MASSACHUSETTS
HEALTH POLICY COMMISSION

Health Policy Commission Advisory Council

December 18, 2018

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- **HPC Year in Review and Program Updates**
- Select Findings from the 2018 Cost Trends Report

2018 Year in Review: Public Engagement

26 public meetings

(board, committee, advisory council, special events, hearings, listening sessions)

> 50 hours

of public meetings on the **HPC YouTube channel**

- Health Care Cost Growth Benchmark Modification Hearing (March)
- Partnering to Address the Social Determinants of Health: What Works? (May)
- 2018 Cost Trends Hearing (October)

430

unique articles about the HPC's work

33.3k

unique visits to the HPC's website

Twitter

612,200 impressions

(potential views by unique Twitter users)

26,227 profile visits

574 mentions

6th Annual Health Care Cost Trends Hearing

450

in-person attendees

>2,000

live stream viewers

2018 Year in Review: Market Oversight and Transparency

26 **total publications**

$4.8 billion identified as ***Opportunities for Savings in Health Care***

56 provider organizations **registered**

5 online **DataPoints Briefs**

26 providers and payers reviewed for a potential **Performance Improvement Plan**

40 **exhibits** included in the ***2017 Annual Cost Trends Report*** and Chartpack

10 **material change notices** reviewed

329 total pages of **Cost and Market Impact Review** reports

HPC

2018 Year in Review: Care Delivery and Transformation

21 new practices participating in the HPC's Patient-Centered Medical Home (PCMH) program

17 HPC-Certified ACOs

17
ACO Profiles published

2
ACO Policy Briefs issued

Strategic partner of **MassChallenge HealthTech**, working to identify promising digital health start-ups

$10 million
authorized for **15 awards** in the SHIFT-Care Challenge

$17 million
distributed among **45 grants** to support innovative care delivery models in the CHART and HCII Programs

Office of Patient Protection (OPP)

280
external appeals processed

826
enrollment waivers processed

HPC Collaboration with MassChallenge HealthTech (MCHT)

Funding	▪ **1 Year: ~$170k commitment to support MCHT's operating costs and provide pilot funds to startups to test innovations in community-based provider systems**

Collaboration Areas

Participate as a "Champion" in MCHT's Core Program

As a Champion, the HPC may engage with one or more startups as a Dedicated Advisor, Product Validator, and/or Clinical Validator.

Promoting partnerships with community-based providers

The HPC will promote partnerships between digital health startups and community-based providers through a scholarship program and through community-building events.

Develop marketplace resources

The HPC and MCHT will co-author resource guides to advance the ability of digital health startups to validate their products in a variety of provider settings in the Massachusetts health care system.

HPC

MCHT 2019 Cohort: HPC Matches

HPC will be working with three startups in the 2019 cohort as a Dedicated Advisor.

buoy

A chat bot that has been clinically trained to converse with people to help make decisions about where to seek care (e.g. urgent care, ED, PCP office)

Marigold HEALTH

Mobile app for anonymous text-based group psychotherapy for patients in substance use disorder care, moderated by a peer/clinician

DynamiCare HEALTH

Monitoring and rewarding recovery from substance use disorders

HPC

Health Policy Commission Care Delivery Vision

The HPC's care delivery transformation vision is that providers and payers are patient-centered and accountable for high-value care across a patient's medical, behavioral, and health-related social needs.

ACO Certification Program Values

- Support the HPC's **care delivery vision** through certification standards-setting
- Encourage ACOs to **work with non-medical providers** in the community as needed to support the full spectrum of patient needs
- Commit to regular **assessment of the program** to ensure continuous improvement and market value
- Increase **public transparency** while balancing administrative burden for providers in Massachusetts

Overview of Proposed 2019 ACO Certification Requirements

Background information

Attestation or updates to 2017 standards

Assessment Criteria

- ✓ Governance structure
- ✓ Patient/consumer representation
- ✓ Performance improvement activities
- ✓ Population health management programs
- ✓ Cross-continuum care

Supplemental questions

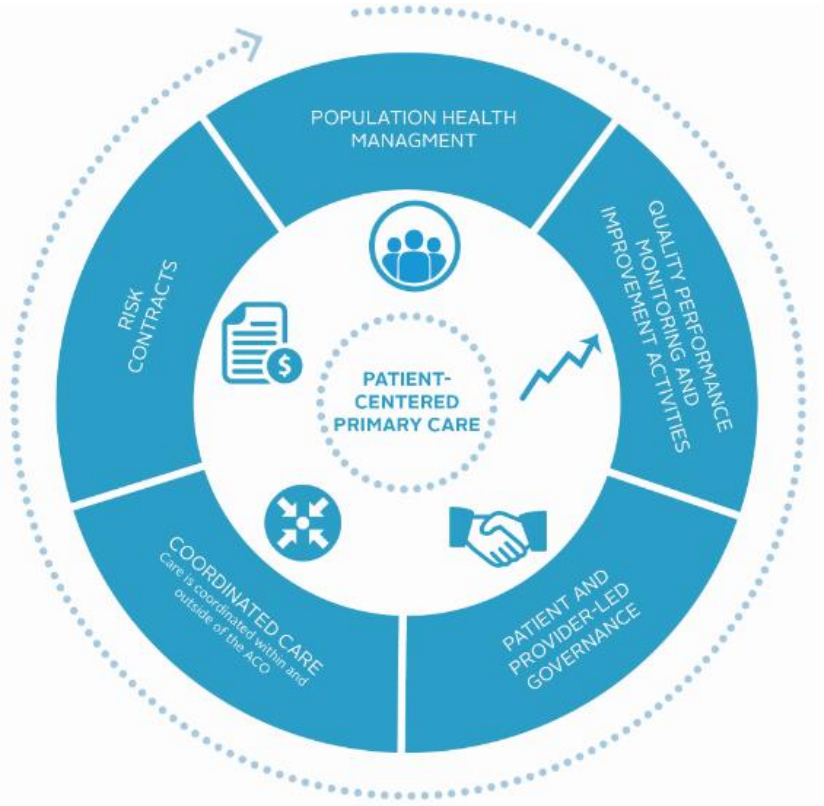
HEALTH POLICY COMMISSION ACO CERTIFIED 2017

Optional new performance-based distinction program

HPC

Proposed New Distinction Program for HPC-certified ACOs

A new, voluntary addition to basic ACO Certification, this program would recognize ACOs that have achieved performance improvements in the domains of the Triple Aim — **health outcomes, care,** and **cost** — plus **health equity**, and make commitments to continue improving.



HPC ACO Certification Timeline and Next Steps

July 15-Sept 14, 2018	HPC drafts initial ACO criteria proposal for stakeholder review
Sept 17-Oct 5, 2018	**Stakeholder engagement phase 1:** One-on-one meetings with ACOs, state agencies, and ACO convening with MHA to gather input
Oct 5-Oct 29, 2018	HPC revises proposal per phase 1 stakeholder input
Oct 29-Nov 28, 2018	**Stakeholder engagement phase 2:** One-on-one meetings with ACOs, state agencies, and consumer groups to gather additional input
Nov 28-Dec 17, 2018	HPC releases final proposal for public comment
Dec 17, 2018-Feb 2019	**Stakeholder engagement phase 3:** public comment period
January 23, 2019	**HPC listening session on ACO certification standards**
February, 2019	Final ACO Certification criteria launch for 2019

HPC

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- HPC Year in Review and Program Updates
- **Select Findings from the 2018 Cost Trends Report**

2018 Cost Trends Report: Presentation Outline

Topics			
Overview	**Utilization**	**Price**	**Total Spending**
▪ Trends in spending, affordability, and care delivery	▪ Trends ▪ Low value care ▪ Admissions from the ED	▪ Oncology drug prices ▪ Commercial prices compared to Medicare prices	▪ Total Medical Expenses by Provider Group ▪ Provider organization cohort study
			

HPC

Select Findings from the 2018 Cost Trends Report

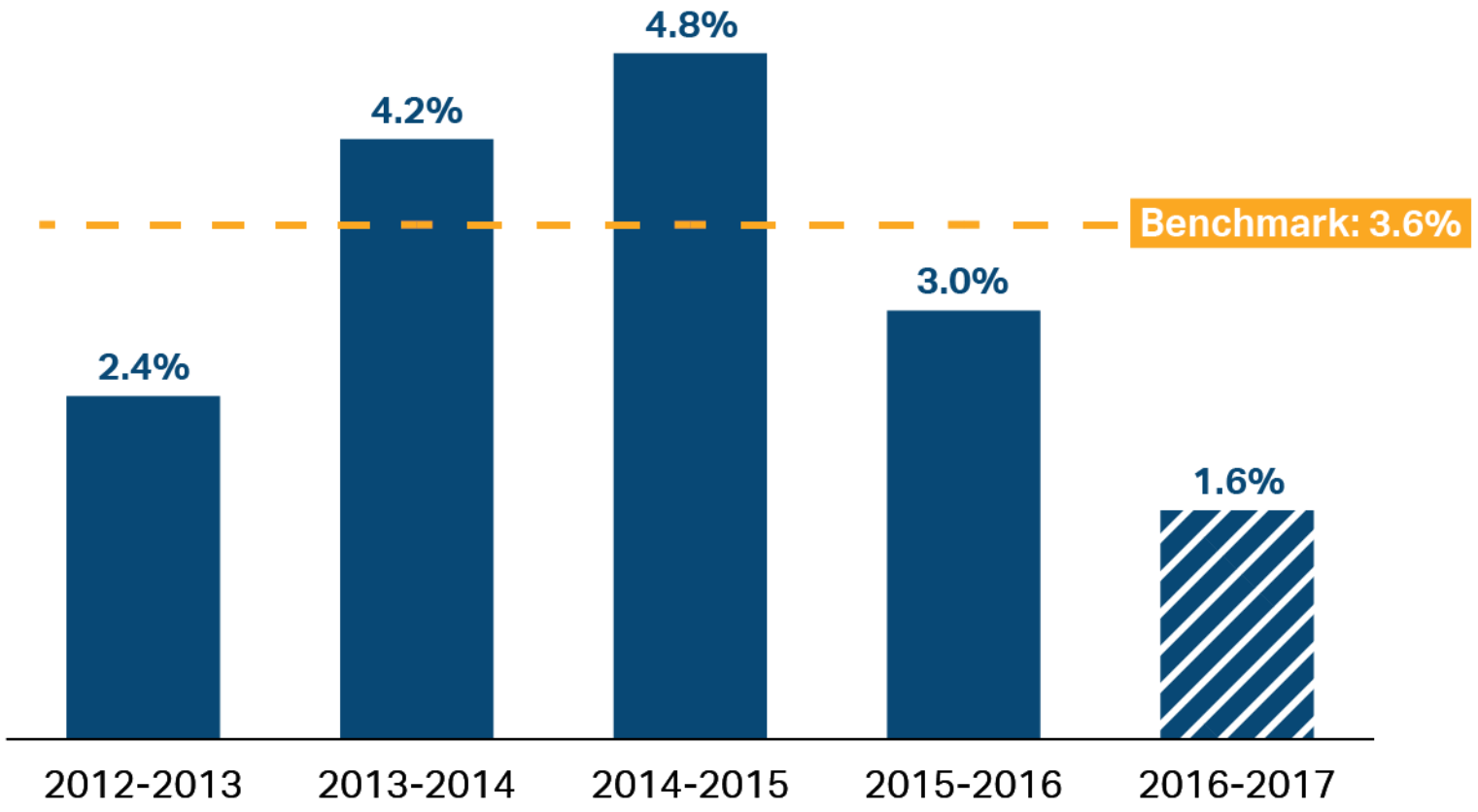
Topics			
Overview	**Utilization**	**Price**	**Total Spending**

Trends in spending, premiums, affordability, and payment methods

HPC

Growth in THCE per capita was 1.6% from 2016-2017, significantly below the health care cost growth benchmark

Annual growth in total health care expenditures per capita in Massachusetts

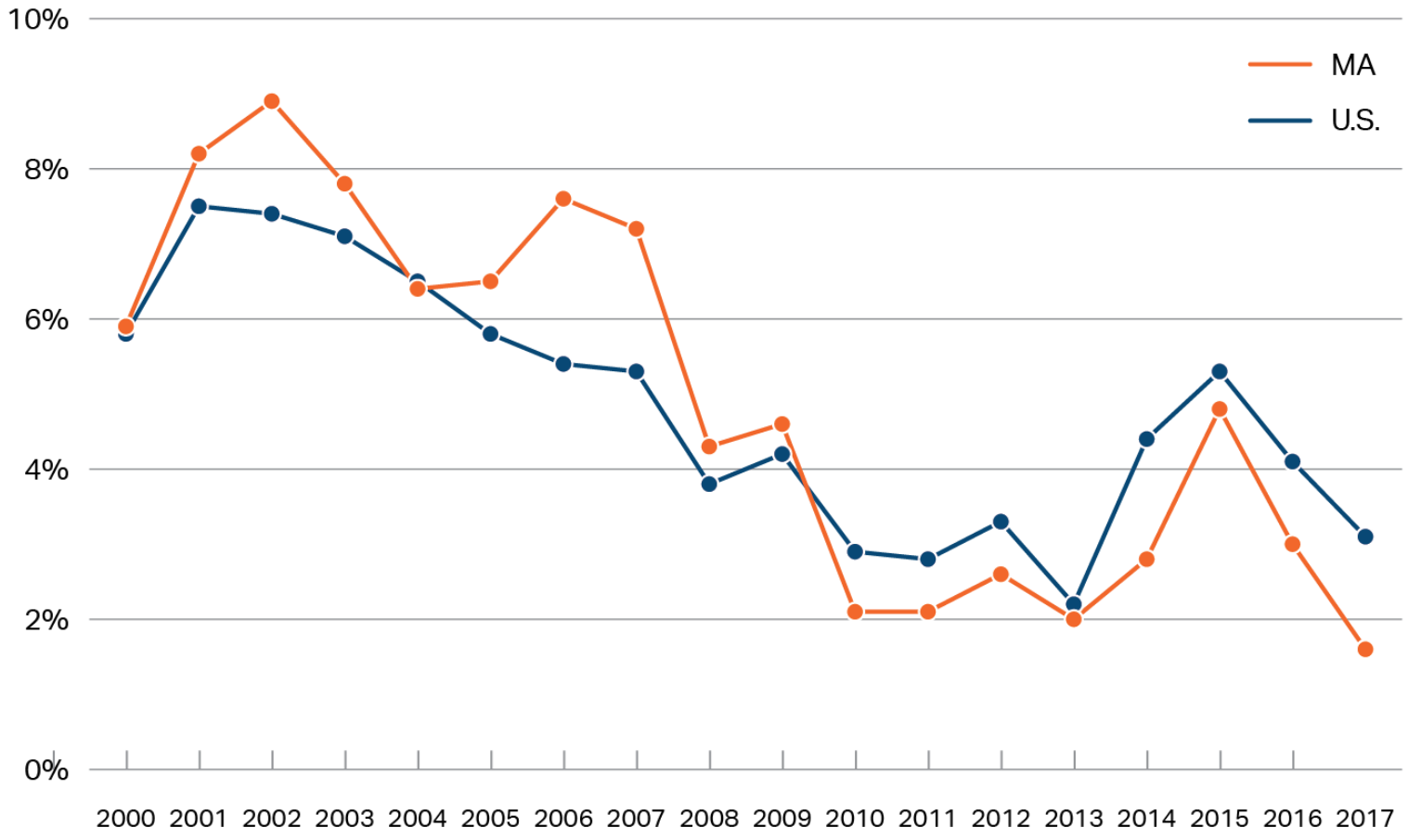


Annual growth averaged 3.2% between 2012 and 2017

Notes: 2016-2017 spending growth is preliminary.
Sources: Center for Health Information and Analysis Annual Report, 2018

In 2017, total health care spending growth in Massachusetts was well below the national rate, continuing a multi year trend

