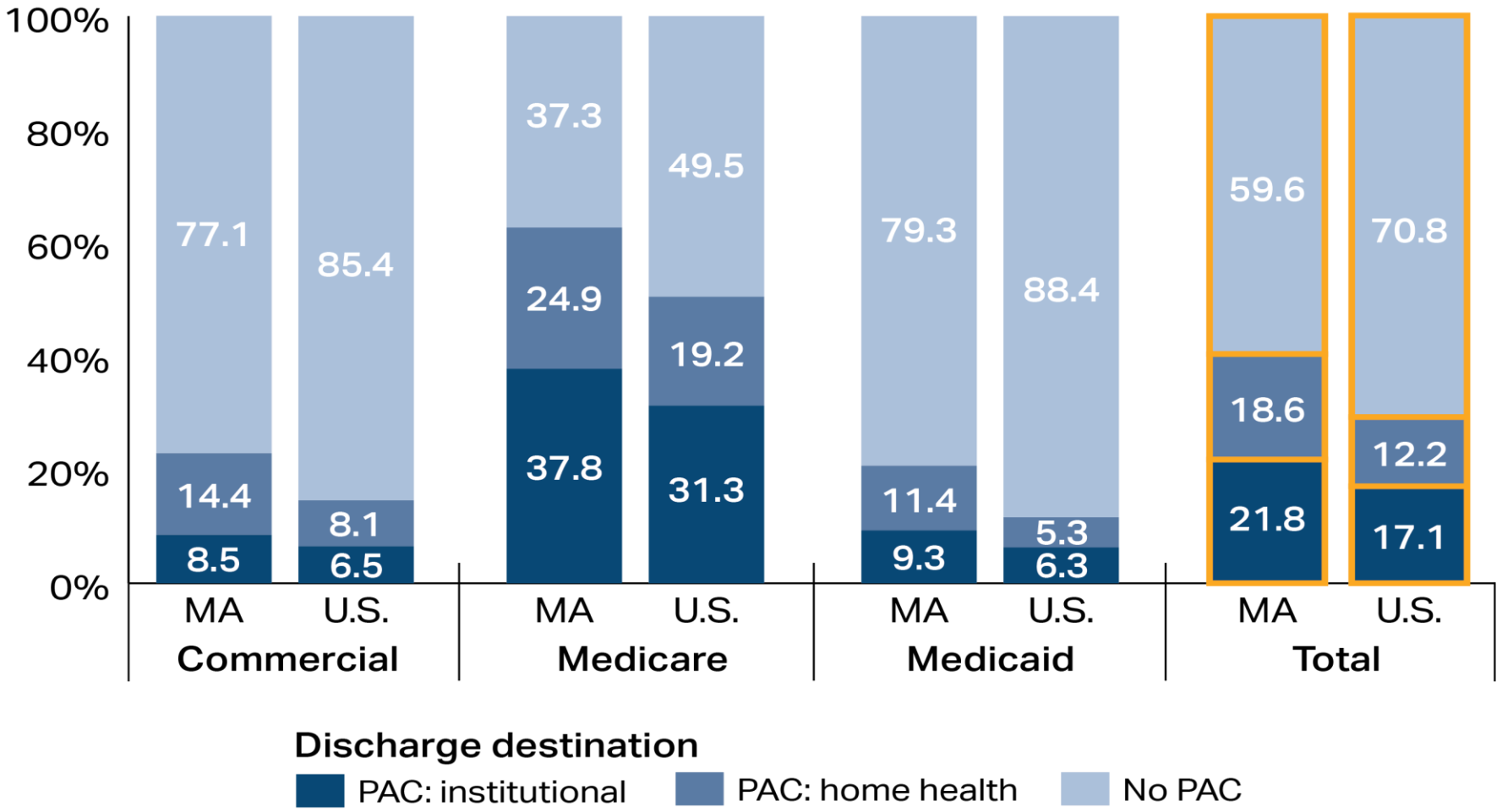
Discharges at Lahey and Winchester hospitals, by type, 2012-2015



Notes: Discharges that could be appropriately treated in community hospitals were determined based on expert clinician assessment of the acuity of care provided, as reflected by the cases' diagnosis-related groups (DRGs). All other discharges are classified as "higher acuity" for the purposes of this analysis.
Source: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database, 2012-2015

Massachusetts has a higher rate of discharge to institutional PAC than the U.S. average

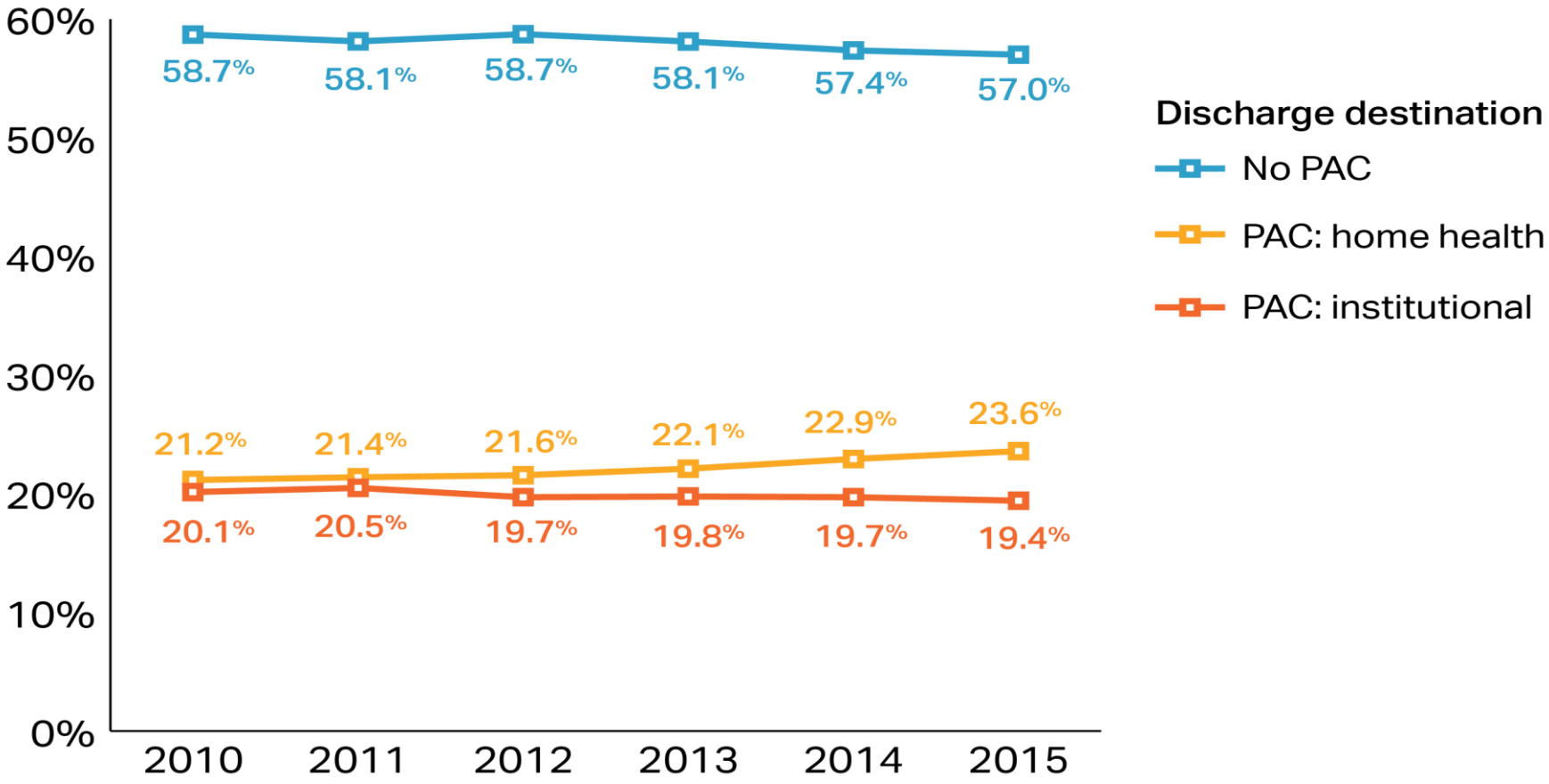
Discharge destination following an inpatient admission, by payer, 2013



Notes: PAC=post-acute care. Institutional includes skilled nursing facilities, short-term hospitals, intermediate care facilities (ICF), and another type of facility.
Sources: HPC analysis of Healthcare Cost and Utilization Project (HCUP) Massachusetts State Inpatient Database & Nationwide Inpatient Sample Survey, 2013

Since 2010, home health PAC use is increasing, while institutional PAC use remains fairly constant

