

Findings on select cost drivers

2013 Cost Trends Report

What is the role of the Health Policy Commission?

Chapter 224 sets the ambitious goal of bringing health care spending growth in line with growth in the state's overall economy. The Commission is working to advance this goal by:

- Fostering reforms to the health care payment system that aim to reward quality care, improve health outcomes, and more efficiently spend health care dollars
- Promoting innovative delivery models that will enhance care coordination, advance integration of behavioral and physical health services, and encourage effective patient-centered care
- Investing in community hospitals and other providers to support the transition to new payment methods and care delivery models
- Increasing the transparency of provider organizations and assessing the impact of health care market changes on the cost, quality, and access of health care services in Massachusetts
- Analyzing and reporting of cost trends through data examination and an annual public hearing process to provide accountability of the health care cost-containment goals set forth in Chapter 224
- Enhancing accountability through the implementation of performance-improvement plans for certain providers and payers that threaten the ability of the state to meet the cost growth benchmark
- Evaluating the prevalence and performance of initiatives aimed at health system transformation
- Engaging consumers and businesses on health care cost and quality initiatives
- Partnering with a wide range of stakeholders to promote informed dialogue, recommend evidence-based policies, and identify collaborative solutions

Goals for our annual report


The Commission releases an annual cost trends report, intended to provide:

- A profile of the Massachusetts health care delivery system
- An evidence-based discussion of trends in Massachusetts health care costs, leveraging new data sets such as the All-Payer Claims Database
- Analysis of drivers of growth, including factors leading the state's growth to be above or below the benchmark set by Chapter 224
- A fact base to inform the other activities of the Commission, as well as other policy development in Massachusetts
- Analysis of specific cost drivers in Massachusetts, including:
 - Topics of known importance that can be analyzed with new or state-specific data
 - Topics that have been insufficiently studied or evaluated
 - Topics where a comprehensive discussion integrating evidence from multiple sources can better inform policy dialogue

This year's annual report does not measure cost growth against the benchmark established in Chapter 224. The benchmark will be reviewed beginning in 2014.