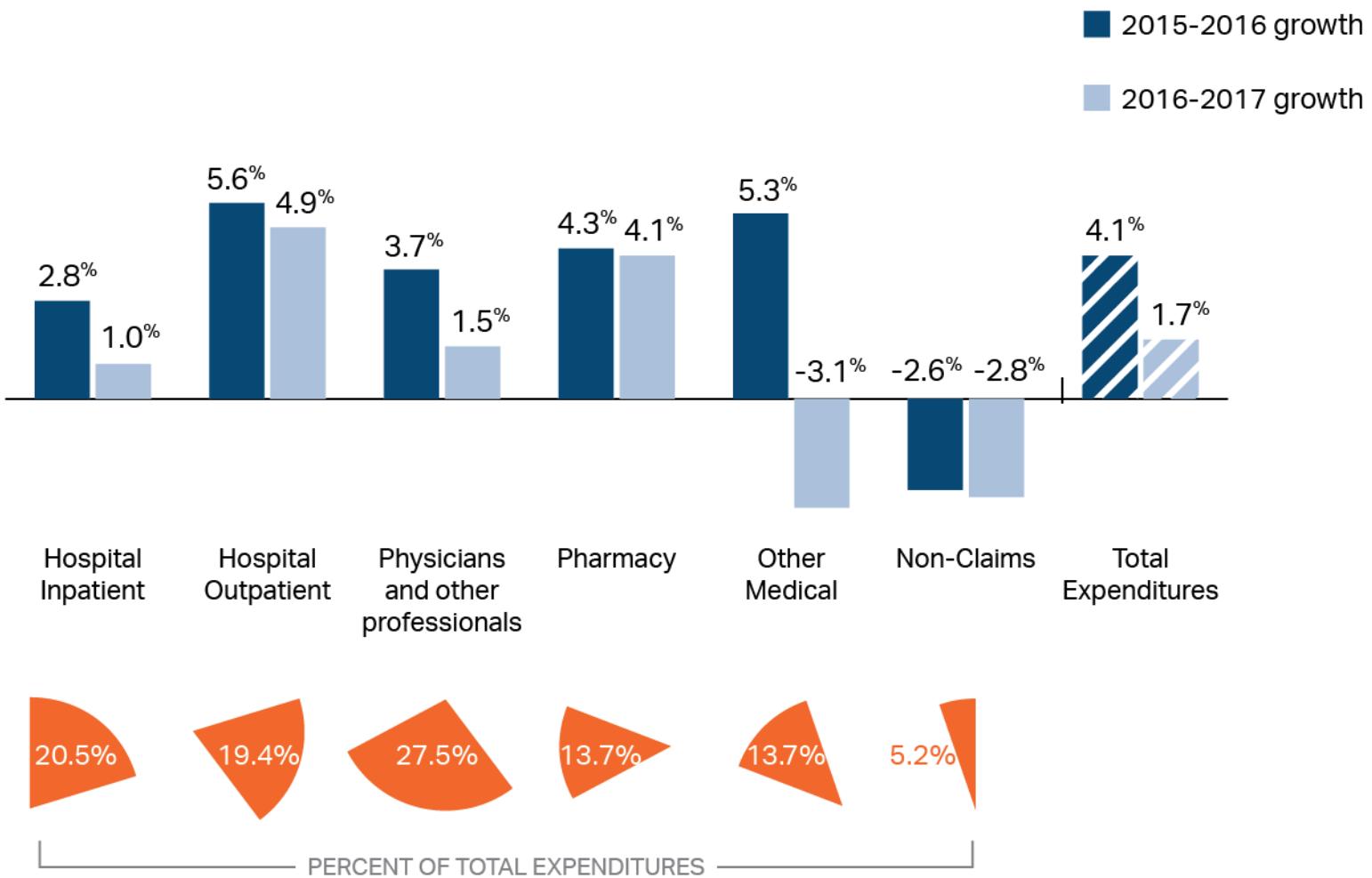
Annual growth in per-capita health care spending, MA and the U.S., 2000 – 2017



Notes: US data include Massachusetts.
Sources: Centers for Medicare and Medicaid Services National Healthcare Expenditure Accounts, Personal Health Care Expenditures Data (U.S. 2014-2017), and State Healthcare Expenditure Accounts (U.S. 1999-2014 and MA 1999-2014); Center for Health Information and Analysis Annual Report (MA 2014-2017)

Hospital outpatient and pharmacy spending were the fastest-growing categories in 2016 and 2017

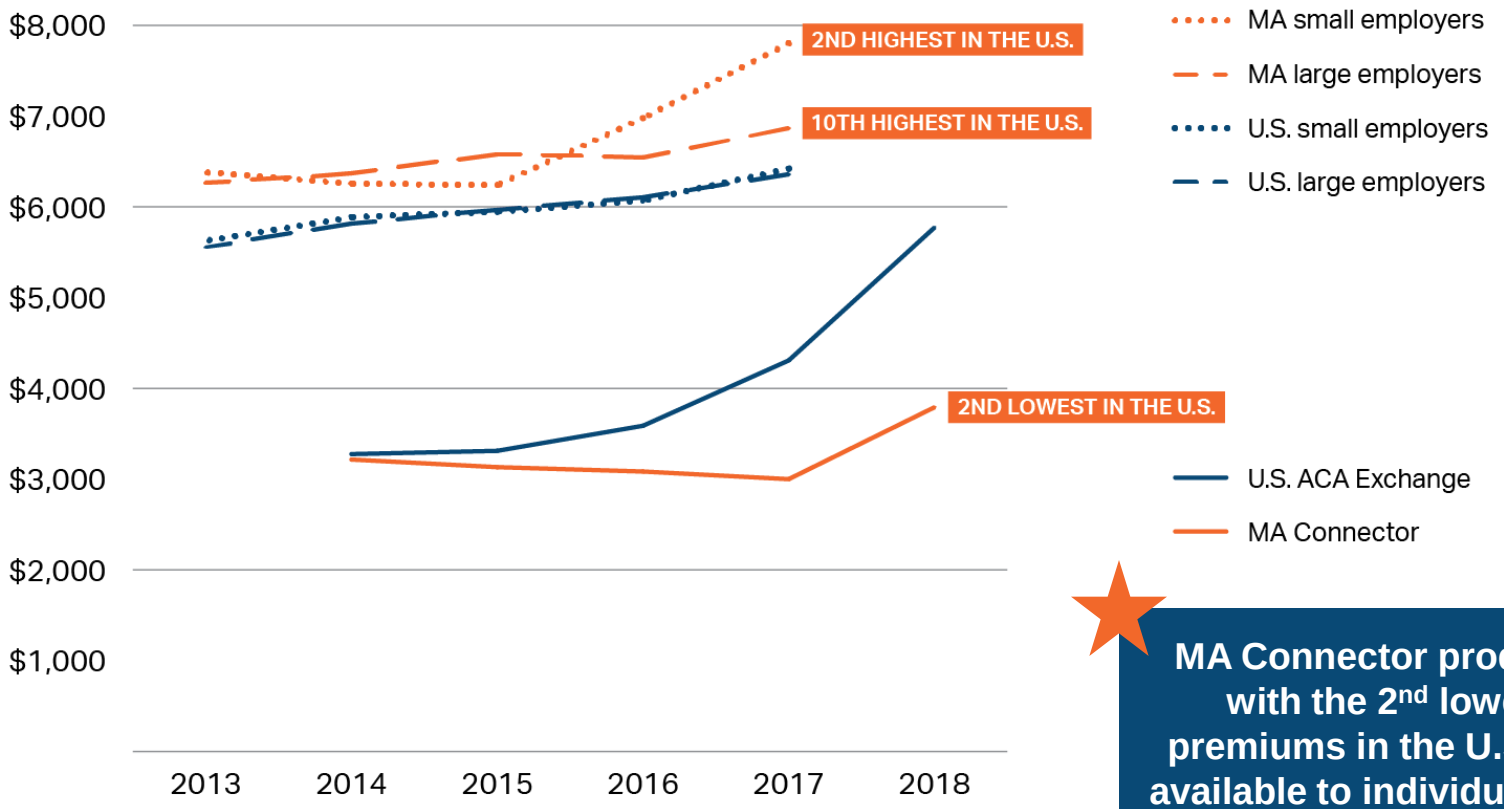
Rates of spending growth in Massachusetts in 2016 and 2017 by category, all payers



Notes: Total expenditures exclude net cost of private health insurance, VA and Health Safety Net. Pharmacy spending is net of rebates. Other medical category includes long-term care, dental and home health and community health. Non-claims spending represents capitation-based payments.
Source: Payer reported TME data to CHIA and other public sources; appears in Center for Health Information and Analysis Annual Report, 2018

Insurance premiums for large Massachusetts employers are 10th highest in the U.S. (down from 2nd highest in 2013), though premiums for small employers have risen recently

Annual premiums for single coverage in the employer market and average annual unsubsidized benchmark premium for a 40-year-old in the ACA Exchanges, MA and the U.S., 2013-2018



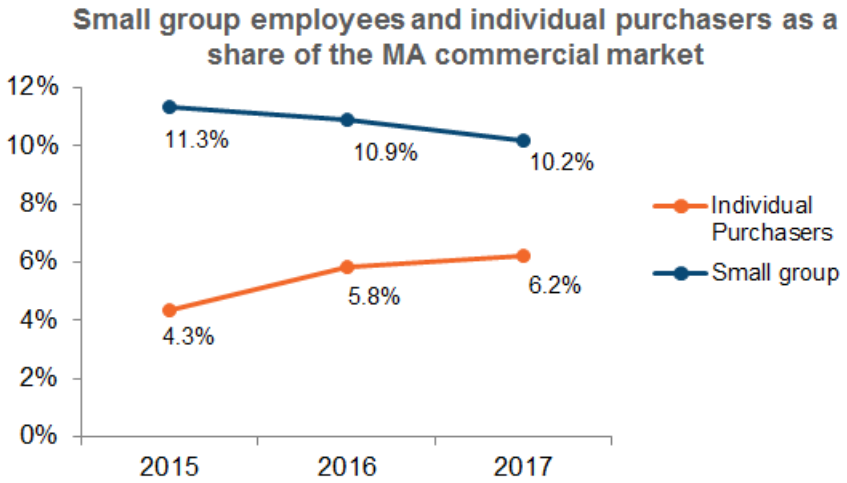
MA Connector products, with the 2nd lowest premiums in the U.S., are available to individuals and small employers

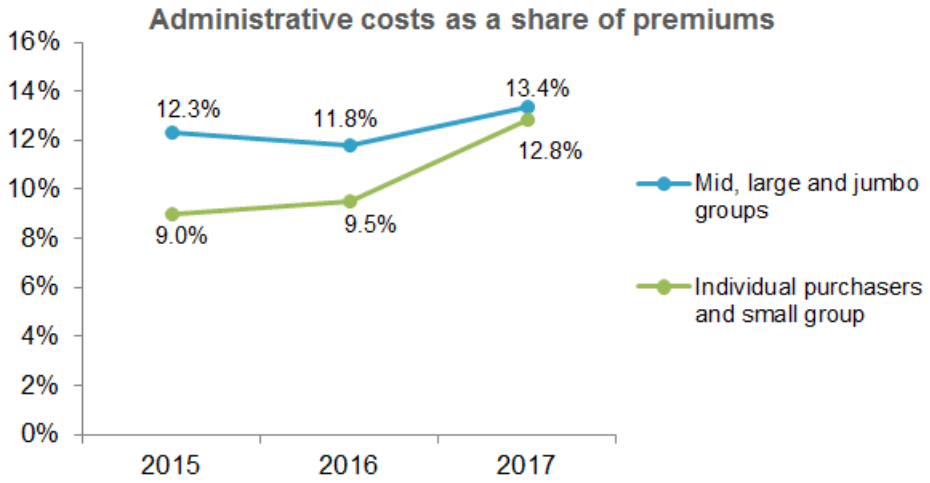
Notes: US data include Massachusetts. Employer premiums are based on the average premium according to a large sample of employers within each state. Small employers are those with less than 50 employees; large employers are those with 50 or more employees. Exchange data represent the weighted average annual premium for the second-lowest silver (Benchmark) plan based on county level data in each state. These plans have an actuarial value of 70%, compared to 85%-90% for a typical employer plan, and are thus not directly comparable to the employer plans without adjustment.

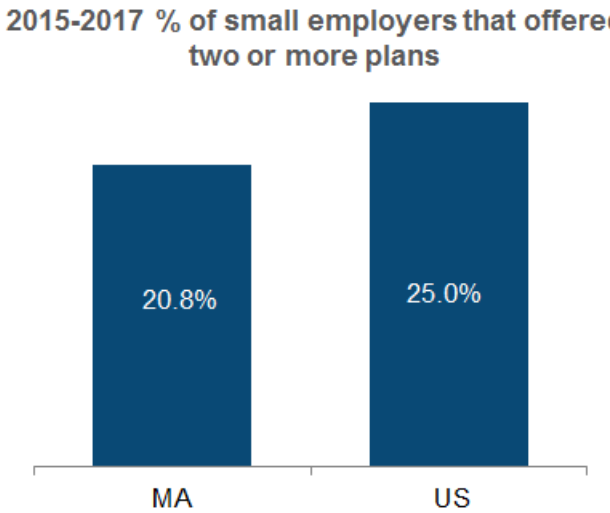
Sources: Kaiser Family Foundation analysis of premium data from healthcare.gov (marketplace premiums 2014-2018); US Agency for Healthcare Quality, Medical Expenditure Panel Survey (commercial premiums 2013-2017)

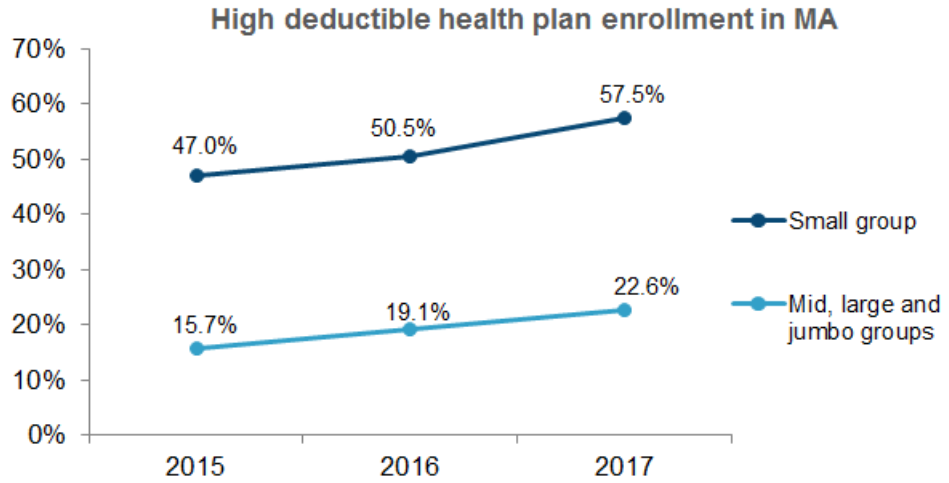
HPC

Characteristics of the Massachusetts small group insurance market: limited plan choice, rising deductibles, growing administrative costs, and declining enrollment







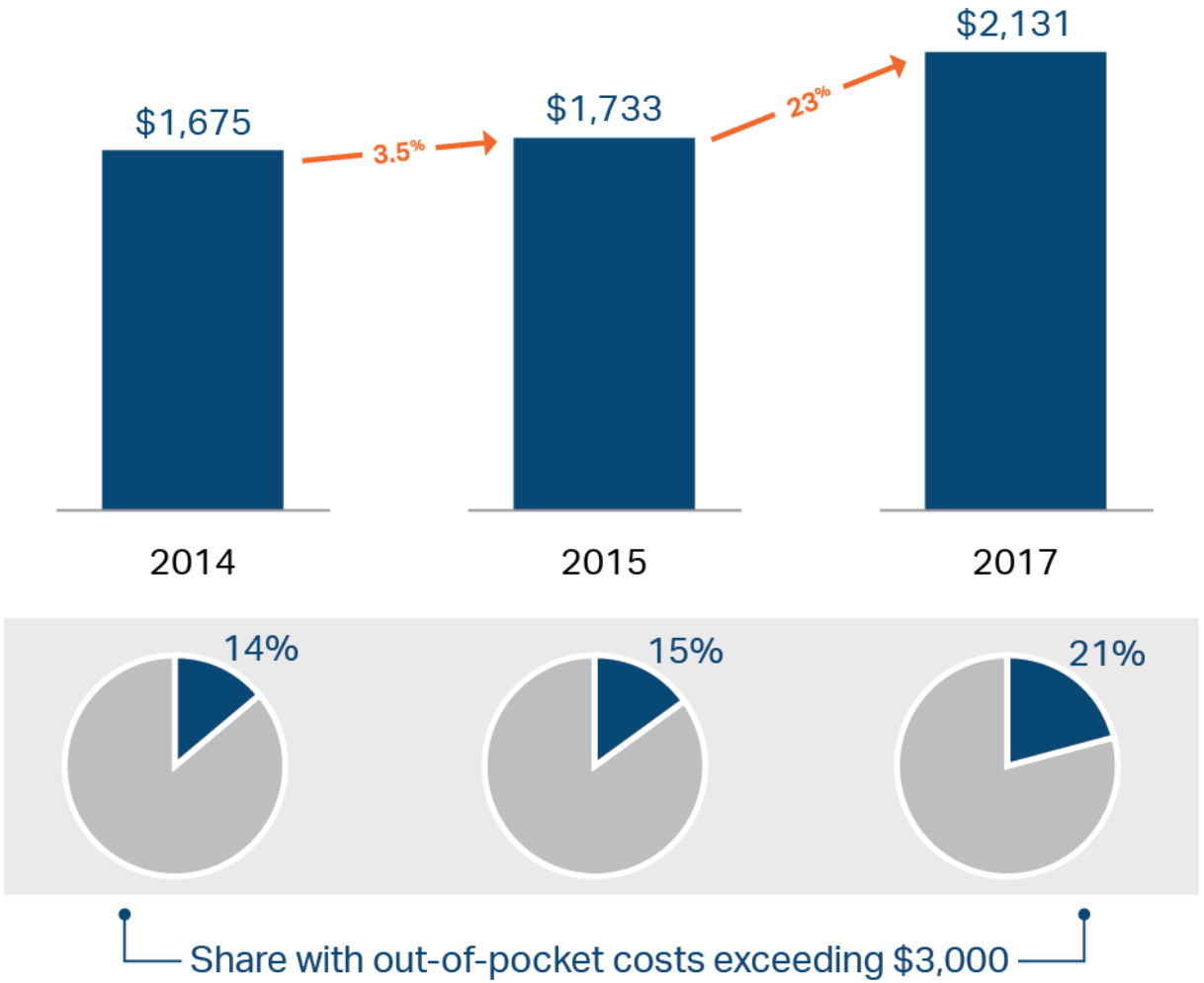


Notes: Small, mid-size, large and jumbo firms are defined as those with 1- 50 employees, 51-100 employees, 101-499 employees. and 500+ employees, respectively. High deductible health plans (HDHPs) are defined as those with an individual deductible greater than or equal to $1,300 for 2015-2017 (for the most preferred network or tier, if applicable). Premiums are pre Medical Loss Ratio rebates adjustment, as those are a component of administrative costs. Administrative costs for individual purchasers and small group are before 3R transfers. 3R transfers do not apply to larger groups.