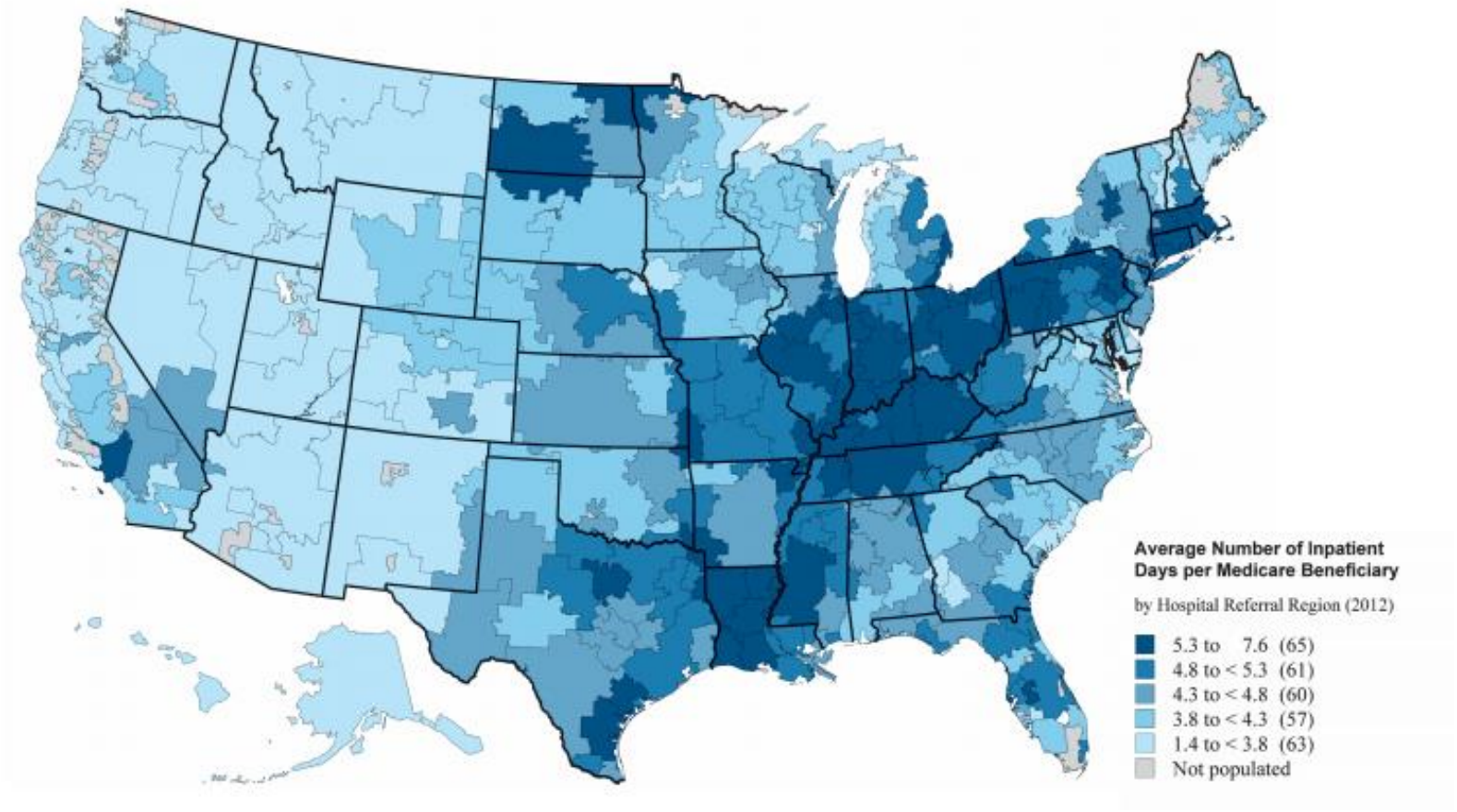
Discharge destination following an inpatient admission, adjusted for DRG mix, 2010-2015



Notes: PAC= post-acute care. Data include adult patients who were discharged to routine care or some form of PAC. Discharges from hospitals that closed and specialty hospitals, except New England Baptist, were excluded. Discharges from UMass Memorial, Cape Cod, Marlborough, Clinton and Falmouth hospitals were excluded due to coding irregularities in the database. Institutional PAC settings include skilled nursing facilities, inpatient rehabilitation facilities, and long-term care hospitals. Adjusted using ordinary least squares (OLS) regression to control for changes in mix of diagnosis-related groups (DRGs) over time.
Source: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database, 2010-2015

Medicare beneficiaries in Massachusetts spend more time in hospitals and skilled nursing facilities (SNFs) than in most regions of the country

Combined inpatient hospital and SNF days, per Medicare beneficiary, 2012



Notes: SNF= skilled nursing facility. Inpatient days= SNF days + hospital inpatient days.
Source: Dartmouth Atlas, 2012

Variation in spending by primary care provider (PCP) group

Background

- Massachusetts has higher commercial spending per enrollee compared to the U.S. average, particularly on physician services and outpatient care[1]
- HPC assessed two measures of spending by primary care provider (PCP) group: total medical expenses (TME) and non-recommended care

Total medical expenses

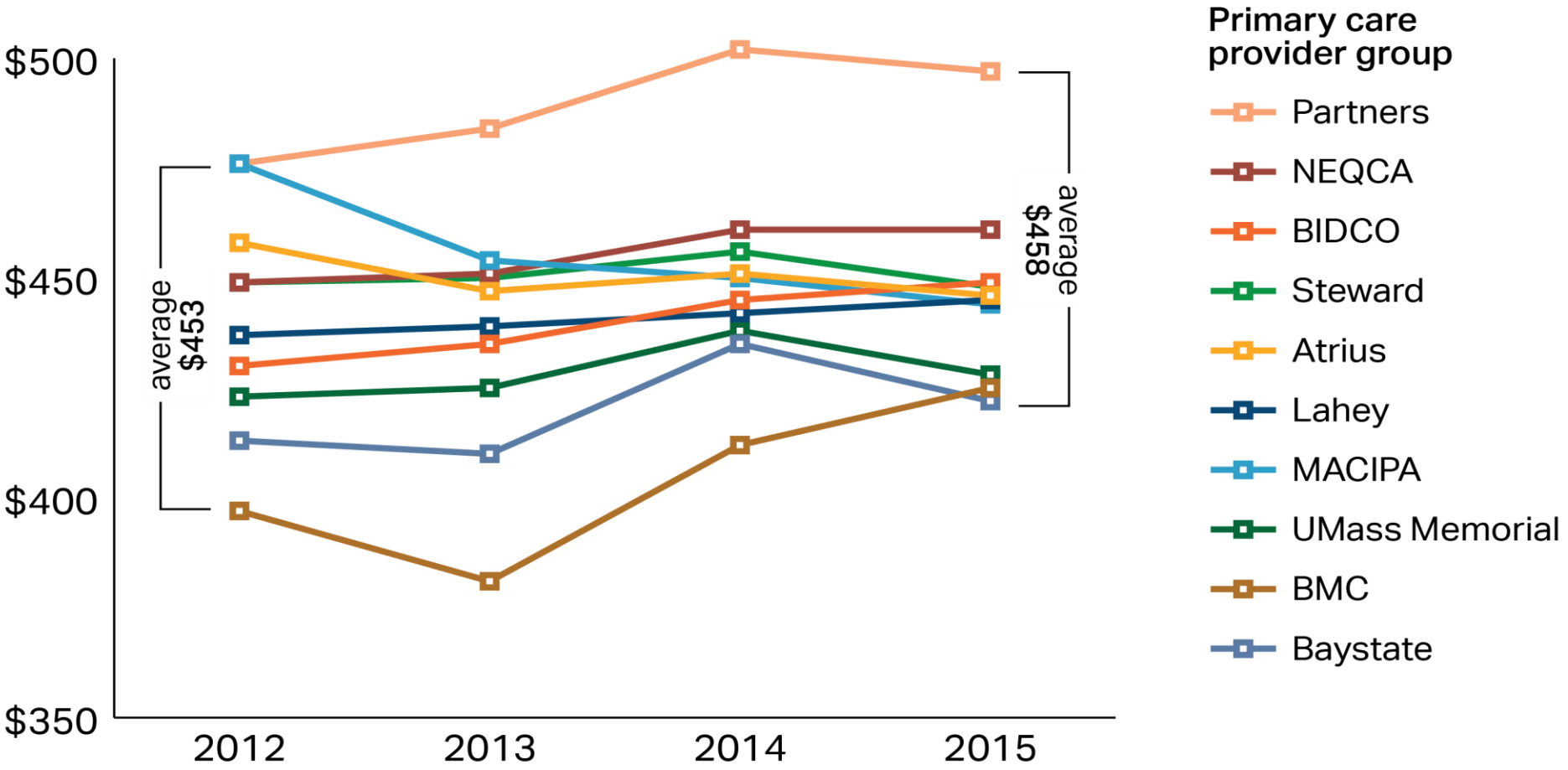
- TME includes all medical care spending for patients with an assigned PCP for enrollees in HMO and POS products
- Comparing TME across provider groups allows for comparison of resources used to care for comparable (health status adjusted) patients and reflects differences in both practice patterns and prices
- Comparisons can help inform supply-side (e.g. APMs) and demand-side (e.g. premium differentials by PCP group) incentives that are based on TME