Topics in the 2013 cost trends report

Profile of Massachusetts




Levels of spending



Trends in spending



The MA delivery system



Quality and access

2013 cost trends report


Select cost drivers



Hospital operating expenses

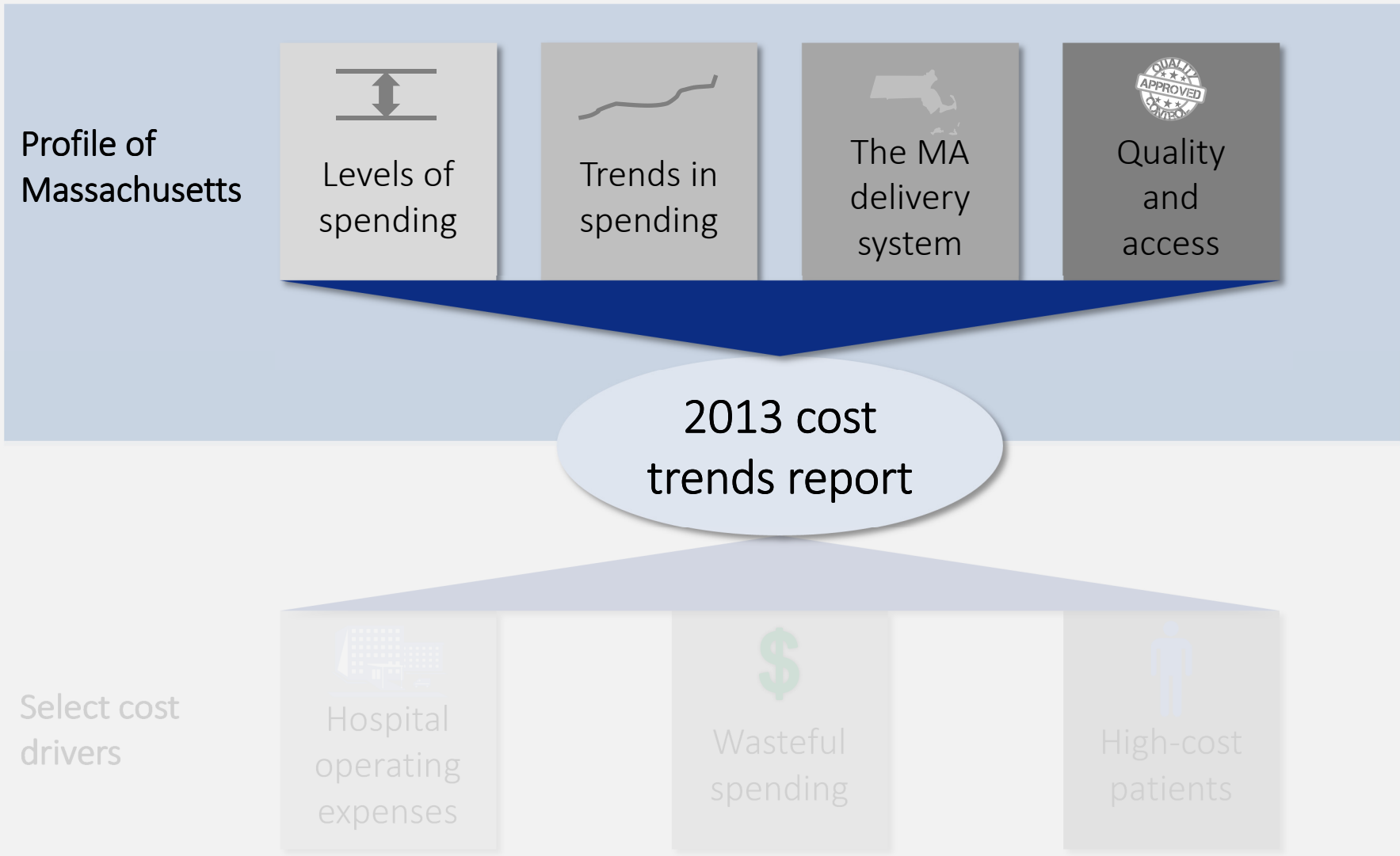


Wasteful spending



High-cost patients

Topics in the 2013 cost trends report

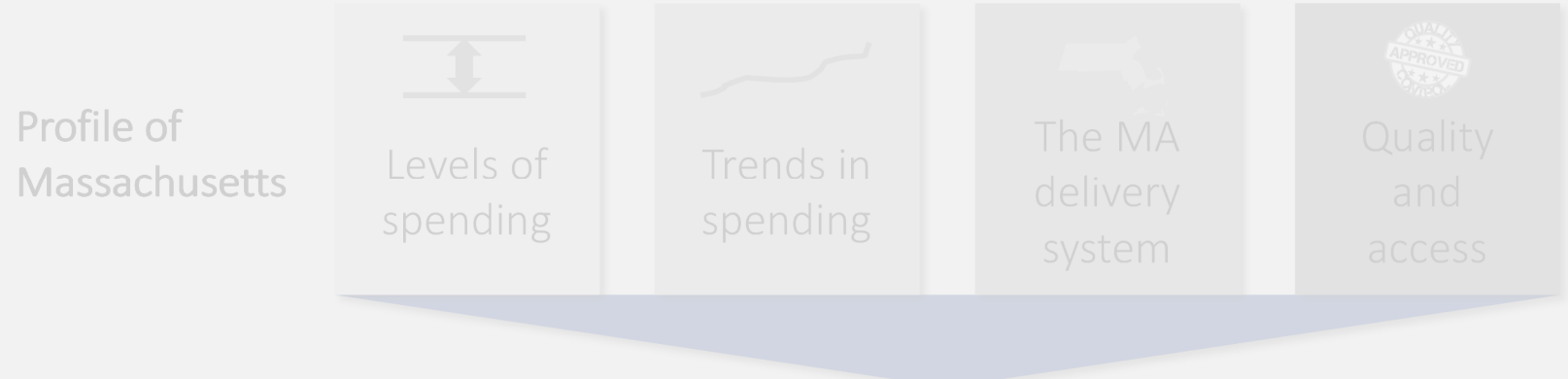


Conclusions from profile of Massachusetts' health care spending

- **Spending in Massachusetts is the highest of any state in the U.S., crowding out other priorities for consumers, businesses, and government**
 - Over the past decade, Massachusetts health care spending has grown much faster than the national average, driven primarily by faster growth in commercial prices
 - Massachusetts residents continue to use health care services at a higher rate than the nation, especially in hospital care and long-term care, although the difference between Massachusetts and the U.S. average has been stable over the past decade