Sources: Agency for Healthcare Research and Quality Medical Expenditure Survey (insurance offer rates 2015 - 2017); Center for Health Information and Analysis Coverage and Costs Databook 2018

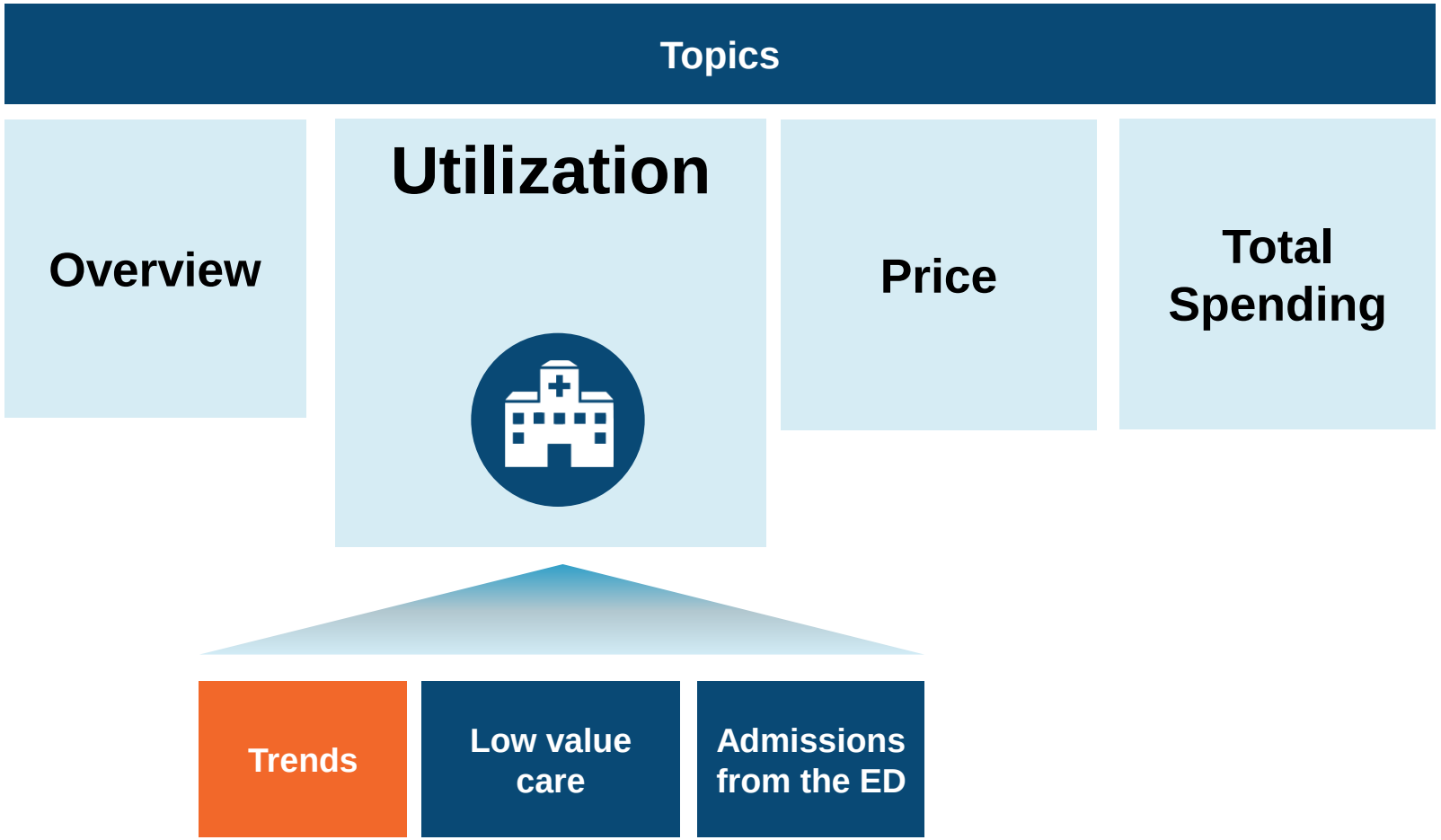
Commercially insured residents experienced a sharp increase in out-of-pocket spending between 2015 and 2017

Out-of-pocket spending per year for enrollees with commercial insurance, 2014, 2015 and 2017



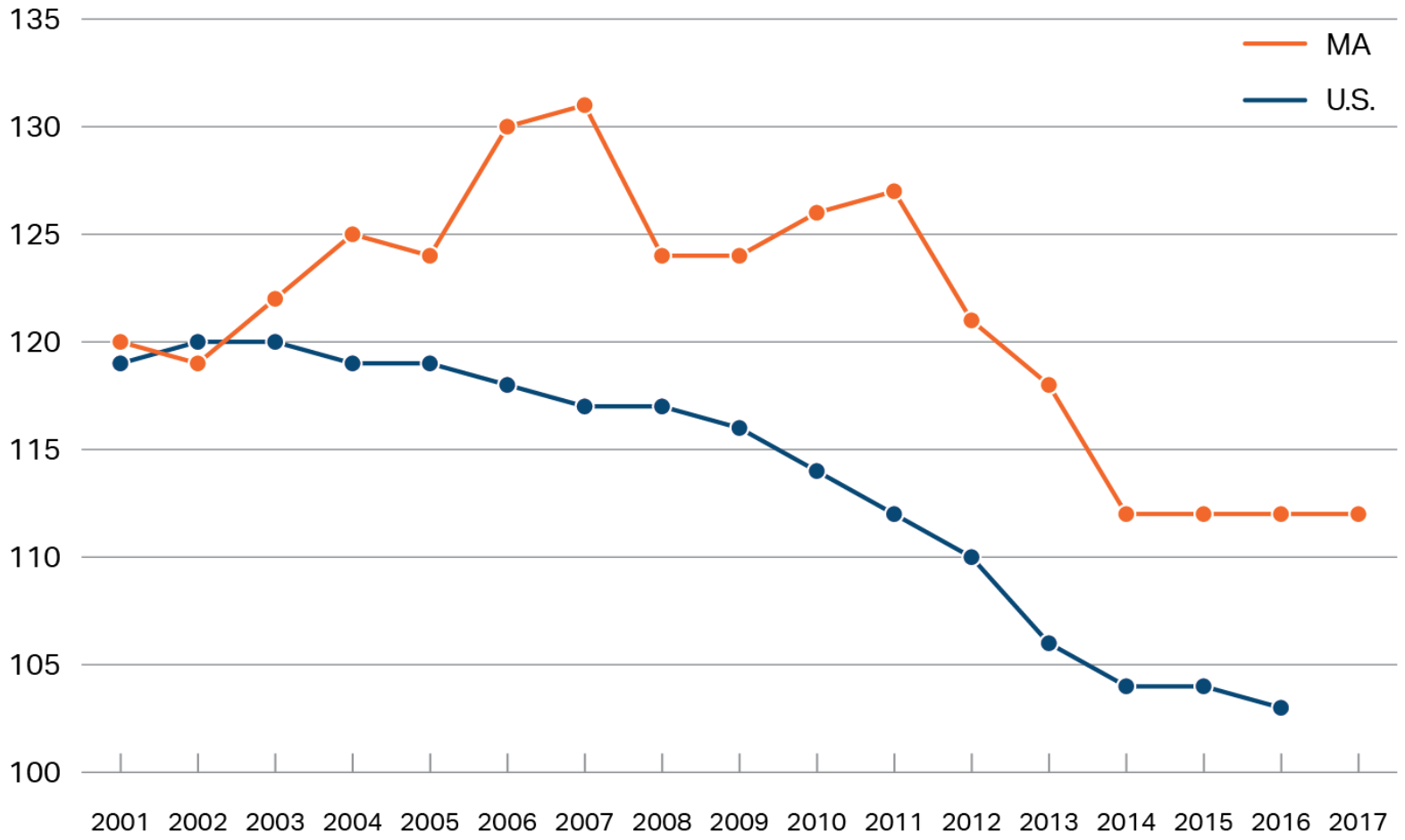
Notes: Out-of-pocket spending is defined as the amount of health care costs a respondent paid in the past 12 months, that was not covered by any insurance or special assistance they may have. Averages shown are conditional on having non-zero out of pocket spending to maintain data consistency across years of survey data.
Sources: HPC analysis of Massachusetts Health Interview Survey, 2014-2017

Select Findings from the 2018 Cost Trends Report



Overall Massachusetts inpatient hospital use is unchanged since 2014 and continues to exceed the U.S. average

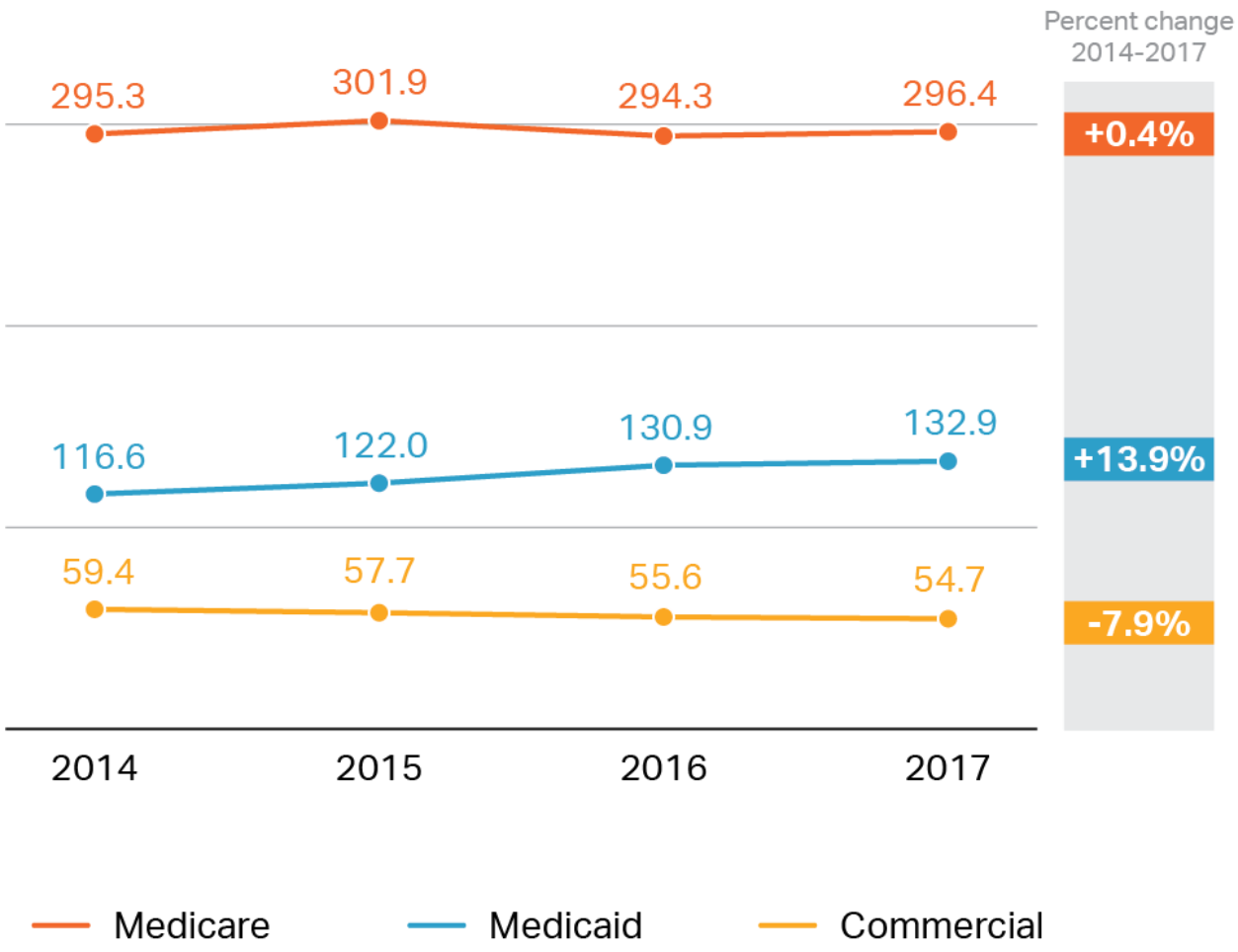
Inpatient hospital discharges per 1,000 residents, Massachusetts and the U.S., 2001-2017



Notes: US data include Massachusetts. Massachusetts' 2017 data is based on HPC's analysis of Center for Health Information and Analysis discharge data.
Sources: Kaiser Family Foundation analysis of American Hospital Association data (U.S., 2001-2016), HPC analysis of Center for Health Information and Analysis Hospital Inpatient Database (MA 2017)

Inpatient hospital use has declined 8% among commercially-insured residents since 2014

Inpatient hospital discharges per 1,000 enrollees by payer, 2014 - 2017

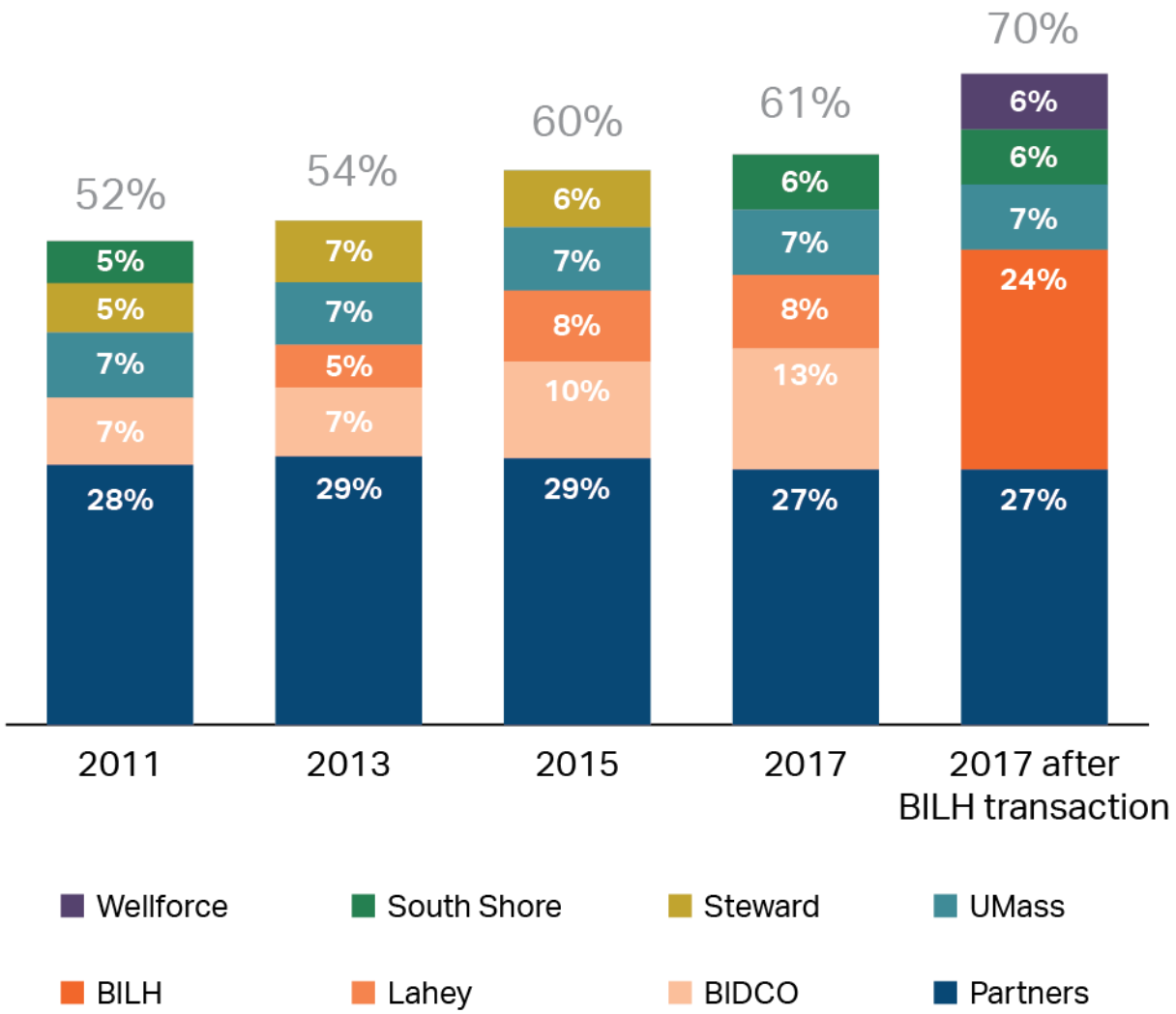


Notes: Out of state residents are excluded from the analysis.