Notes: Includes TME only for members of Blue Cross Blue Shield of MA, Tufts Health Plan and Harvard Pilgrim Health Care. HMO= health maintenance organization, POS= point of service, APM= alternative payment methods

Source: [1]Milliman, Inc., 2014

TME by PCP group has converged somewhat over time, with the exception of Partners

Blended health status adjusted TME, per member per month, 2012-2015

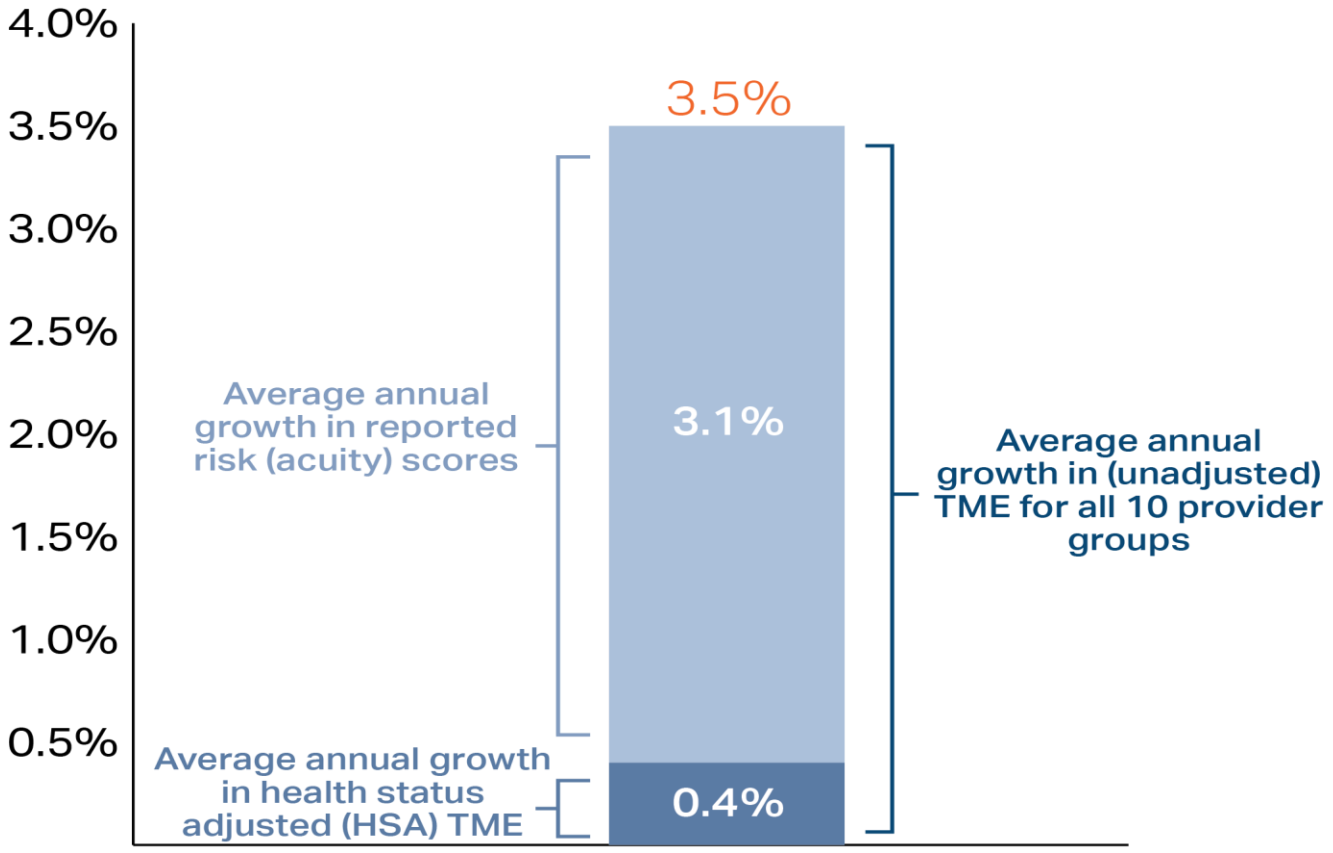


Notes: TME= total medical expenses, Blended TME is the combined normalized health status adjusted TME weighted across the three largest commercial payers (see Technical Appendix for details). Analysis includes the 10 largest primary care groups as identified by the Center for Health Information and Analysis (CHIA) in terms of member-months: Partners Community Physicians Organization (Partners); New England Quality Care Alliance (NEQCA), a corporate affiliate of Wellforce; Beth Israel Deaconess Care Organization (BIDCO); Steward Health Care Network (Steward); Atrius Health (Atrius); Lahey Clinical Performance Network (Lahey); Mount Auburn Cambridge IPA (MACIPA); UMass Memorial Medical Group (UMass Memorial); Boston Medical Center Management Services (BMC); and Baycare Health Partners (Baycare).

Source: HPC analysis of Center for Health Information and Analysis 2016 Annual Report TME Databook

Reported patient acuity has increased 3% per year; as a result, unadjusted TME growth is substantially higher than health status adjusted TME growth