- **While spending growth in Massachusetts since 2009 has slowed in line with slower national growth, sustaining lower growth rates will require concerted effort**
 - Past periods of slow health care growth in Massachusetts, such as the 1990s, have been followed by sustained periods of higher growth
 - While observed growth rates for individual payers are low, the statewide growth rate is higher, driven by enrollment shifts among payers due to trends such as the aging of the population

Topics in the 2013 cost trends report



2013 cost trends report



Topics in the 2013 cost trends report

HOSPITAL OPERATING EXPENSES



WASTEFUL SPENDING



HIGH-COST PATIENTS



Why this topic is important to cost trends

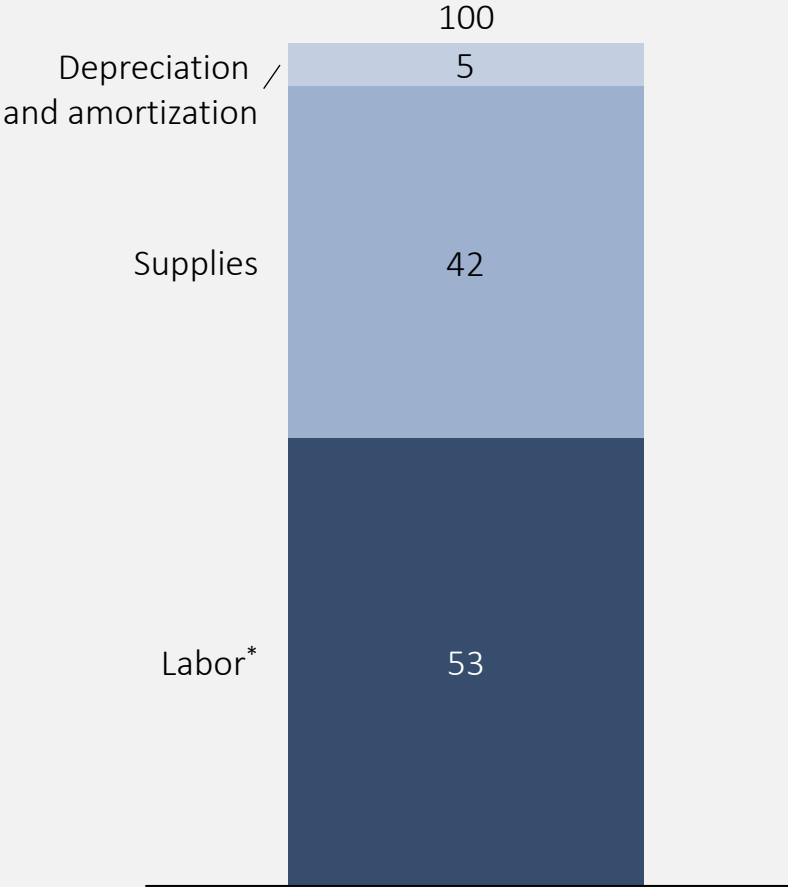
- Improving operating efficiency could enable hospitals to deliver care more affordably
- Hospitals with higher expense structures could reduce operating expenses, while maintaining equal or better quality of care

Research questions

- What are the major categories of operating expenses for Massachusetts hospitals, and are there opportunities to improve efficiency in these areas?
- How efficiently do hospitals in Massachusetts deliver services?
 - Are levels of operating expenses similar across hospitals?
 - Are higher operating expenses associated with higher-quality care?
- What are the differences in hospital operating margins for public payers and commercial payers?