Sources: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database (2014 - 2017). Center for Health Information and Analysis Enrollment Databook 2018.

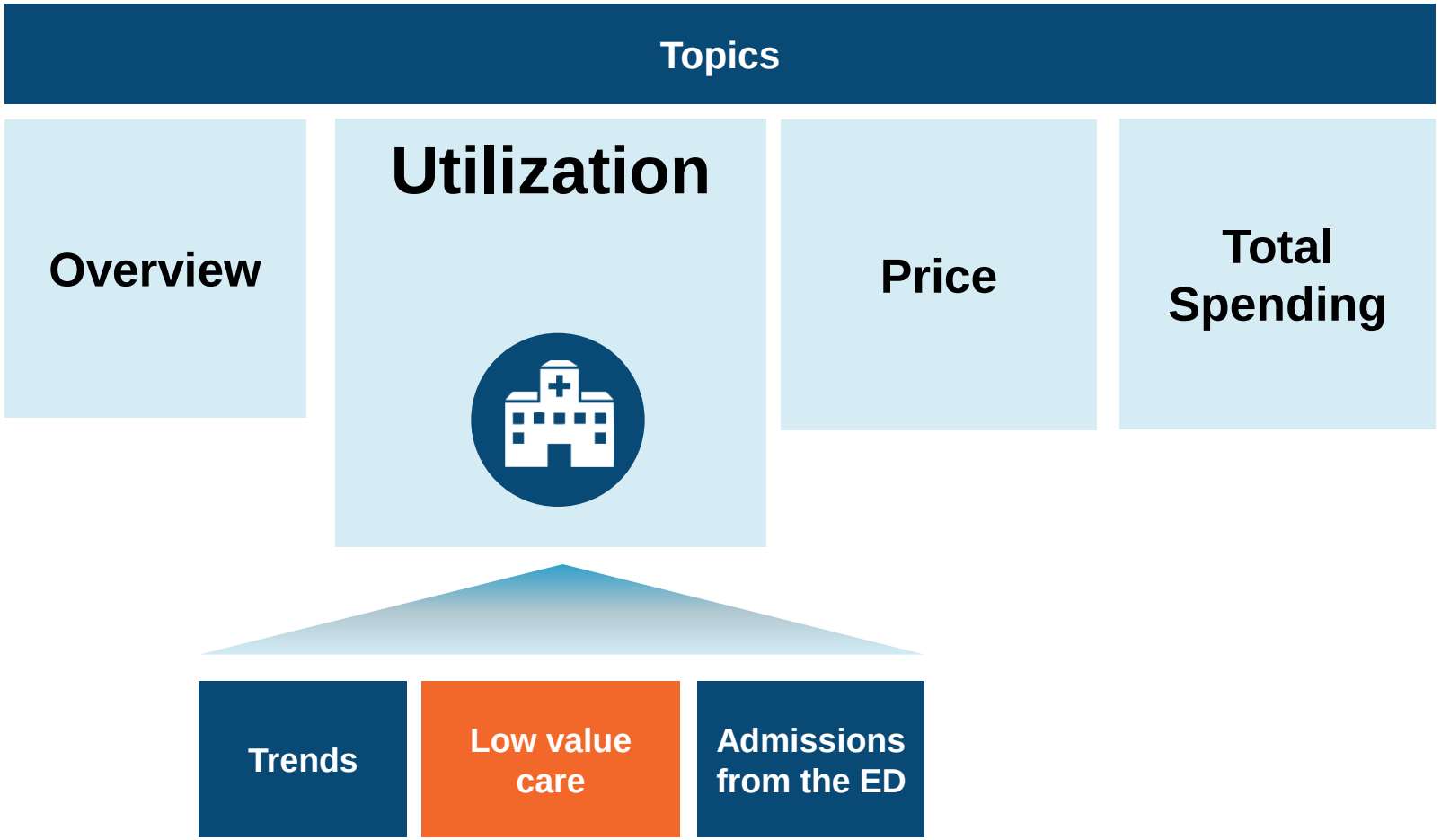
After the formation of Beth Israel Lahey Health, the top five health systems will account for 70% of all commercial inpatient stays statewide, continuing a multi year trend of increasing concentration

Share of commercial inpatient discharges in the five largest hospital systems in each year, 2011 - 2017



Notes: Percentages represent each system's share of commercial inpatient hospital discharges provided in Massachusetts for general acute care services. Discharges for normal newborns, non-acute services, and out-of-state patients are excluded.
Sources: HPC analysis of Center for Health Information and Analysis Hospital Inpatient Discharge Database (2011-2017)

Select Findings from the 2018 Cost Trends Report



Low Value Care (LVC) in the Commonwealth: Background

- **Background:** Choosing Wisely, an initiative of the American Board of Internal Medicine (ABIM) Foundation, convened specialist organizations in 2012 to select procedures in their fields that had little to no value to patients
- **Aim:**
  - Identify instances of provision of certain low-value care services in the Massachusetts APCD
  - Quantify the extent of these services, overall and by provider group

Unnecessary screening tests	Unnecessary Imaging
Vitamin D deficiency screening	Head imaging for uncomplicated headache
Homocysteine screening	Back imaging for patients with non-specific low back pain
Carotid artery disease screening for those at low-risk	Head imaging in the evaluation of syncope
Pap smears for women under 21	Electroencephalogram (EEG) for uncomplicated headache
Unnecessary pre-operative testing	Imaging for diagnosis of plantar fasciitis/heel pain
Cardiac stress test before low-risk, non-cardiac surgery	Neuroimaging in children with simple febrile seizure
Pulmonary function test (PFT) for low and intermediate risk surgery	Sinus CT for simple sinusitis
Unnecessary procedures	Abdominal CT with and without contrast
Spinal injections for low-back pain	Thorax CT with and without contrast
Arthroscopic surgery for knee osteoarthritis	**Inappropriate prescribing**
IVC Filters	Inappropriate antibiotics for sinusitis, pharyngitis, suppurative otitis media, and bronchitis

Notes: ABIM is the American Board of Internal Medicine. See Schwartz, Aaron L., et al. "Measuring low-value care in Medicare." *JAMA internal medicine* 174.7 (2014): 1067-1076.

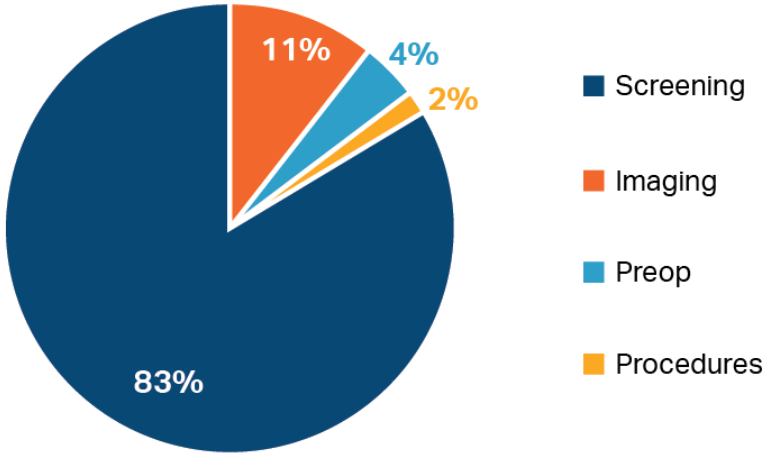
Sources: Choosing Wisely http://www.choosingwisely.org/

Low Value Care: Key Findings

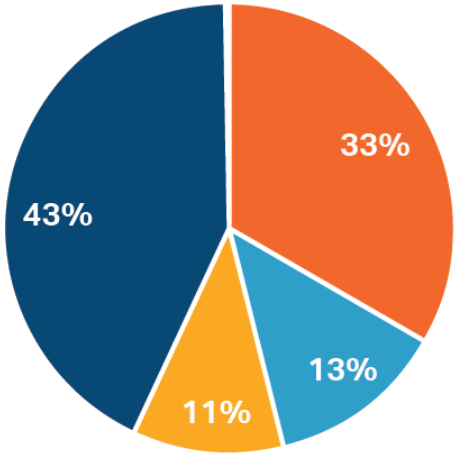
Among the three major commercial health plans in the Commonwealth:

- **485,377** of 2.36 million members (**20.5%**) received at least one low value care service in a 2-year time period
- All 19 low value care procedures accounted for **$80.0 million ($12.2 million out of pocket)** in health care spending in the 2 year period between 2013-2015*

Total LVC encounters for 19 measures, commercial APCD 2013-15[1]



Total LVC spending for 19 measures, commercial APCD 2013-15[1]



[1]n=626,015 encounters

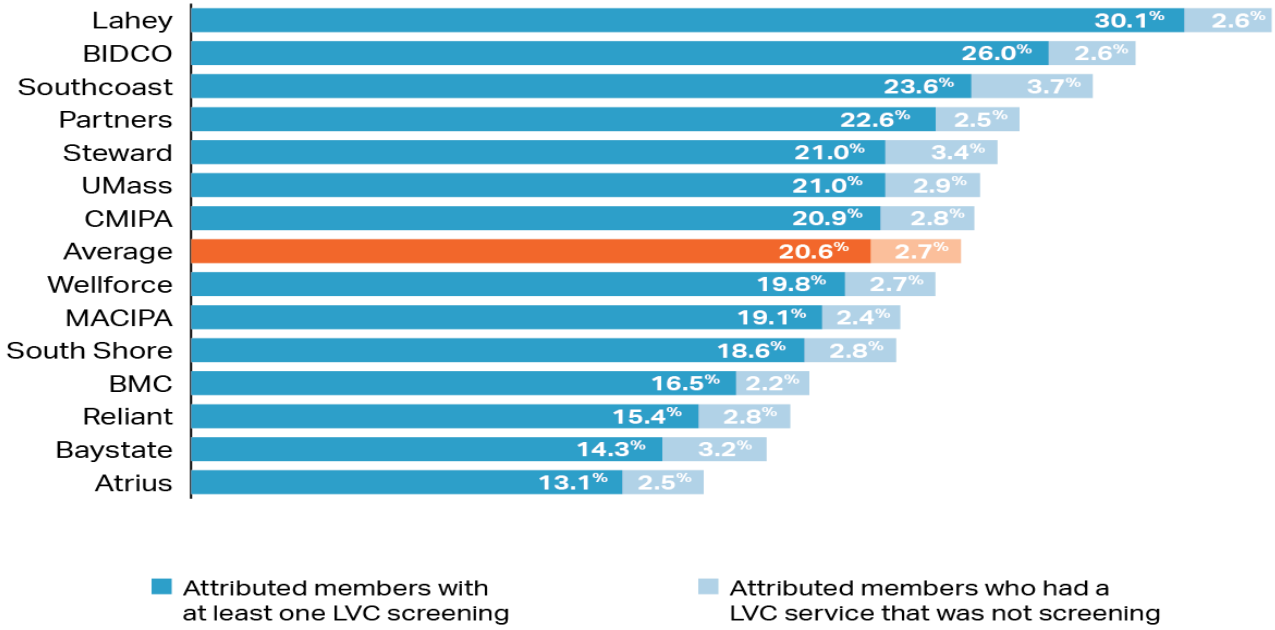
Notes: This timeframe was selected because much of the literature is based on ICD-9 diagnoses and several measures required a "look-back" period. *For thorax and abdomen CT with and without contrast, only the marginal cost of the procedure was counted that was in excess of either with or without contrast.

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2013-2015

Variation in rates of low value care by provider organization are driven primarily by low value screening

- 1.6 million members were attributed to one of the top 14 largest provider organizations based on their primary care provider
- Members experiencing at least one low value care service by attributed provider organization varied from 15.5% (Atrius) to 32.7% (Lahey)
- If low value screening is excluded, member rates of receiving low value care ranged from 2.2% (BMC) to 3.7% (Southcoast)

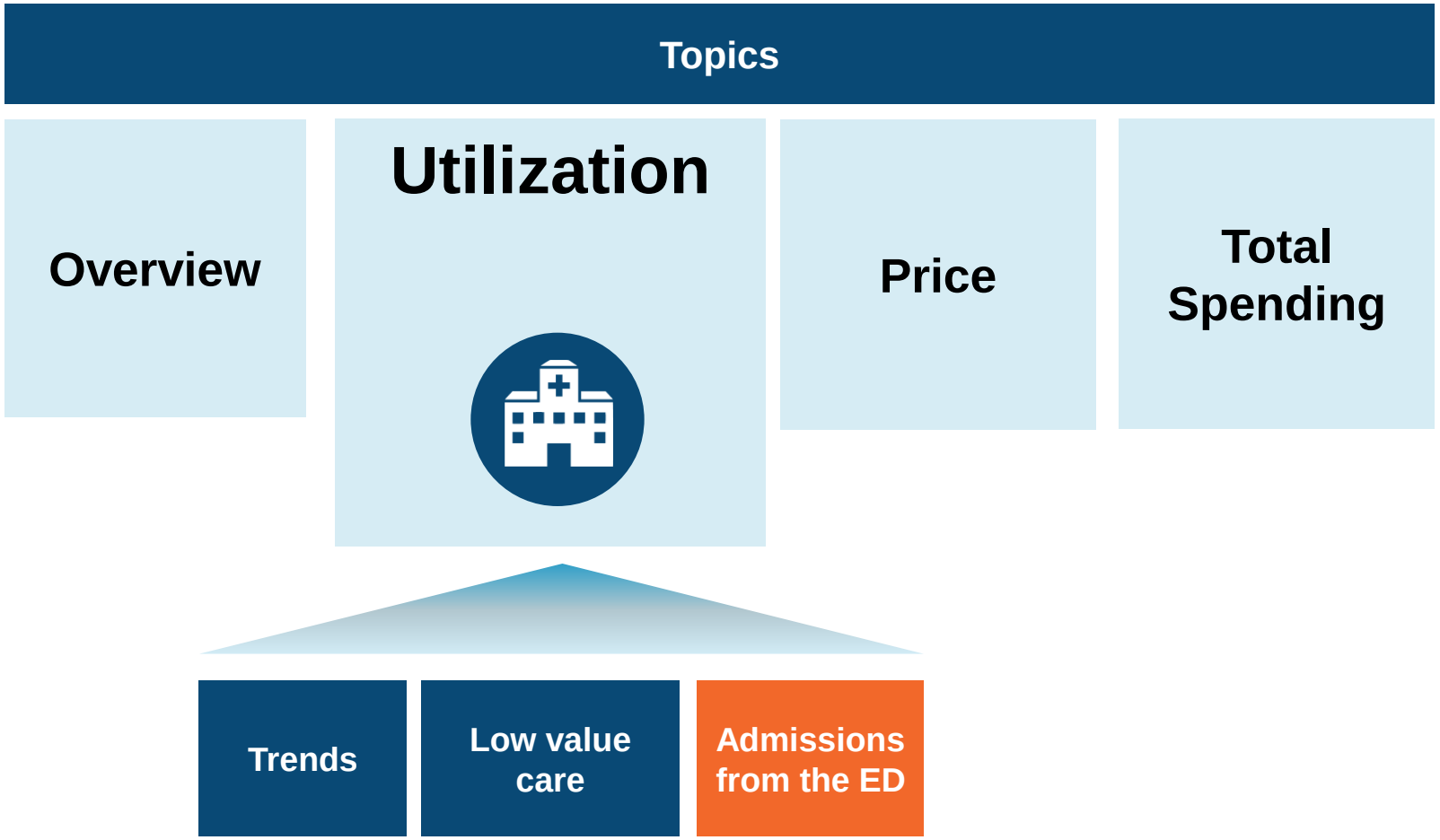
Attributed members with at least one low value care service by provider organization



Notes: Analysis uses HPC provider attribution methodology to assign patients to a provider organization. A total of 1.6 million members were attributed to 1 of the 14 top provider organizations. See CTR 2017 for more information on this methodology.

Sources: Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2013-2015

Select Findings from the 2018 Cost Trends Report



Hospital Admissions from the Emergency Department (ED): Background

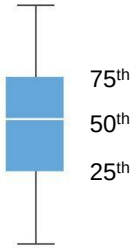
- ED visits are the main gateway to an inpatient admission, where the decision to admit a patient is made by an ED's attending physicians and other personnel and can be influenced by social and administrative as well as clinical factors. Nationally, ~50% of inpatient stays originate in the ED.
- Research shows that there is significant variation by hospital and by condition in admission rates. This literature, recent controversy (see notes), as well as discussions with stakeholders indicate that this variation *may be a source of potentially avoidable health care costs*.
- The cost difference between an average ED visit and an inpatient admission is significant, typically a factor of 10 or more (~$10,000-20,000 vs ~$1,000-$1,500).