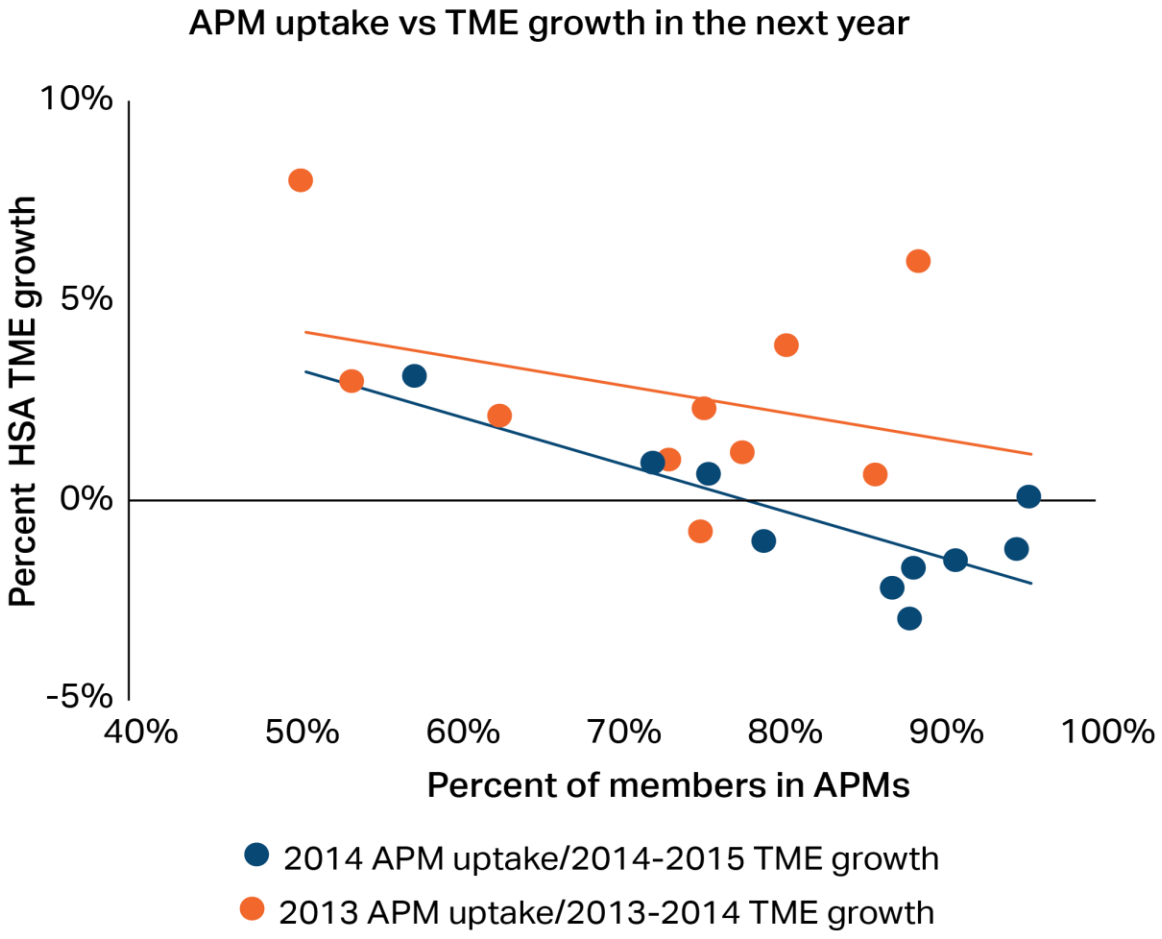
Growth in blended TME, 2012-2015

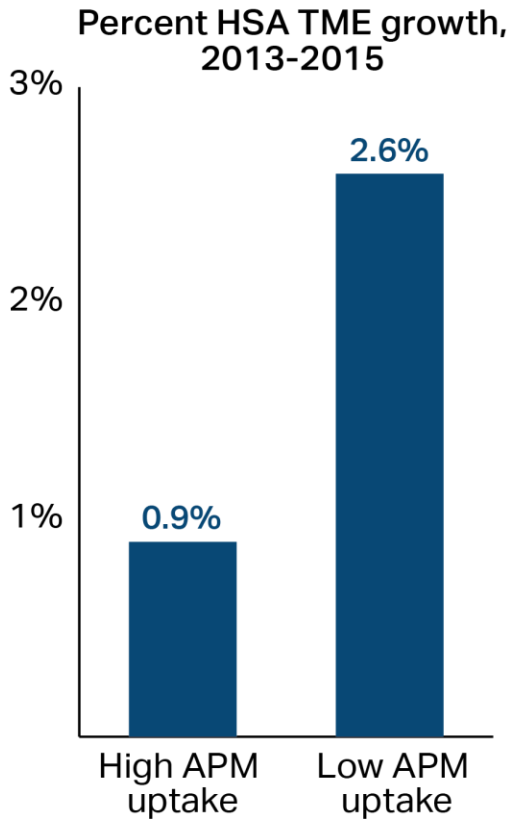


Notes: Blended TME is the combined normalized health status adjusted TME weighted across the three largest commercial payers (see Technical Appendix for details). Analysis includes the 10 largest primary care groups: Partners Community Physicians Organization (Partners); New England Quality Care Alliance (NEQCA), a corporate affiliate of Wellforce; Beth Israel Deaconess Care Organization (BIDCO); Steward Health Care Network (Steward); Atrius Health (Atrius); Lahey Clinical Performance Network (Lahey); Mount Auburn Cambridge IPA (MACIPA); UMass Memorial Medical Group (UMass Memorial); Boston Medical Center Management Services (BMC); and Baycare Health Partners (Baycare).

Source: HPC analysis of Center for Health Information and Analysis 2016 Annual Report TME Databook

High APM uptake has been followed by lower TME growth in the next year





Notes: APM= alternative payment methods. High APM uptake defined as providers with more than 74 percent of their members under APMs. Blended TME is the combined normalized health status adjusted TME weighted across the three largest commercial payers (see Technical Appendix for details). Analysis includes the 10 largest primary care groups: Partners Community Physicians Organization (Partners); New England Quality Care Alliance (NEQCA), a corporate affiliate of Wellforce; Beth Israel Deaconess Care Organization (BIDCO); Steward Health Care Network (Steward); Atrius Health (Atrius); Lahey Clinical Performance Network (Lahey); Mount Auburn Cambridge IPA (MACIPA); UMass Memorial Medical Group (UMass Memorial); Boston Medical Center Management Services (BMC); and Baycare Health Partners (Baycare).

Source: HPC analysis of Center for Health Information and Analysis 2016 Annual Report APM and TME Databooks

Examining non-recommended care as an opportunity for improvement

- This analysis was informed by the Choosing Wisely campaign, in which physician specialty groups defined wasteful or unnecessary screenings, procedures, and tests within their own specialty. Non-recommended care is alternatively referred to as "**low-value care**"

- Previous work has examined practice pattern variation by region and payer, while HPC's analysis also examines measures of utilization by primary care provider group
  - Through combination of the Massachusetts All-Payer Claims Database with the Registry of Provider Organizations dataset

- Methods to measure non-recommended care are based on previous studies care:
  - Rosenthal et. Al, "Choosing Wisely: prevalence and correlates of low-value health care services in the United States", *Journal of General Internal Medicine* (2015)
  - Schwartz et. Al, "Measuring low-value care in Medicare", *Journal of American Medical Association* (2016)

Measures of non-recommended care analyzed by HPC

Measures and number of instances in MA, 2013-2014

Screenings	Surgeries and invasive procedures	Imaging and lab tests
Cervical cancer screening for women under 21 (n=12,261)	Arthoscopic surgery for knee osteroarthritis (n=1,010)	Neuroimaging for child febrile seizure (n=122)
HPV testing in women under 30 (n=24,493)	Inferior vena cava filters for pulmonary embolism (n=480)	Homocysteine testing for cardiovascular disease (n=175,813)
Echography for adnexal cysts (n=7,459)	Renal artery stenting (n=100)	CT for appendicitis (n=98)
	Spinal injection for lower back pain (n=7,451)	Head imaging for syncope (n=4,830)
	Vertebroplasty for osteoporotic vertebral fractures (n=110)	Imaging for diagnosis of plantar fasciitis (n=20,024)
		EEG for uncomplicated headache (n=1,683)
		Head imaging for uncomplicated headache (n=27,250)
		Back imaging for non-specific low back pain (n=89,999)

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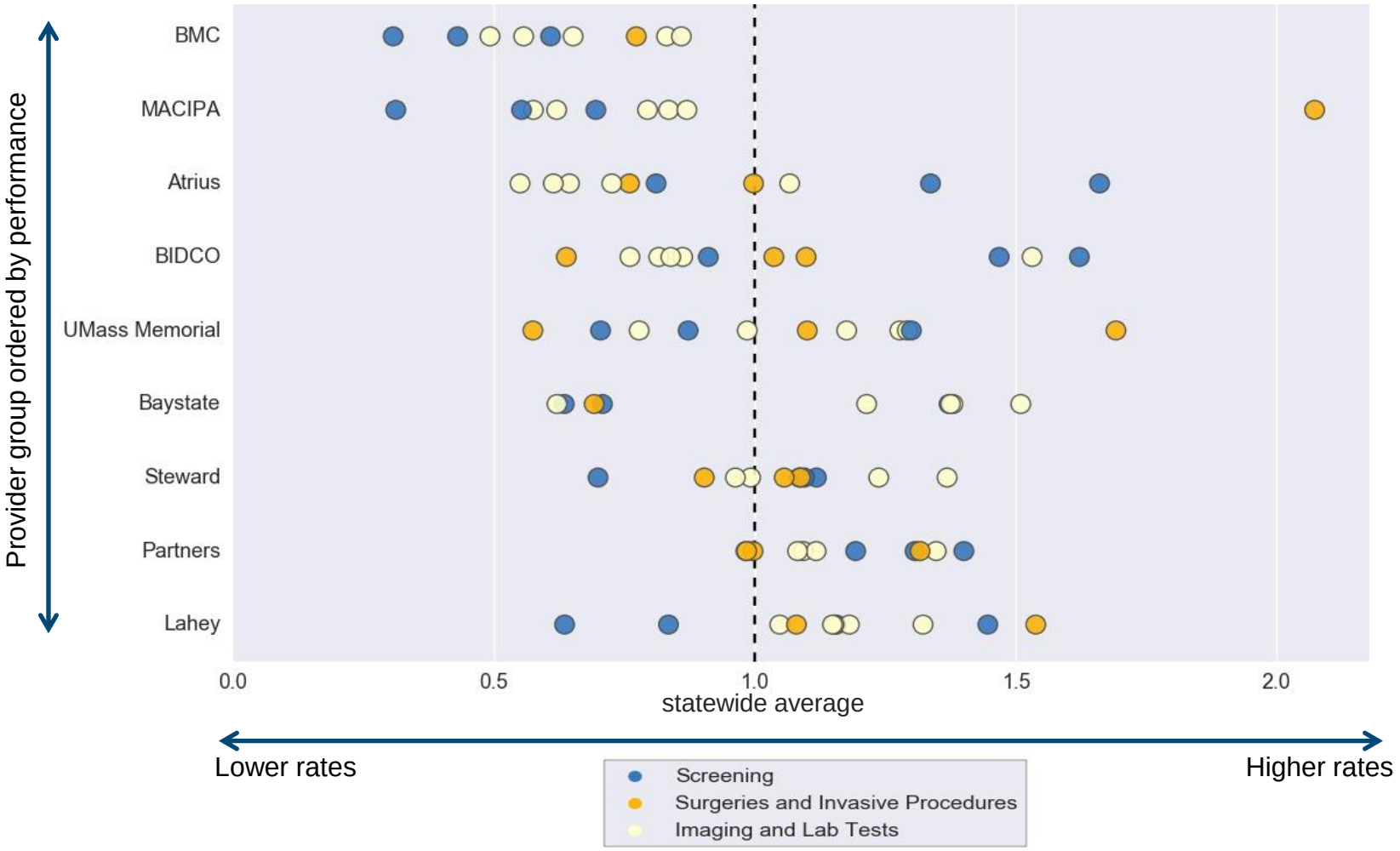
Source: HPC analysis of Massachusetts All-Payer Claims Database, 2013 and 2014

Some provider groups had consistently low or high rates of non-recommended care across measures

Rates of non-recommended care, by provider group relative to the statewide average (indexed to 1.0 for each measure), 2013

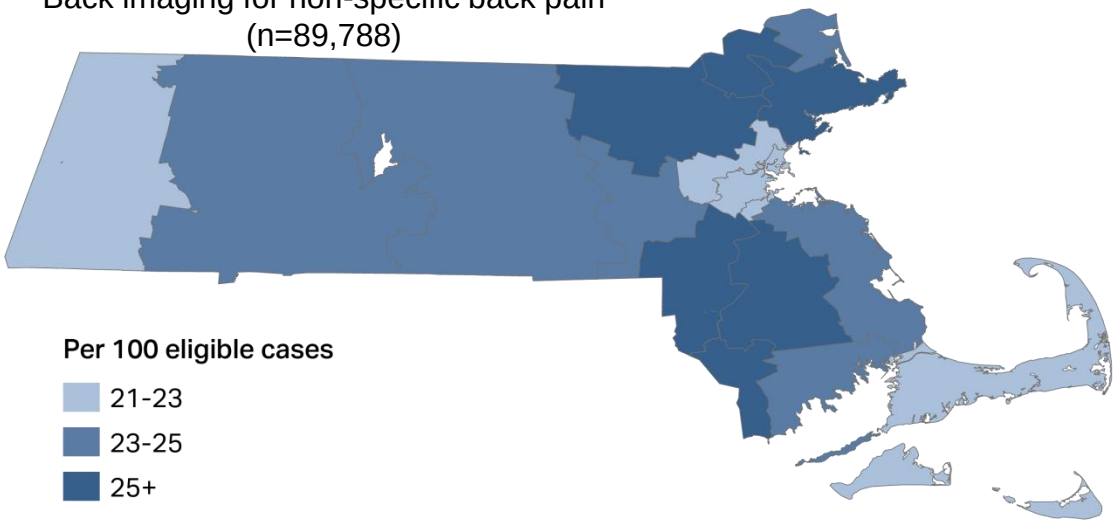


Notes: Analysis includes the same provider groups in the Total Medical Expenses (TME) analysis with the exception of NEQCA. Some measures are not reported for some organizations due to cell size limitations. Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care.

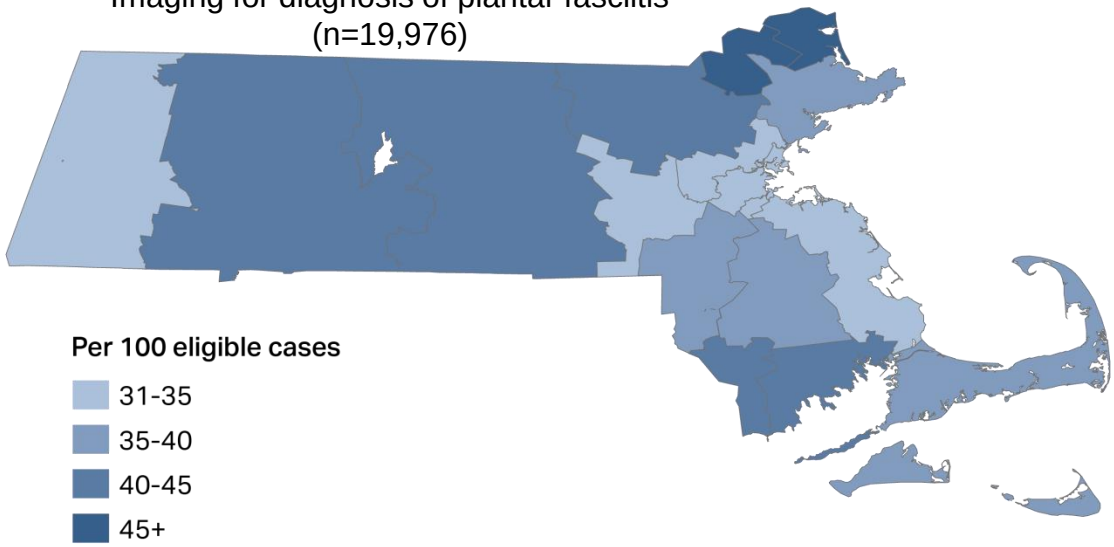
Source: HPC analysis of Massachusetts All-Payer Claims Database, 2013 and Registry of Provider Organizations, 2016

Rates of non-recommended imaging vary by region

Back imaging for non-specific back pain
(n=89,788)



Imaging for diagnosis of plantar fasciitis
(n=19,976)



Notes: Data include only privately insured individuals covered by Tufts Health Plan, Blue Cross Blue Shield of MA, and Harvard Pilgrim Health Care.
Source: HPC analysis of Massachusetts All-Payer Claims Database, 2013 and 2014

Select findings from the 2016 Cost Trends Report

Themes

Spending and the delivery system

Opportunities to improve quality & efficiency

Progress in aligning incentives

Alternative payment methods

Demand-side incentives

HPC

Alternative payment methods (APMs)

Background

- APMs align financial incentives with care delivery goals
- In 2015, HPC set targets for APM adoption in the Commonwealth:
  - *APMs for HMO patients*: All commercial payers should increase the use of APMs, with the goal of having **80%** of the state HMO population in APMs by **2017**
  - *APMs for PPO patients*: Commercial payers should seek to increase the use of APMs for members enrolled in PPO plans, with the initial goal of having **one-third** of the state PPO population in APMs by **2017**

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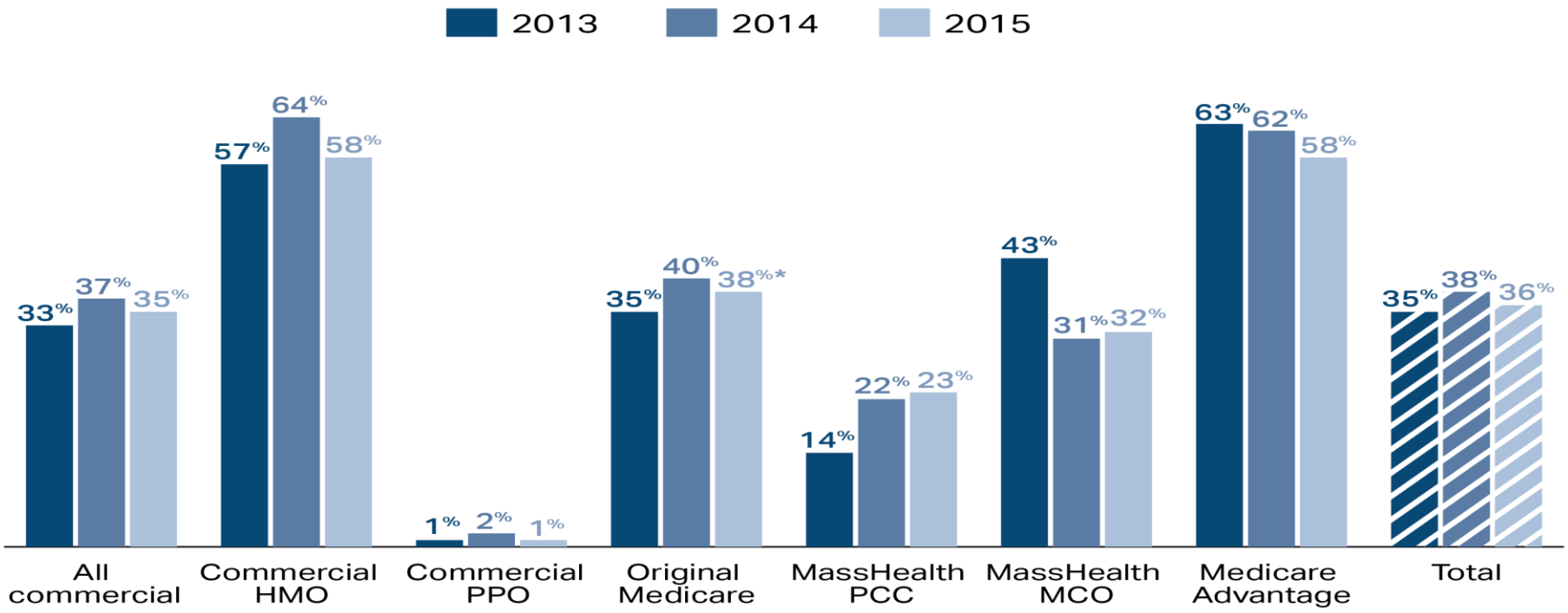
Notes: HMO= health maintenance organization, PPO= preferred provider organization.