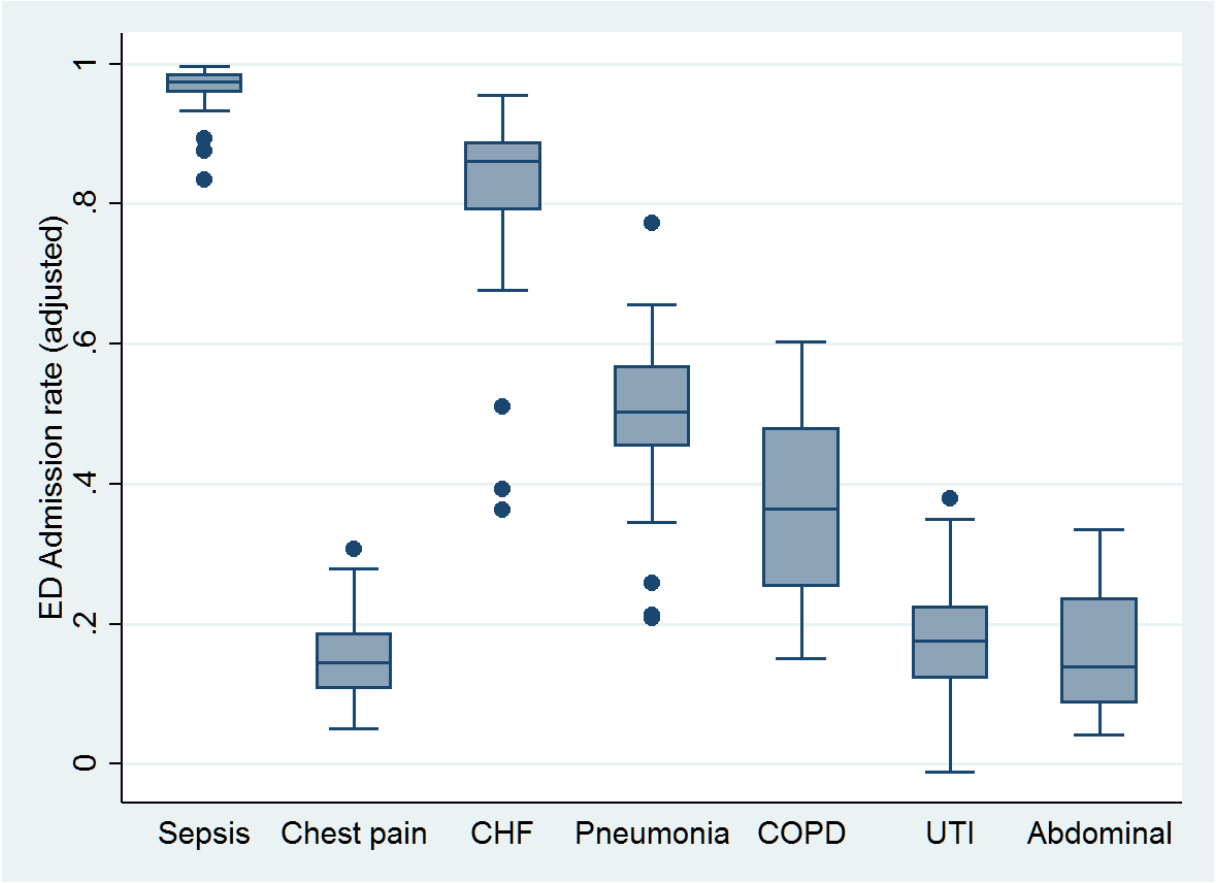
By exploring inpatient admissions from the ED among Massachusetts hospitals, the HPC aims to identify variation in admission by hospital, hospital type, and condition in order to understand if there is the potential for reducing unnecessary inpatient stays.

Notes: Beginning In 2011, Health Management Associates, Inc. of Naples, FL ("HMA") was accused of using admissions quotas (15-20% overall; 50% for Medicare patients) at the hospitals they managed in order to boost their profitability. This led to a class-action suit on behalf of stock holders, a *60 Minutes* expose, as well as a DOJ investigation and eventual criminal charges. In September 2018, HMA's parent organization settled with the DOJ for more $260 million. The investigation also found that HMA had paid physicians various forms of kickbacks in exchange for medical referrals.

Whether hospitals admit ED patients for inpatient stays varies widely by medical condition

Distribution of ED admission rates by hospital for selected conditions, 2016





Percentage point (p.p.) difference between 75th and 25th percentile (Interquartile range)	**2 p.p.**	**8 p.p.**	**9 p.p.**	**11 p.p.**	**21 p.p.**	**9 p.p.**	**15 p.p.**

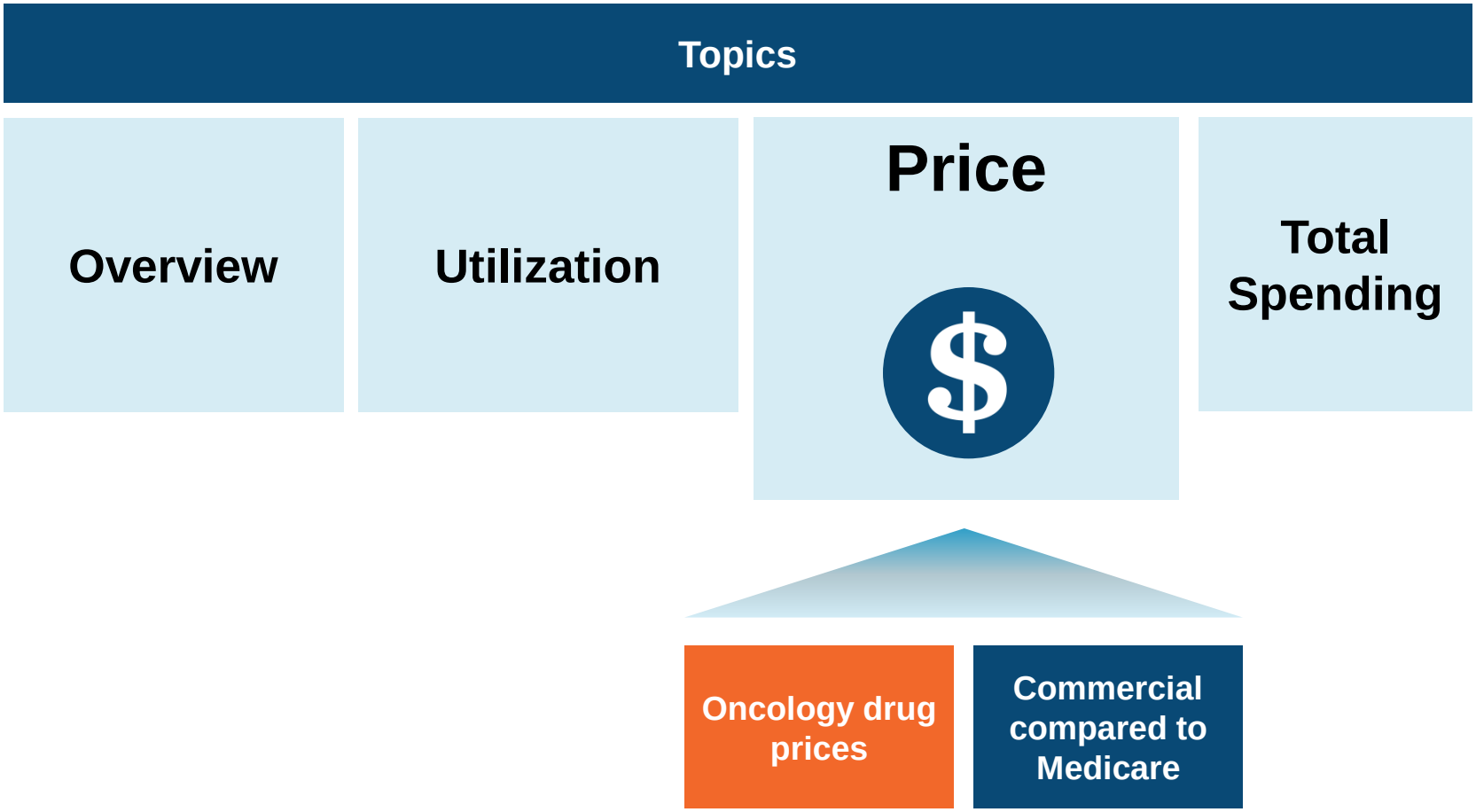
Notes: All admission rates are adjusted for patient characteristics (age, gender, race, payer, income, and drive time to nearest ED). Whiskers in the box plot are defined as the highest observed value that is within the 75th percentile plus 1.5* the interquartile range on the upper end and similar for the lower end. Dots represent outliers whose values fall outside of the whiskers. Admission rates include transfers to other hospitals and observation stays greater than 48 hours.

Sources: HPC analysis of Center for Health Information and Analysis discharge data (HIDD, EDD, OOD, 2016)

Hospital Admissions from the ED: Key Findings

- In 2016, **23% of all medical ED visits** in Massachusetts resulted in either a transfer, long observation stay, or inpatient admission
- Admission rates by hospital varied considerably - from **12% to 30%**
- Within certain clinical groupings, such as septicemia, there was little variation in whether a patient would be admitted
- Other conditions, such as **chest pain and Chronic Obstructive Pulmonary Disease (COPD)**, had significant variation indicating that there may be more discretion in admitting practices or other unobserved factors
- Hospitals with high admission rates for some conditions tended to have **high rates for other conditions**
- Hospitals with low admission rates **did not** tend to have more frequent revisit rates among those patients

Select Findings from the 2018 Cost Trends Report



Oncology Drug Prices: Background

Oncology Drug Costs

- Oncology drugs represent the highest drug expenditure by therapeutic class in both Massachusetts and the U.S.
  - $700 million in Massachusetts in 2014, up 12% from 2013
- Spending is expected to increase as hundreds of late phase oncology therapies are currently in the global pipeline

Injection Chemotherapy Drug Pricing

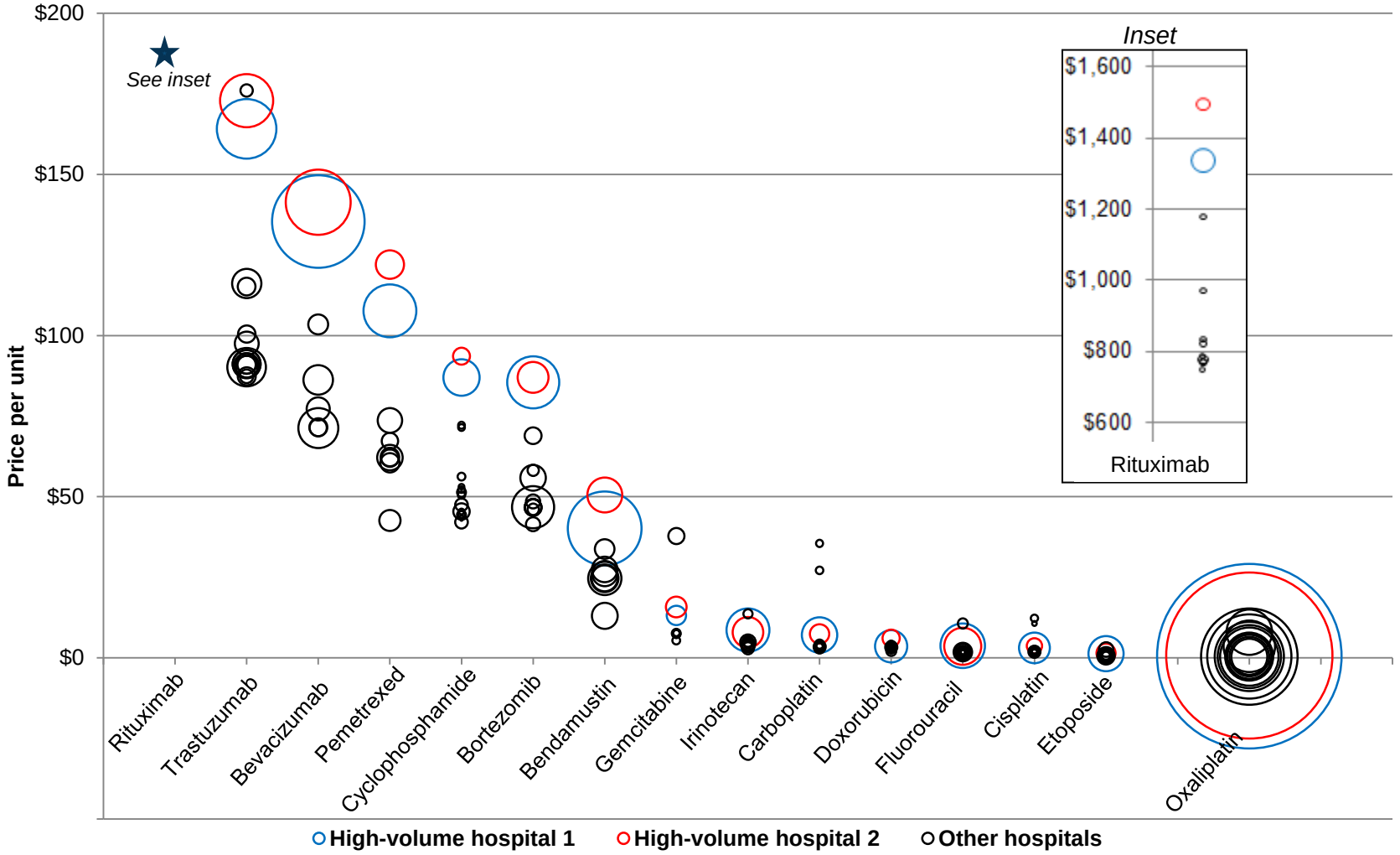
- Chemotherapy drugs are typically administered by injection and thus, are typically covered under a patient's medical benefit, rather than the pharmacy benefit
- The provider purchases a stock of the drug from the manufacturer or wholesaler and administers the drug to the patient in a hospital or physician office. The payer reimburses the provider for both the acquisition and administration of the drug.
  - Prices are negotiated between the provider and the payer

Oncology Drug Prices: Approach

- The HPC examined variation in prices and utilization of injectable chemotherapy drugs
- The HPC analyzed hospital drug prices and utilization for the highest volume injectable chemotherapy drugs in 2016, defined as drugs for which there were more than 10 claims in at least 10 hospitals in 2016, among two of the state's largest commercial payers, Blue Cross Blue Shield of Massachusetts and Tufts Health Plan
  - Harvard Pilgrim Health Care was excluded due to data anomalies
  - This definition resulted in set of 15 injectable chemotherapy drugs

Prices vary substantially for the most common chemotherapy drugs, with volume concentrated in the highest priced hospitals

Variation by hospital in drug unit prices and volume for commonly used chemotherapy drugs, 2016



Notes: Data include Blue Cross Blue Shield of Massachusetts and Tufts Health Plan claims. Sample includes all injectable chemotherapy drugs for which there were more than 10 claims in at least 10 hospitals in 2016. Each bubble represents one hospital in Massachusetts. The area of each bubble is scaled by the volume in total number of units administered by each hospital. Prices represent volume-weighted averages of claims. Claims from Harvard Pilgrim Health Care were excluded due to coding anomalies.

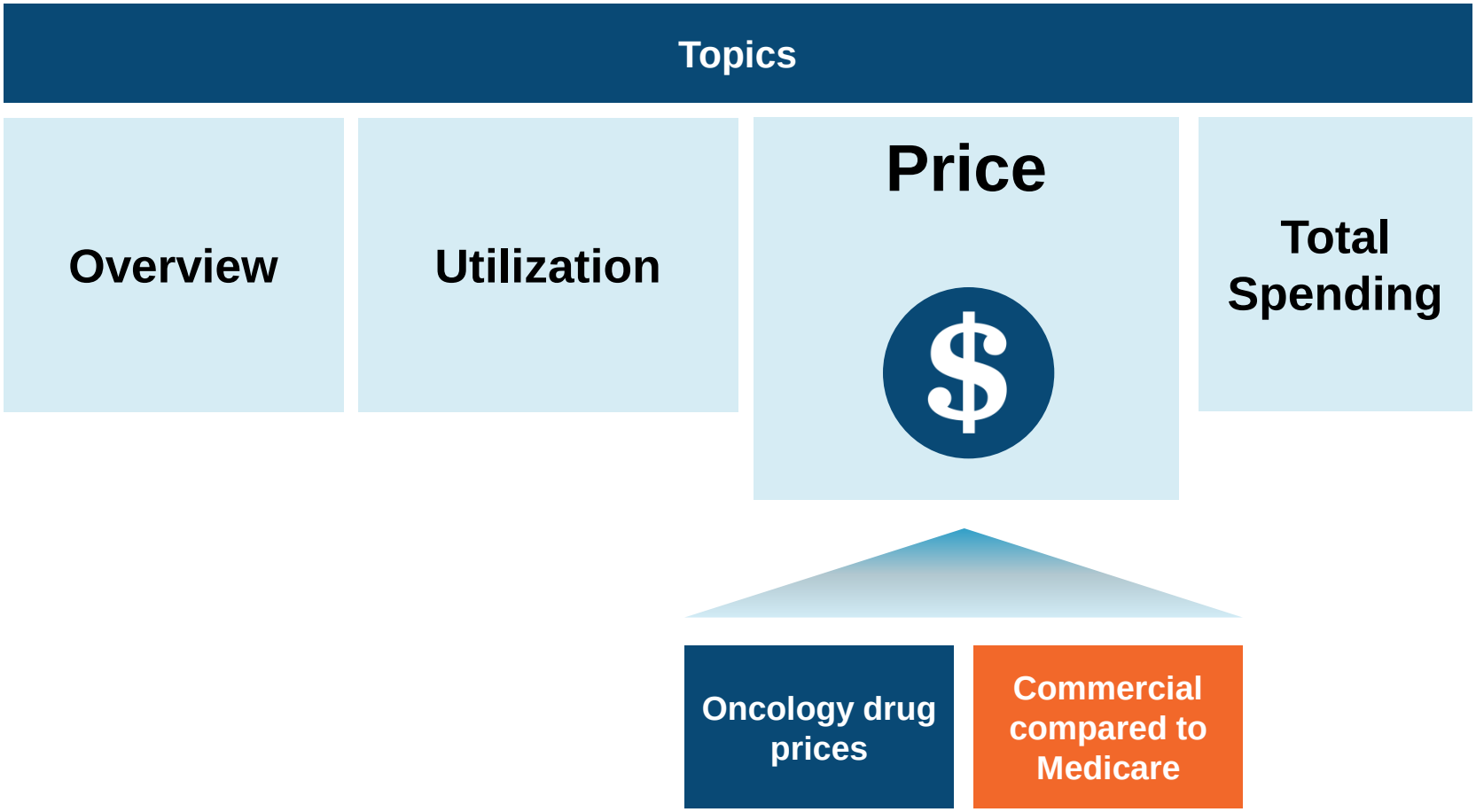
Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2016

Oncology Drug Prices: Key Findings

- For 14 of the 15 drugs examined, the price per unit at the highest-priced hospital was more than **double the price** per unit at the lowest-priced hospital
- Volume was skewed towards the highest priced hospitals
  - 40% of units administered were priced more than 50% above the median price per drug

- The two hospitals that billed the largest volume of these drugs consistently received the highest prices. For the 15 drugs examined, these two hospitals billed 55% of total units and 54% of total claims
- On average, these two hospitals had prices per unit that were **71% and 92% higher** than the median drug price, respectively

Select Findings from the 2018 Cost Trends Report



Commercial Prices: Background and Approach

- **Background:** Medicare prices serve as an important anchor in price comparisons, negotiations and in some cases, out of network prices. Commercial prices relative to Medicare prices facilitate comparisons with the rest of the US. Commercial price **growth** is a key factor in premium growth and meeting the state's benchmark
- **Aim:** Understand differences in commercial prices relative to Medicare prices in the Commonwealth, both at a point in time, and trends over time
- **Approach:** Compare prices for common services in the Massachusetts APCD (2014-2016 data) to Medicare payments for the same services
- **Data:** 2014-2016 APCD data from Blue Cross, Tufts, and Harvard Pilgrim compared to Medicare administered prices. Data were adjusted for outlier payments and outlier claims or those with invalid prices were excluded

By comparing commercial prices to Medicare using the APCD, the HPC aims to quantify the sometimes significant differences in payment for comparable services. By identifying commercial price growth over time, the HPC aims to highlight the impact of price growth on total spending.

MA has much higher utilization of teaching hospitals, contributing to average Medicare hospital prices that are among the highest in the country

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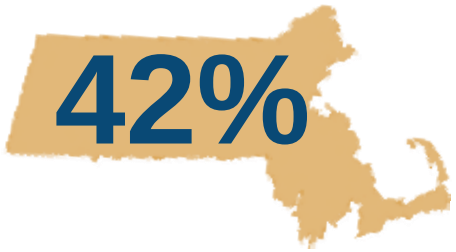
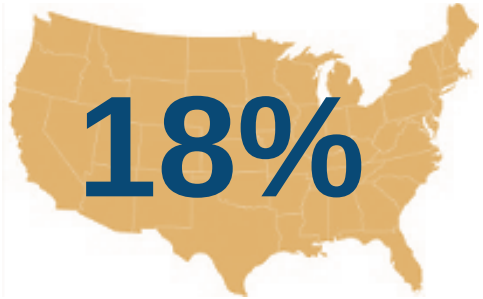


of Medicare discharges in Massachusetts were in major teaching hospitals in 2016



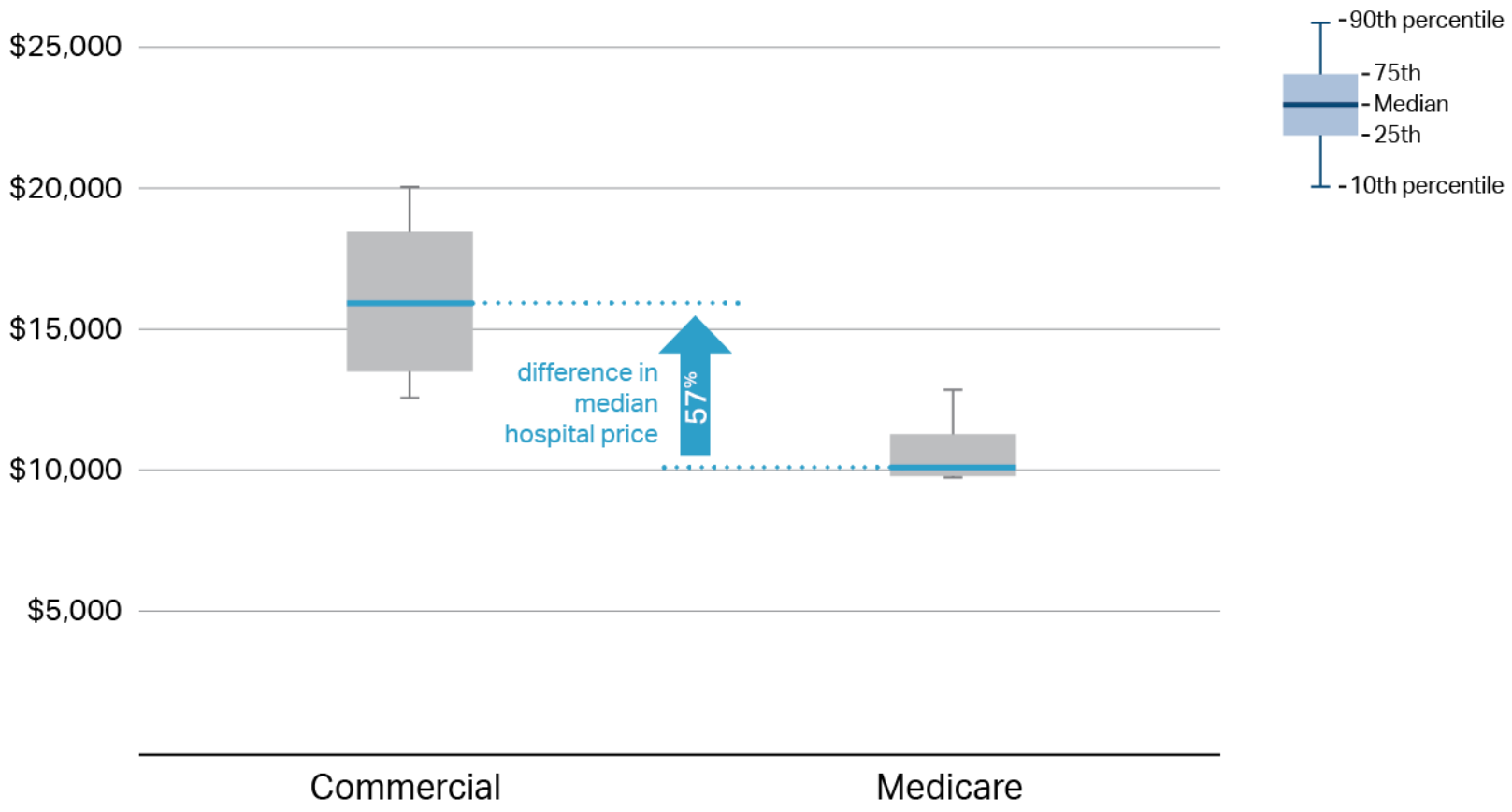
of Medicare discharges in the U.S. were in major teaching hospitals in 2016

Massachusetts has the **6th** highest average Medicare inpatient prices of all states, **21%** above the U.S. average

Massachusetts has the **4th** highest average Medicare outpatient prices, **12%** above the U.S. average

Inpatient prices: Average commercial prices for inpatient care are substantially higher than Medicare and vary more

Distribution of average hospital facility payments per discharge, commercial and Medicare, 2016

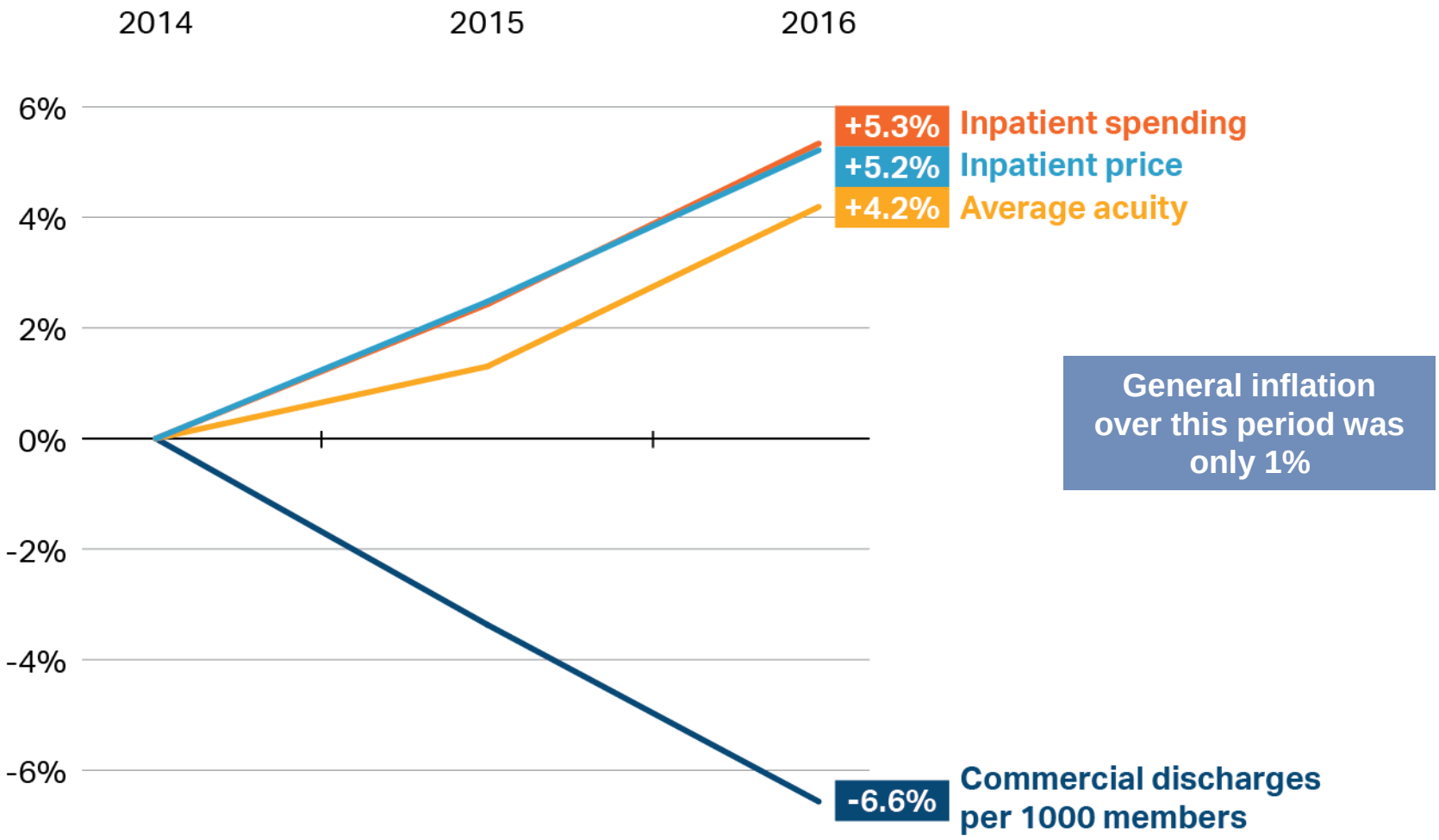


Notes: Analysis includes facility payments only, excluding professional services. Analysis excludes claims with invalid payment codes and excludes outlier claims at each hospital. Excludes some maternity claims for which discharge of mother and newborn cannot be distinguished. Commercial average payment per discharge is adjusted for case weight across hospitals; Medicare averages are calculated according to Medicare payment rules, including DSH and teaching hospital adjustments, and assume the same acuity and patient distribution as commercial discharges. Excludes hospitals not paid under Medicare's Inpatient Prospective Payment System, including Critical Access Hospitals and certain specialty hospitals.

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2016; Medicare Impact File 2016 and FY 2016 Final Rules Tables, Table 1A-1E.

Although commercial inpatient utilization has declined, inpatient spending has continued to increase, driven by increasing prices and average acuity

Change in average commercial inpatient prices, utilization, acuity, and spending, 2014-2016



Notes: Price analysis includes facility portion only, adjusted for changes in acuity and provider mix over time, and excludes claims with invalid payment codes, outlier claims at each hospital, and some maternity claims for which discharge of mother and newborn cannot be distinguished. Commercial TME trend represents facility payments to the three larges commercial payers in MA, acuity trend was calculated for all commercial discharges using Medicare DRG case weights, and discharge trend is per 1000 commercial members for all commercial payers.

Sources: HPC analysis of All-Payer Claims Database, 2016; CHIA hospital discharge data sets for 2014-2016; CHIA Total Medical Expense files.

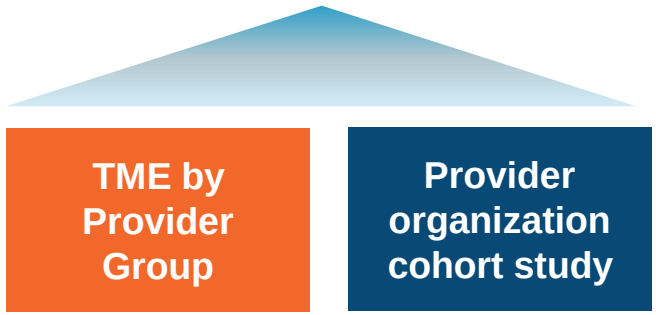
Commercial Prices: Key Findings

- In 2016, Massachusetts commercial prices were far above Medicare prices for comparable services across a variety of service lines and settings
  - Commercial price for inpatient care was **57% higher** than Medicare
  - Commercial price for a hip or knee replacement was **52% higher** than Medicare
  - Commercial price for a routine office visit was **77% higher** than Medicare
  - Commercial price for a brain MRI was **129% higher** than Medicare
- Variation in commercial prices across providers is substantially greater than variation in Medicare prices for comparable services
- Between 2014 and 2016, Massachusetts commercial prices for **inpatient care grew 5.2%.** This commercial price growth outpaced:
  - **General inflation (1%)**
  - **Medicare price growth (3.3%)**
- During the same time period, the average payment for an Emergency Department (ED) visit **increased 12%**
- Commercial price increases are a key driver in overall health care spending, preventing the Commonwealth from realizing net savings as a result of declining inpatient utilization