While progress on APMs stalled in 2015, there are several promising developments for 2016 and beyond

Proportion of member months under APMs, by insurance category, CY 2013-2015



- Commercial: Developments in expanding APMs into PPO products, including one major commercial payer which is extending its APM to PPO members served by several large providers systems
- Medicare: Implementation of MACRA to link quality to physician payments, adoption of the Next Generation ACO program, and introduction of new bundled payment initiatives
- MassHealth: Implementation of MassHealth ACO program, as supported the Delivery System Reform Incentive Program (DSRIP) and the amended 1115 waiver

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Notes: * denotes that 2015 results based on preliminary estimates. Original Medicare= fee-for-service, APM= alternative payment method, CY= calendar year, PPO= preferred provider organization, MACRA= Medicare Access and CHIA Reauthorization Act of 2015, ACO= accountable care organization.

Sources: Centers for Medicare and Medicaid Services, 2013-2015; Center for Health Information and Analysis 2016 Annual Report APM Databook

Demand-side incentives (DSI)

Background

- DSIs reduce healthcare spending and improve market functioning by encouraging individuals and employers to make value-based choices, including:
  - Tiered and limited network plans
  - Cash-back incentives and price transparency programs
  - Reference pricing products

- These mechanisms are enabled and fostered by:
  - Informed and activated employers and employees
  - Price and quality transparency
  - Competitive insurance markets such as exchanges

Some incremental progress on DSI

- Mechanisms include:
  - Cash-back incentives
    - Unicare adds cash-back option for GIC members (2016)
  - Tiered and limited network products
    - Limited network products increased from **3.0%** to **3.2%** of commercial market in 2015 while tiered networks decreased from **16.0%** to **15.9%**

- Enabling forces include:
  - Price transparency
    - Several insurers, notably Blue Cross Blue Shield of MA and Harvard Pilgrim Health Care, reported increase in website hits from 2015 to 2016
    - The Center for Health Information and Analysis is planning to launch a statewide price and quality website in 2017
  - Market structure
    - The HPC has conducted an analysis on small and mid-size employers to understand if 1) their employees served well by the health insurance market, and 2) these employers able to enable and foster high-value insurance choices

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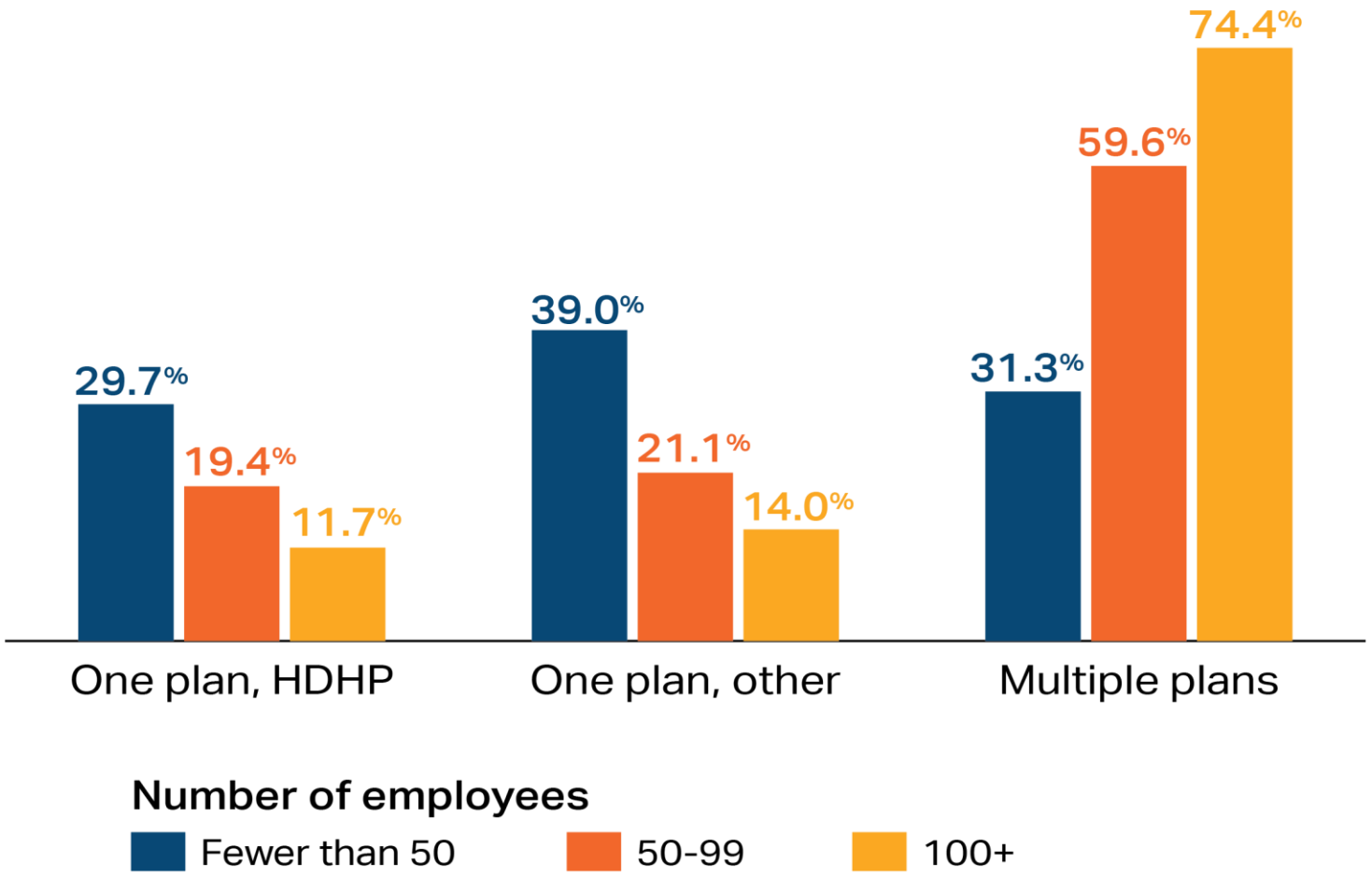
Source: ???

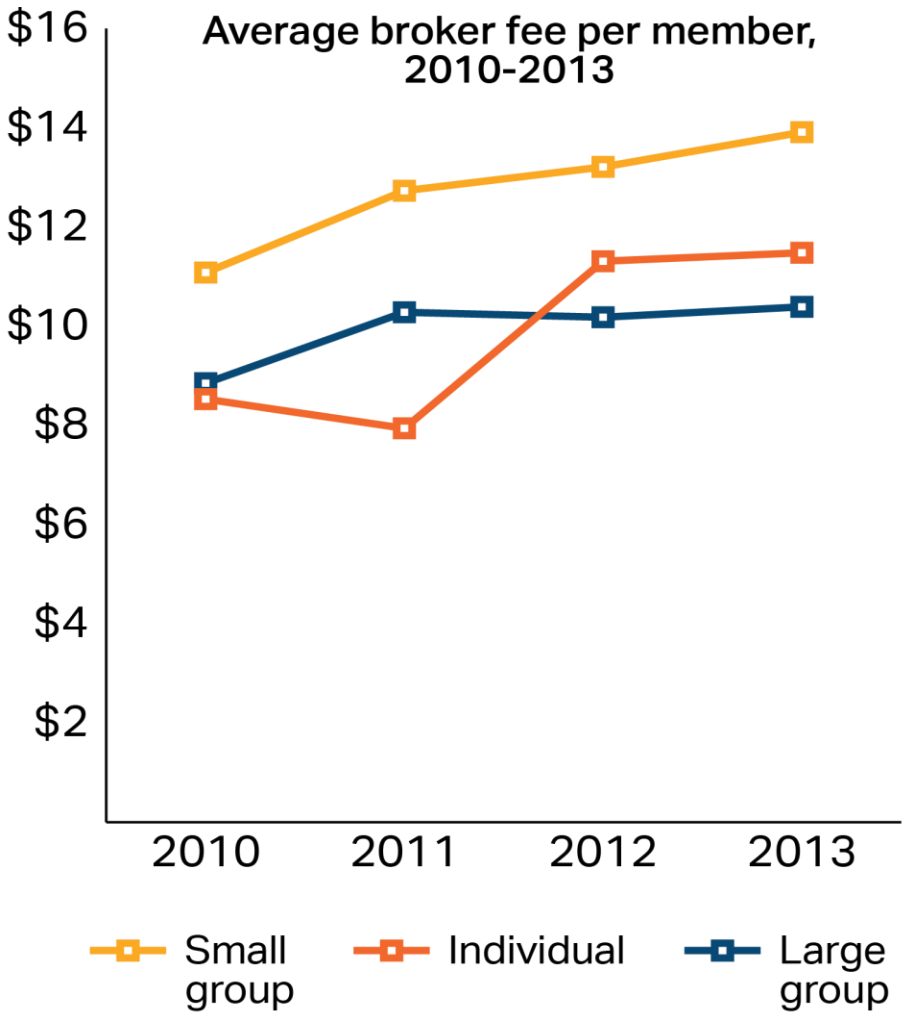
Most small group employees do not have a choice of plans

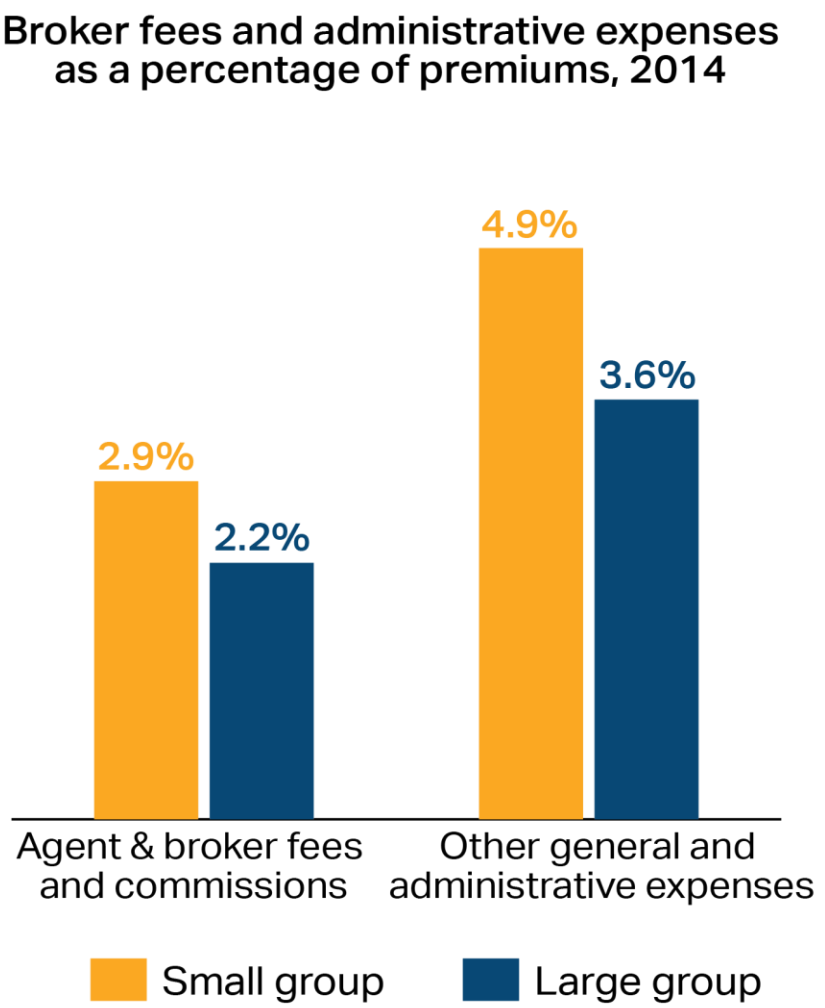
Among employees offered coverage by their firms, percent with plan choice by company size, 2014



Note: HDHP= high-deductible health plan.
Source: HPC analysis of Center for Health Information and Analysis Massachusetts Employer Survey, 2014

Small group employers pay more in broker fees and other insurance administrative costs



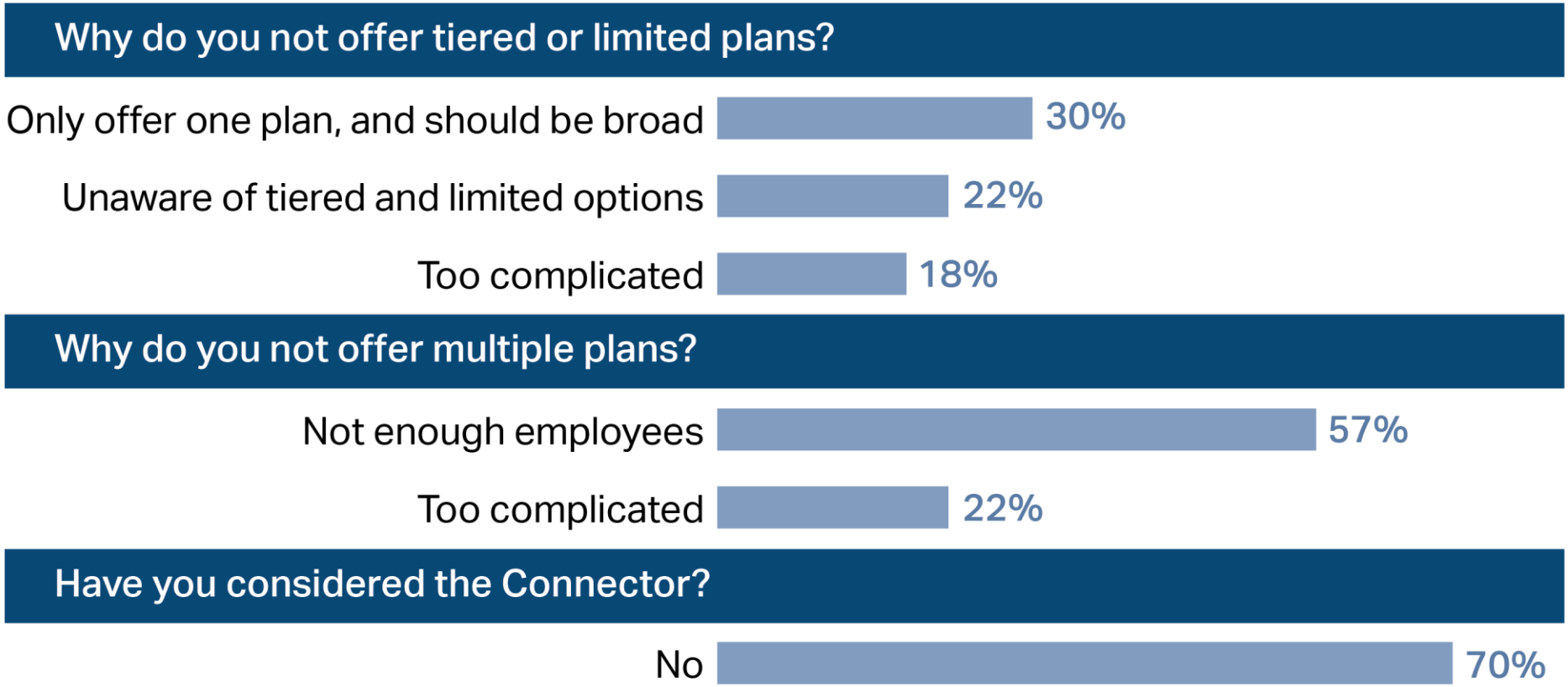


Notes: Graph on left defines small employers as those with fewer than 100 employees; graph on right defines small employers as those with fewer than 50 employees. In 2015, the vast majority (75%) of employees at firms with fewer than 100 employees were in firms with fewer than 50 employees.

Source: Kaiser Family Foundation analysis of data from Mark Farrah Associates, 2010-2013