Select Findings from the 2018 Cost Trends Report

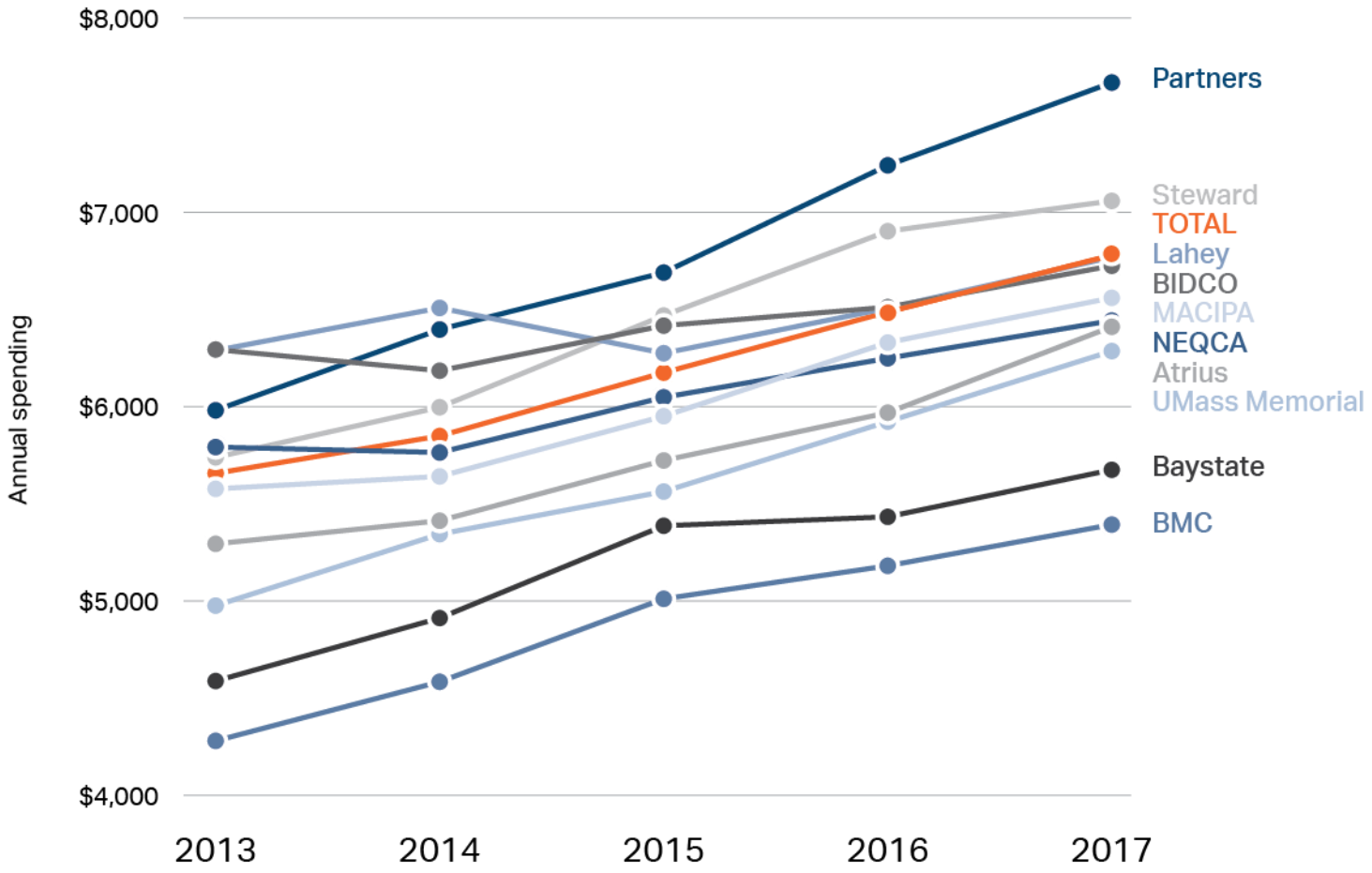
Topics

Overview	Utilization	Price	Total Spending



Annual per member total medical expenses (TME) varies more than $2k by attributed primary care provider group, and is diverging over time

Annual total spending per attributed member insured with either BCBS, THP, or HPHC



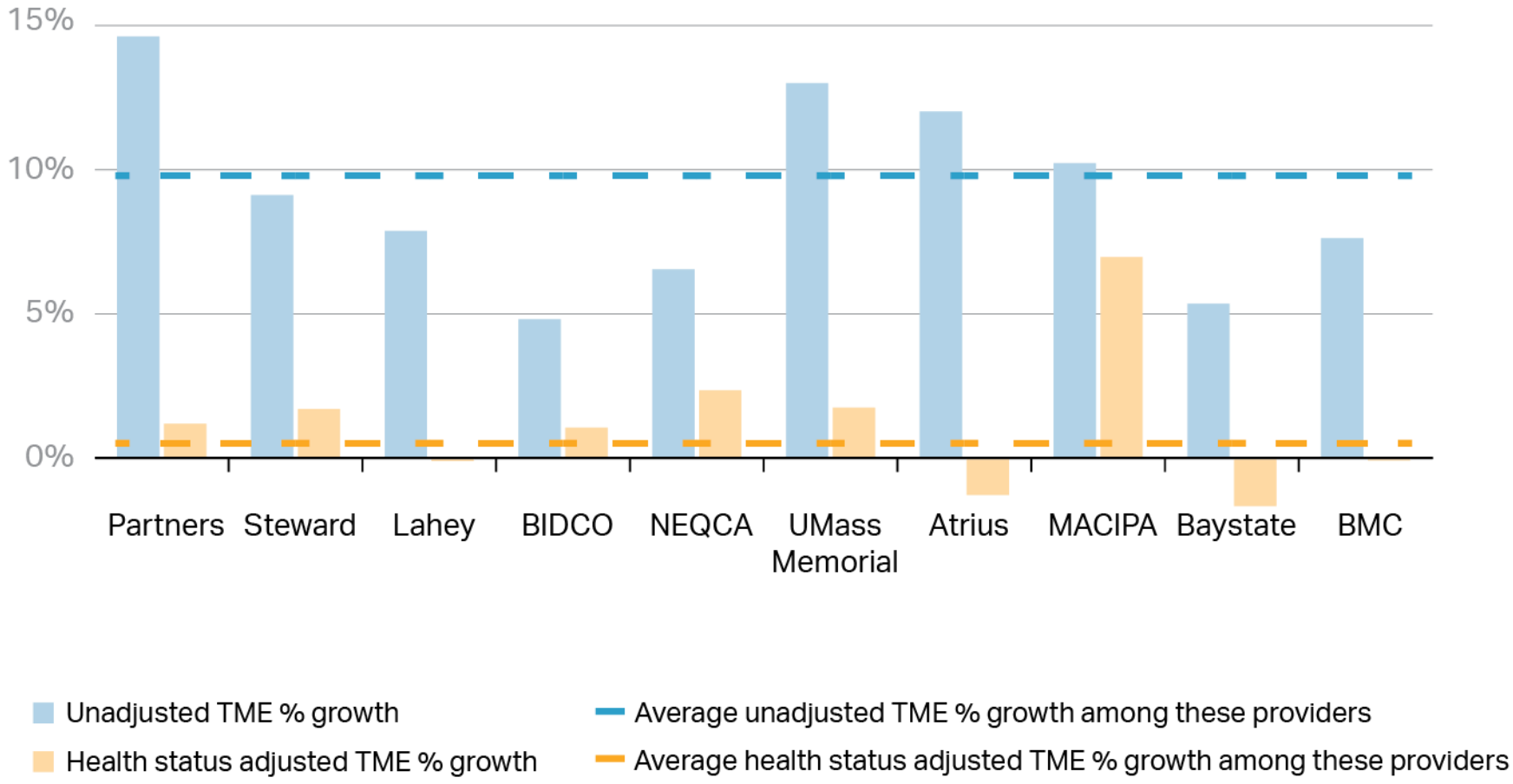
Notes: TME = total medical expenses; PCP = primary care provider. For members insured with either BlueCrossBlueShield of Massachusetts, Tufts Health Plan, or Harvard Pilgrim Health Plan, analysis includes 10 largest PCP groups as identified by the Center for Health Information and Analysis in terms of 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 Independent Physician Association (MACIPA); UMass Memorial Medical Group (UMass Memorial); Boston Medical Center Management Services (BMC); Baystate Health Partners (Baystate).

Sources: HPC analysis of Center for Health Information and Analysis 2016, 2017, and 2018 Annual Report TME Databook

HPC

Unadjusted TME grew 10% between 2015 and 2017 yet health-status adjusted TME grew just 0.5%; risk scores grew 9.5%

Total growth in TME from 2015 to 2017 per attributed commercial member with BCBS, THP, or HPHC



Notes: Analysis includes the ten largest PCP groups and three large payers as identified by CHIA in terms of member months and noted on the previous slide. Health-status adjusted TME uses risk scores as reported by the payers for each provider group as described in previous HPC reports.

Sources: HPC analysis of Center for Health Information and Analysis 2018 Annual Report TME Databook

Select Findings from the 2018 Cost Trends Report

Topics

Overview	Utilization	Price	Total Spending

TME by Provider Group

Provider organization cohort study

Provider Organization Performance Variation (POPV): Background

- In the 2017 Cost Trends Report, the HPC attributed 1.4 million patients in the Massachusetts APCD to provider organizations in order to compare spending and utilization across organizations
  - Members with PCPs in AMC-anchored organizations tended to have **higher spending** than those with PCPs in physician-led groups
    - This finding is consistent with a growing body of research finding better performance of ACOs that do not include hospitals[1]
    - *Hospital outpatient* spending accounted for most of the variation

[1]McWilliams, J. Michael, et al. "Medicare Spending after 3 Years of the Medicare Shared Savings Program." *New England Journal of Medicine* 379.12 (2018): 1139-1149.

Provider Organization Cohort Study: Approach

- **Aim**: Develop further understanding of why spending differs

- **Approach**: Identify **clinically similar** groups of patients ('cohorts') to better isolate the impact of provider organizations' practice and pricing patterns
    - Decompose spending difference across organizations into price, site of service, and utilization
    - Compare quality of care among settings

- **Data**: 2015 APCD including commercially-insured members of Blue Cross Blue Shield, Tufts Health Plan, and Harvard Pilgrim Health Care attributed to provider organizations

Constructing clinically similar cohorts with more comparable patients between provider groups nonetheless shows significant spending differences

Cohort study

Characteristics of patients attributed to physician-led groups and AMC-led groups

	Members (N)	Risk Score	Average Age	% Female	% HMO/POS	Total Spend	% Difference in Spending
Overall							
AMC-anchored	488,662	0.90	44.1	51.1%	65.8%	$4,398	**23.3%**
Physician-led	170,406	0.85	42.7	52.5%	70.6%	$3,566	
Healthy Cohort							
AMC-anchored	368,104	0.59	41.4	52.0%	67.1%	$2,659	**25.6%**
Physician-led	131,994	0.57	40.1	53.4%	71.6%	$2,118	
Cardio Metabolic Cohort							
AMC-anchored	120,558	1.81	52.2	48.5%	61.7%	$9,706	**13.7%**
Physician-led	38,412	1.80	51.8	49.2%	67.3%	$8,540	
Diabetes Cohort							
AMC-anchored	7,633	1.35	51.7	41.6%	62.5%	$7,926	**19.3%**
Physician-led	2,770	1.35	51.2	42.3%	66.6%	$6,642	

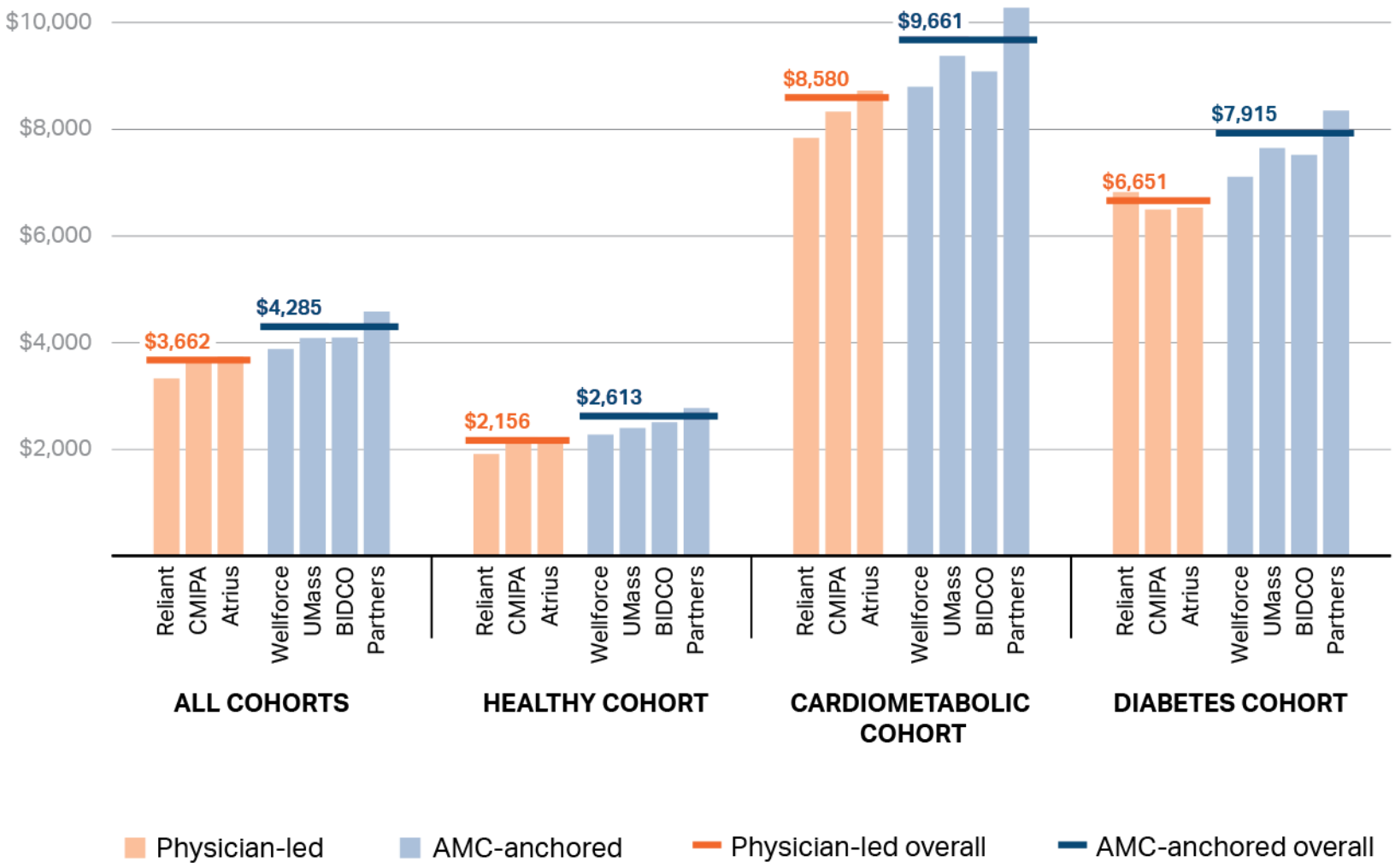
Notes: HMO is health maintenance organization. POS is point of service plan. AMC-anchored includes BIDCO, Partners, UMass, Wellforce; Physician-led includes Atrius, CMIPA, and Reliant. BMC was not included in the AMC category due to data abnormalities and its role as a high-public-payer hospital.. Individuals included in the study population were able to be attributed to a provider organization, had at least 1 year of continuous enrollment, an ACG risk score <5, and ages 18+. Individuals were excluded from study if sex was undetermined based on the member eligibility file. Percent difference is the percentage by which spending for patients attributed to AMC-anchored groups exceeds that of patients attributed to physician-led groups.

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2015

HPC

Spending is higher in AMC-anchored provider organizations compared to those in physician-led organizations for all cohorts

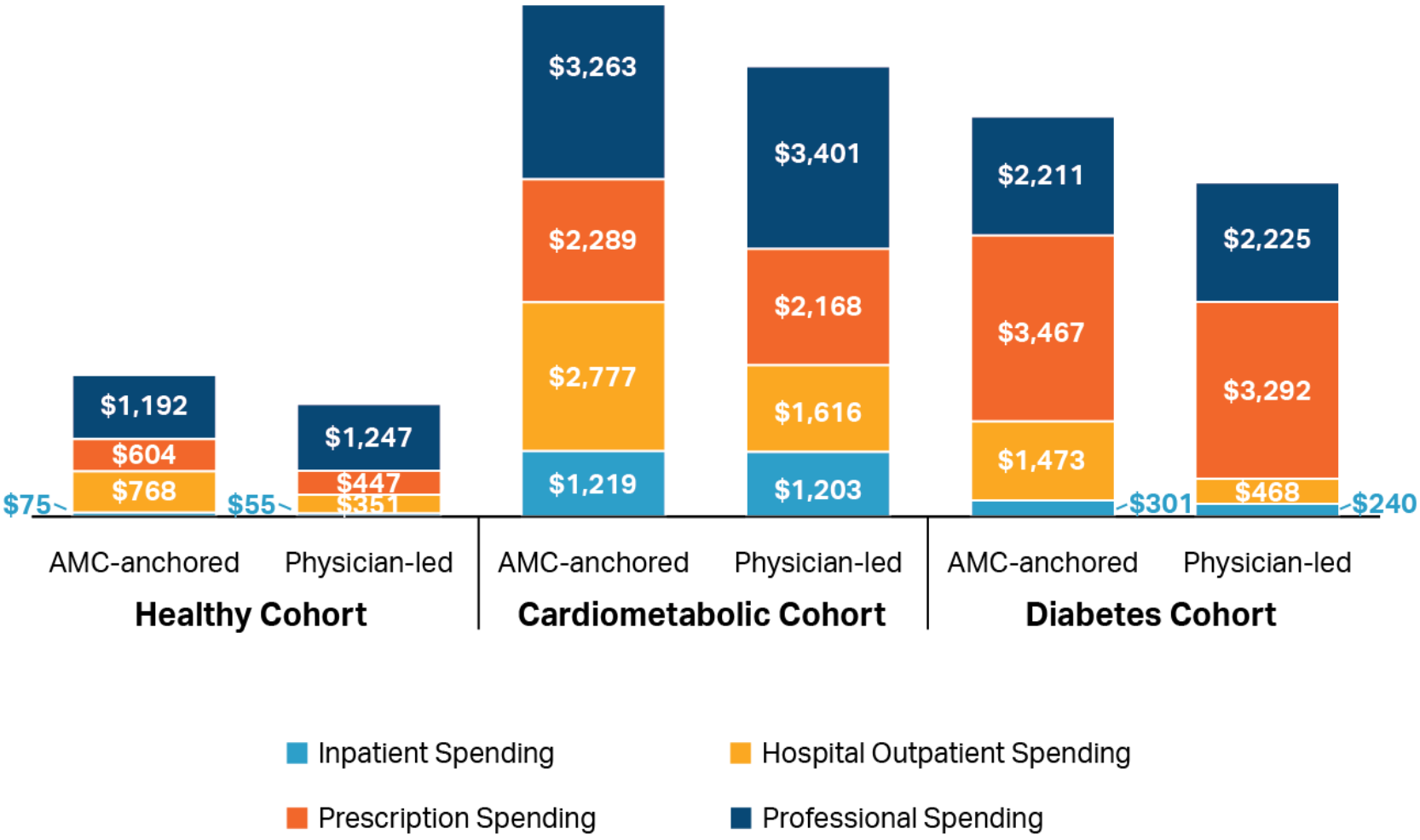
Per member per year (PMPY) risk-adjusted overall spending, 2015