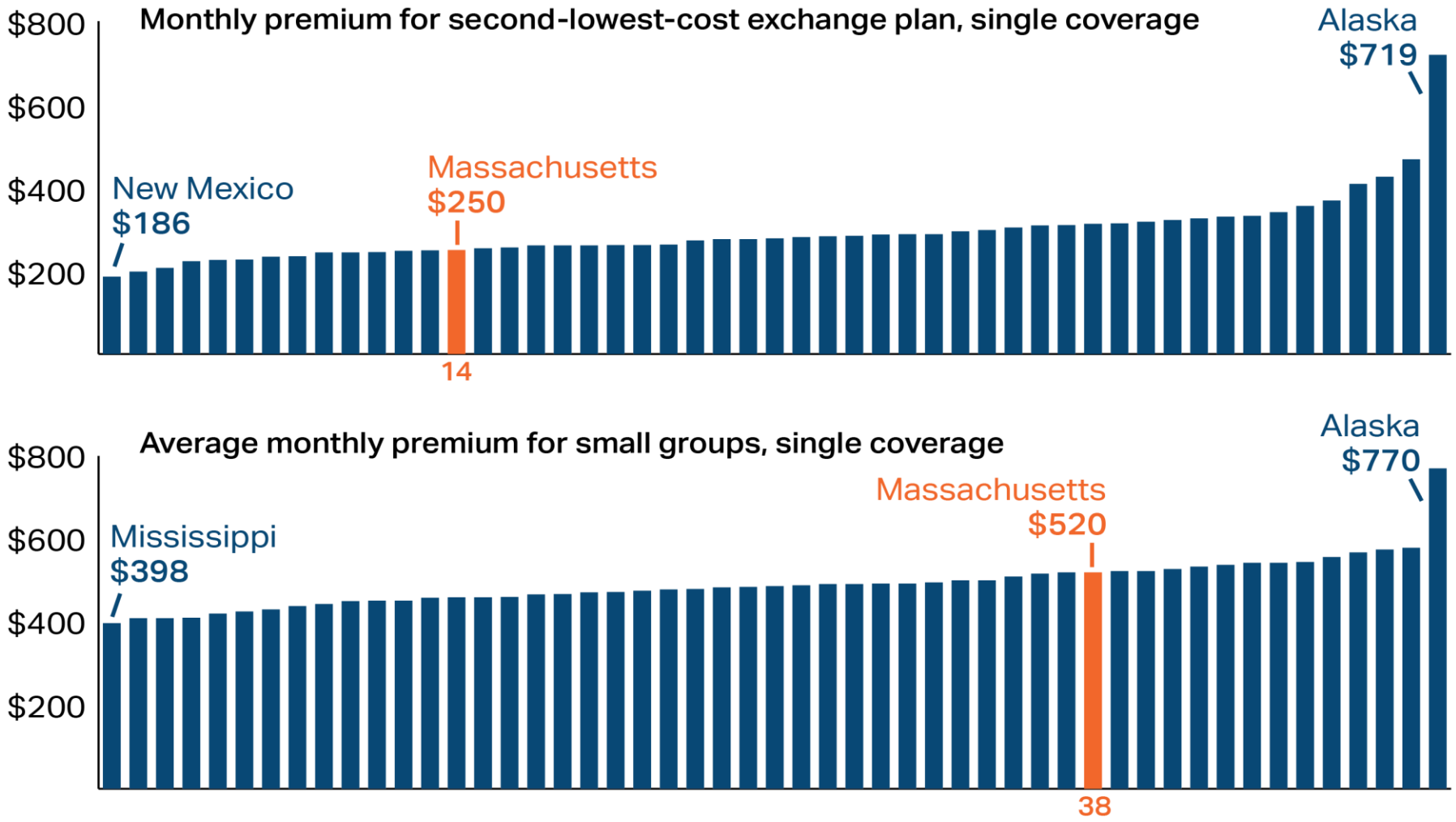
Small and mid-size employers noted challenges in offering competitive insurance options

Percent of firm representatives answering yes (multiple affirmative responses allowed), 2015



Source: HPC and Associated Industries of Massachusetts (AIM) survey of 188 Massachusetts employers, 2015

Massachusetts Health Connector premiums are below the national average, but employer based small-group premiums are higher



Notes: Top graph shows the average for the second-lowest silver plan premium for a 40 year old non-smoker earning $30,000 per year in the largest city in each state; bottom graph reflects the average monthly single premium for a private sector firm with fewer than 50 employees.

Sources: Kaiser Family Foundation, 2016 (top); Agency for Healthcare Research and Quality, 2015 (bottom)

2016 Cost Trends Report: summary of preliminary findings

Promising Developments

- Recent spending growth per person in Massachusetts continues to be below national rates; Massachusetts now spends about **6-7%** more on health care than other states, down from about **9-13%** more in 2009
- Overall, Massachusetts residents benefitted from lower prescription drug cost sharing from 2012-2014, due in large part to protections in the Affordable Care Act
- Early directional evidence suggests adoption of Alternative Payment Methods (APMs) may contribute to moderated spending growth for certain primary care provider groups
- Premiums for individual coverage offered through the Massachusetts Health Connector are below the U.S. average, unlike employer-based coverage

Challenging Developments

- Hospital utilization and readmissions increased in 2015 after years of decline
- Community appropriate care is continuing to increase at teaching hospitals
- While moderating somewhat in 2015, prescription drug spending in Massachusetts continues to grow more rapidly than any other category of service
- Rates of behavioral health-related ED use and ED boarding are increasing
- Post-acute care spending and utilization – particularly use of institutional care – remains high
- Growth in APM coverage stalled in 2015, though there are promising signs for 2016 and beyond
- Most small employers do not offer employees choice of insurance plan and pay higher broker/administrative fees

Dashboard: Benchmark and spending

Key area	Measure	MA time trend		Comparison	
				U.S.	Target
Benchmark and spending	1. Growth of THCE per capita (performance assessed relative to 3.6% benchmark)	4.2% (2013-2014)	4.1% (2014-2015)	5.1% (2014-2015)	< 3.6%
	2. Growth in commercial premiums	1.4% (2013-2014)	1.6% (2014-2015)	5.2% (2014-2015)	
	2a. Level of commercial premiums	Family: $17,702 Single: $6,348 (2014)	Family: $18,454 Single: $6,519 (2015)	Family: $17,322 Single: $5,963 (2015)	
	3. Individuals with high out-of-pocket spending relative to income	11% (2013-2014)	11% (2014-2015)	14% (2014-2015)	

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Better performance | Similar performance | Worse performance | Projected performance

Dashboard: Efficient, high-quality care delivery

Key area	Measure	MA time trend		Comparison	
				U.S.	Target
Efficient, high-quality care delivery	4. Readmission rate (Medicare)	17.7% (2014)	18.2% (2015)	MA ranked 43rd out of 51 (U.S. = 16.8%) (2014)	
	4a. Readmission rate (All payer)	15.3% (2014)	15.8% (2015)	N/A	< 13% by 2019
	5. ED utilization (per 1,000 persons)	366 (2014)	364 (2015)	MA ranked 32nd out of 51 (2014)	
	5a. BH-related ED utilization (per 1,000 persons)	25.6 (2014)	26.0 (2015)	MA = 25.4 U.S. = 17.8 (2013)	
	6. Percentage of inpatient discharges to institutional PAC	19.7% (2014)	19.4% (2015)	MA = 21.8% U.S. = 17.1% (2013)	
	7. At-risk adults without a doctor visit	7% (2014)	7% (2015)	13% (2015)	
	8. Number of primary care physicians practicing in certified PCMHs	2,024 25.3% of all PCPs (2015)	2,347 28.6% of all PCPs (2016)	16.3% of all PCPs (2016)	33% by 2017; 20% in Prime practice by 2017
	9. Hospital inpatient days in last 6 months of life (Medicare 65+)	N/A	8.5 (2012)	8.7 (2012)	
	10. Of decedents who used hospice, percent who used hospice for 7 days or less	N/A	30.9% (2012) (Medicare 65+)	35.5% (2012) (All decedents)	

HPC

Better performance | Similar performance | Worse performance | Projected performance

Dashboard: Alternative payment methods (APMs)

Key area	Measure	MA time trend		Comparison	
				U.S.	Target
APMs	11. Percentage of beneficiaries in Original Medicare covered by APMs	40% (2014)	38% (2015)	20% (2015)	
	12. Percentage of commercial HMO patients in APMs	64% (2014)	58% (2015)	N/A	80% by 2017
	13. Percentage of commercial PPO patients in APMs	2% (2014)	1% (2015)	N/A	33% by 2017
	14. Percentage of MassHealth members in APMs	PCC: 22% MCO: 31% (2014)	PCC: 23% MCO: 32% (2015)	N/A	

HPC

Better performance | Similar performance | Worse performance | Projected performance

Dashboard: Value-based markets

Key area	Measure	MA time trend		Comparison	
				U.S.	Target
Value-based markets	15. Enrollment in tiered and limited network products	19.1% (2014)	19.1% (2015)	N/A	
	16. Percentage of discharges in top 5 systems	60.9% (2014)	59.9% (2015)	N/A	
	17. Percentage of community appropriate discharges from community hospitals	53.6% (2014)	53.3% (2015)	N/A	

HPC

Better performance | Similar performance | Worse performance | Projected performance

Key statistics from the 2016 Cost Trends Report

HPC Key Findings

4.1%
total health care expenditure growth between 2014 and 2015

6.0%
commercial health care spending per person in MA in excess of national average

30%
portion of income a typical family of 3 at three times the federal poverty level pays for health insurance premiums, copayments, and deductibles

$20,400
annual health insurance premium plus cost-sharing for typical family in MA in 2015

8.8%
per capita growth in commercial prescription drug spending, not factoring rebates

87%
growth in opioid related emergency department visits between 2011 and 2015

21%
approximate percent of commercial health care spending attributable to prescription and medical drugs combined in 2015

24.4%
rate of non-recommended imaging for lower back pain per 100 eligible cases

22.8%
portion of behavioral health related emergency department visits with a length of stay of more than 12 hours

4X
growth in percent of prescriptions with no cost sharing among women between 2012 and 2014 (3.2% to 13.4%)

+11,000
change in the number of inpatient admissions in Massachusetts in 2015 after 3 years of declines of over 20,000 per year

HPC