Notes: These spending totals are risk-adjusted using the ACG risk score.
Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2015

Hospital outpatient spending is the largest driver of spending differences

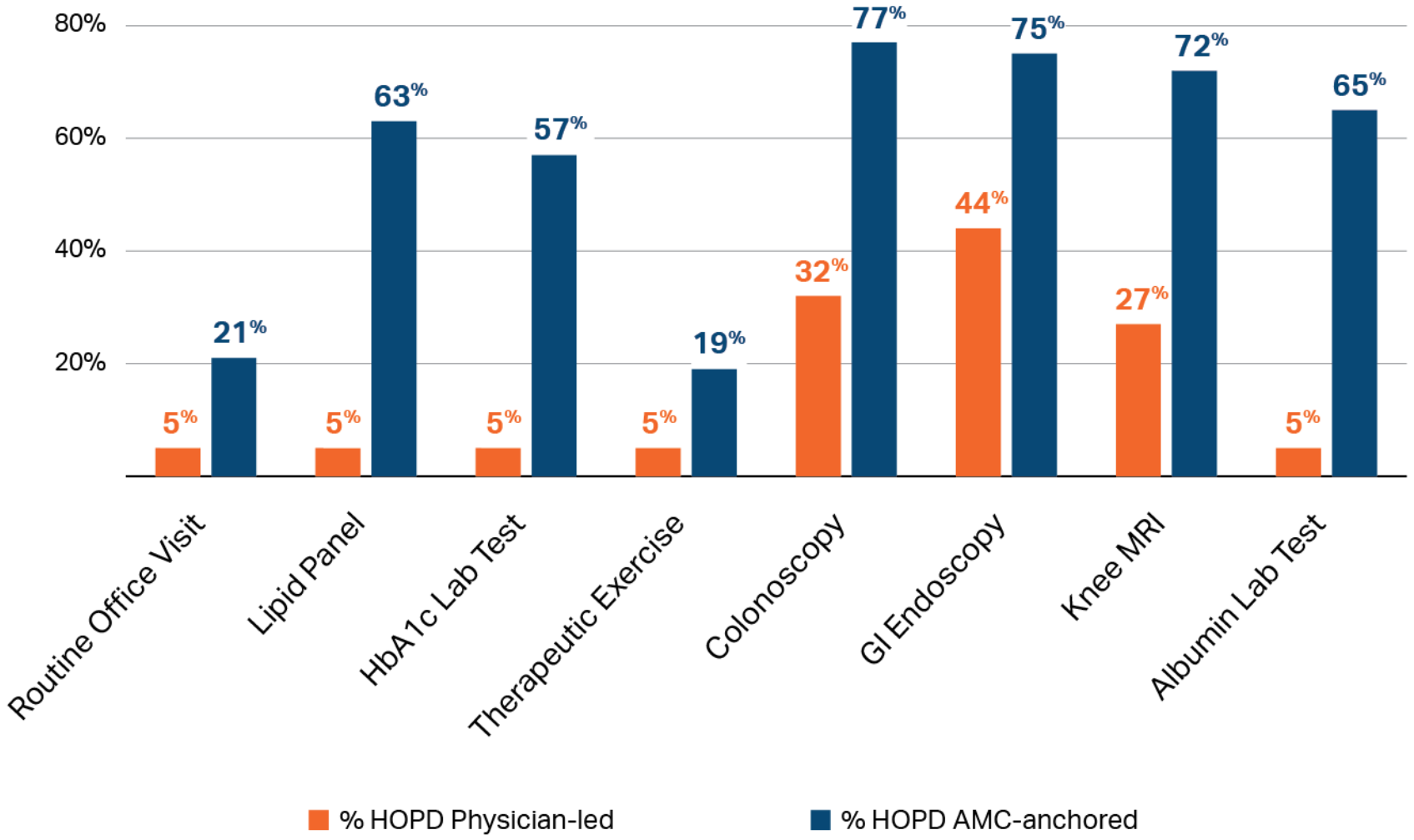
Per member per year (PMPY) spending by category, 2015



Notes: Some minor categories of spending included in earlier totals, such as post-acute and long-term care, are omitted from this figure.
Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2015

Common ambulatory services are much more likely to be provided in hospital outpatient departments in AMC-anchored groups

Diabetes Cohort: Percentage of services delivered in a hospital outpatient department (HOPD) setting

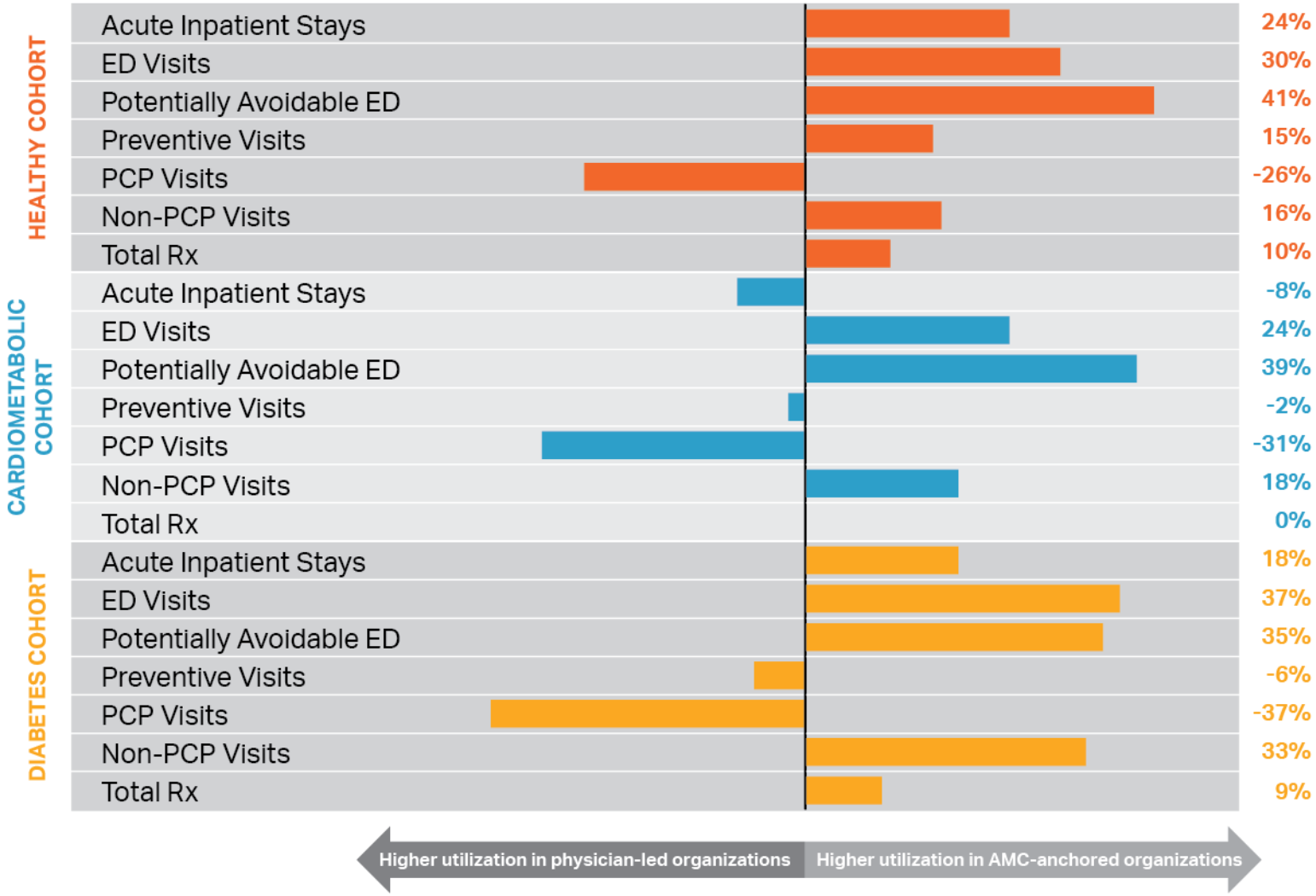


Notes: Figure is limited to results for the Diabetes Cohort, which follows aforementioned inclusion criteria, and includes only those individuals with diabetes, and no other chronic disease indicators. All x-axis categories reflect a single CPT code: 99213, 80061, 83036, 97710, 45378, 43239, 73721, 82043, respectively.

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2015

Utilization is generally higher in AMC-anchored organizations, with the exception of PCP visits and preventive visits

Comparison of AMC-anchored utilization with physician-led utilization by cohort

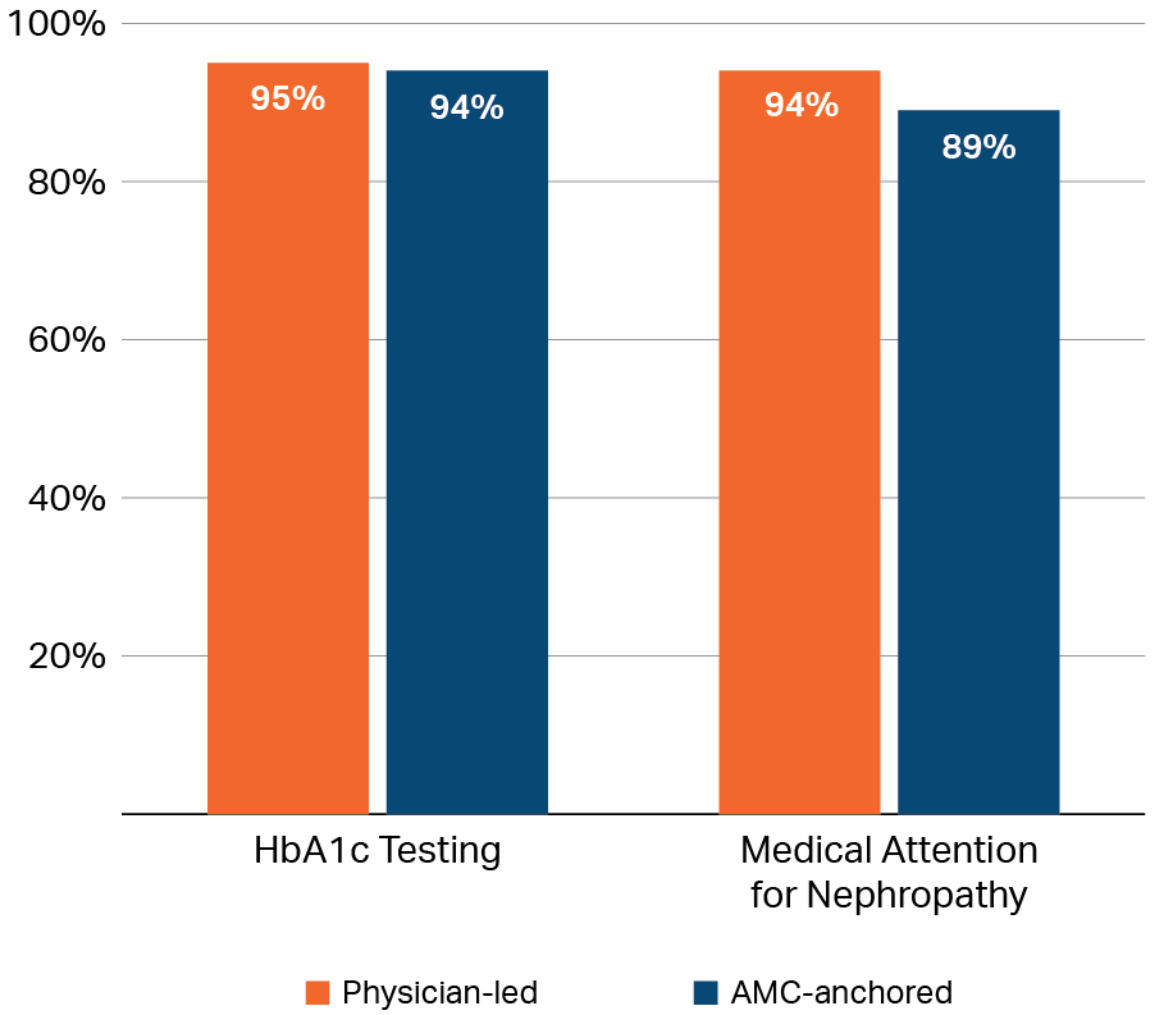


Notes: "Non-PCP visits" are any visits with a physician or other licensed care provider that have not been identified as primary care. This could include physician specialists as well as other providers such as occupational therapists. "PCP Visits" are not mutually exclusive from the "Preventive Visits" category. "Preventive Visits" include s CPT codes 99381-99387, 99391-99397, 99401-99404, 99429, G0402.

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2015

Diabetes Cohort: AMC-led providers do not score better on two measures of quality diabetes care

Diabetes-related quality metrics for AMC-anchored and physician-led organizations, 2014



Notes: Most current available data source is from 2014. Analysis selected two representative process measures from a larger set of quality measures for diabetes care. These measures are process measures rather than A1C control measures.

Sources: HPC analysis of "A Focus on Provider Quality Databook 2018," CHIA April 2018

Provider Organization Cohort Study: Key Findings

- Once we isolated to similar groups of patients, spending was still ~**20% higher** for patients attributed to AMC-anchored organizations vs. those attributed to physician-led organizations
  - **Hospital outpatient spending** continued to be a key driver, with **more than 50%** higher spending for patients in AMC-anchored groups for outpatient surgery, labs and pathology, and radiology
    - **Site of service:** Patients in AMC-anchored groups typically received routine services (such as labs, tests, procedures) in more expensive hospital outpatient departments; patients in physician-led groups received them in physician offices
    - **Price:** Patients in AMC-anchored groups often paid 30-60% more for the same services
    - **Utilization:** Patients in AMC-anchored groups had more ED visits and more office visits to non-PCPs. They had **fewer** visits to PCPs.
  - **Quality and provision of recommended care** was not superior at AMC-anchored groups for diabetes patients

Presentation Topics and potential areas for recommendations

Topics

Overview	Utilization	Price	Total Spending
▪ Trends in spending, affordability, and care delivery	▪ Trends ▪ Low value care ▪ Admissions from the ED	▪ Oncology drug prices ▪ Commercial prices compared to Medicare prices	▪ TME by provider group ▪ Provider organization cohort study

Themes from the 2018 Cost Trends Hearing and Policy Recommendations

HPC

Key Themes of the 2018 Cost Trends Hearing

1.6%

2017 Total Health Care Expenditures Growth Rate per capita

- Variation and complexity in health care payment systems increases **administrative burden** and impedes transparency
- **Health care cost savings are not being passed to consumers** in the form of more affordable insurance products
- **Price is a primary driver** of health care spending
- **Inpatient readmissions** rates remain high
- **Rising pharmaceutical costs** are a driving factor of cost growth
- **Telehealth and interoperable electronic medical records** can increase access to high-quality behavioral health care
- The **future of the heath care workforce** is uncertain, but there are efforts to develop new roles and focus on patient-centered care
- There has been limited adoption and alignment of **alternative payment methodologies**
- Spending to address **social determinants of health** will improve upstream intervention and health care quality

Advisory Council Discussion on Potential Policy Recommendations for the 2018 Cost Trends Report and 2019 Priorities

Reflecting on the findings presented today from the 2018 Cost Trends Report, discussion at the 2018 Cost Trends Hearing, and other work over the past year, what other topics should the HPC consider for inclusion in this year's policy recommendations and/or for further examination in 2019?

2019 Public Meeting Calendar

Board Meetings[Δ]

- Wednesday, February 13
- Wednesday, March 13 – Benchmark Hearing
- Wednesday, May 1 (1:00 PM)
- Wednesday, July 24
- Wednesday, September 11
- Wednesday, December 11

2019 Cost Trends Hearing

Day One: Tuesday, October 22

Day Two: Wednesday, October 23

Committee Meetings[†]

- Wednesday, February 27
- Wednesday, June 5
- Wednesday, October 2
- Wednesday, November 20

Δ Board meetings begin at 12:00 PM, unless otherwise noted.
† Market Oversight and Transparency (MOAT) Committee meets at 9:30 AM and Care Delivery and Transformation (CDT) Committee meets at 11:00 AM, unless otherwise noted.

HPC