Labor constitutes the majority of operating expenses for hospitals

Breakdown of hospital operating expenses
Percent of expenses by category, 2012

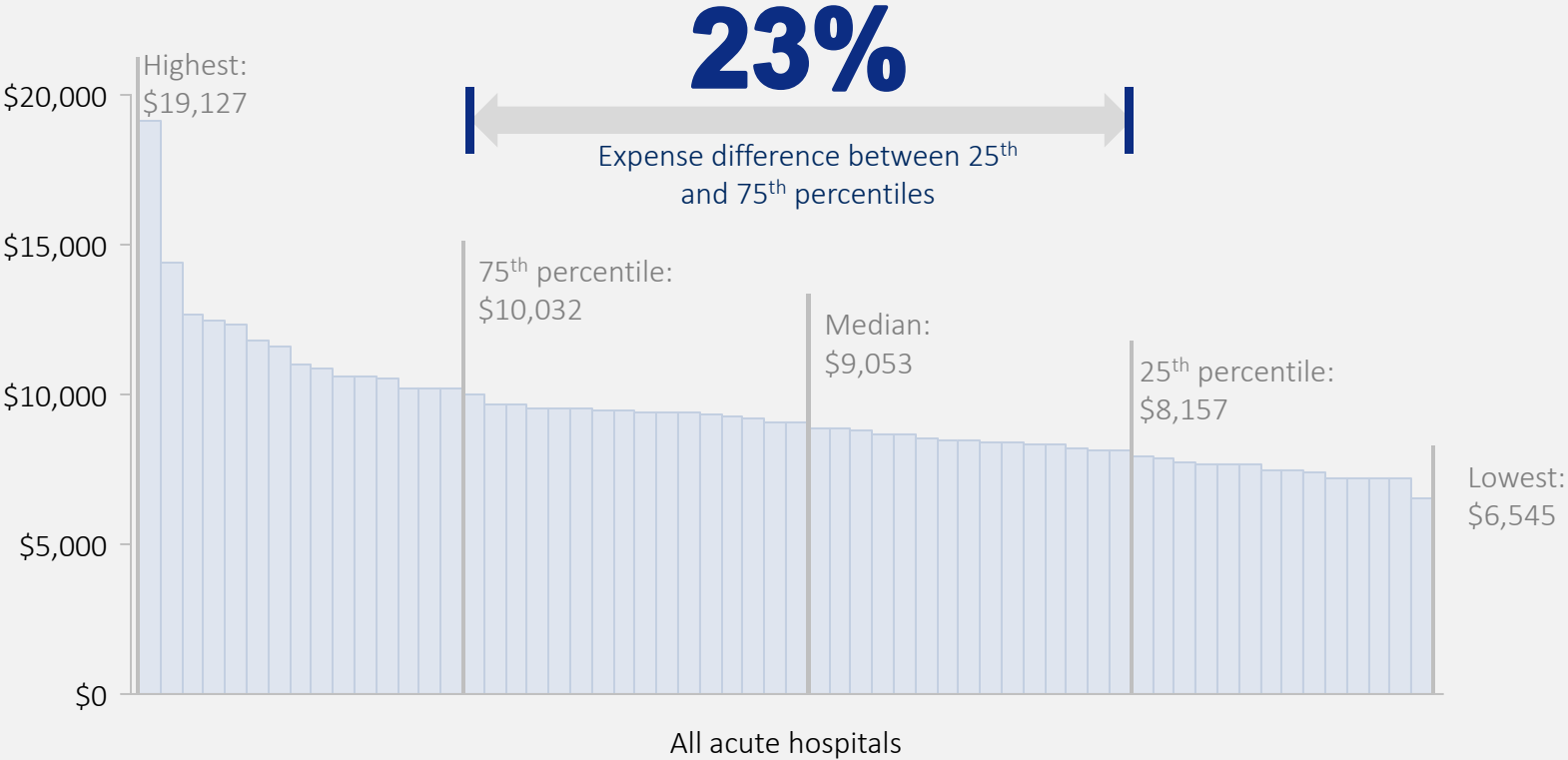


- Examples of expenses include:**
- *Depreciation and amortization:* depreciation of facilities, capital leases, depreciation of imaging equipment
 - *Supplies:* medical devices, medications, surgical gloves
 - *Labor:* salaries and benefits for clinical staff, call center operations, billing and administrative staff

* Labor expense category is composed of salaries and benefits, physician compensation paid directly by hospitals, and purchased services
Source: Center for Health Information and Analysis; HPC analysis

Inpatient operating expenses of Massachusetts hospitals vary greatly

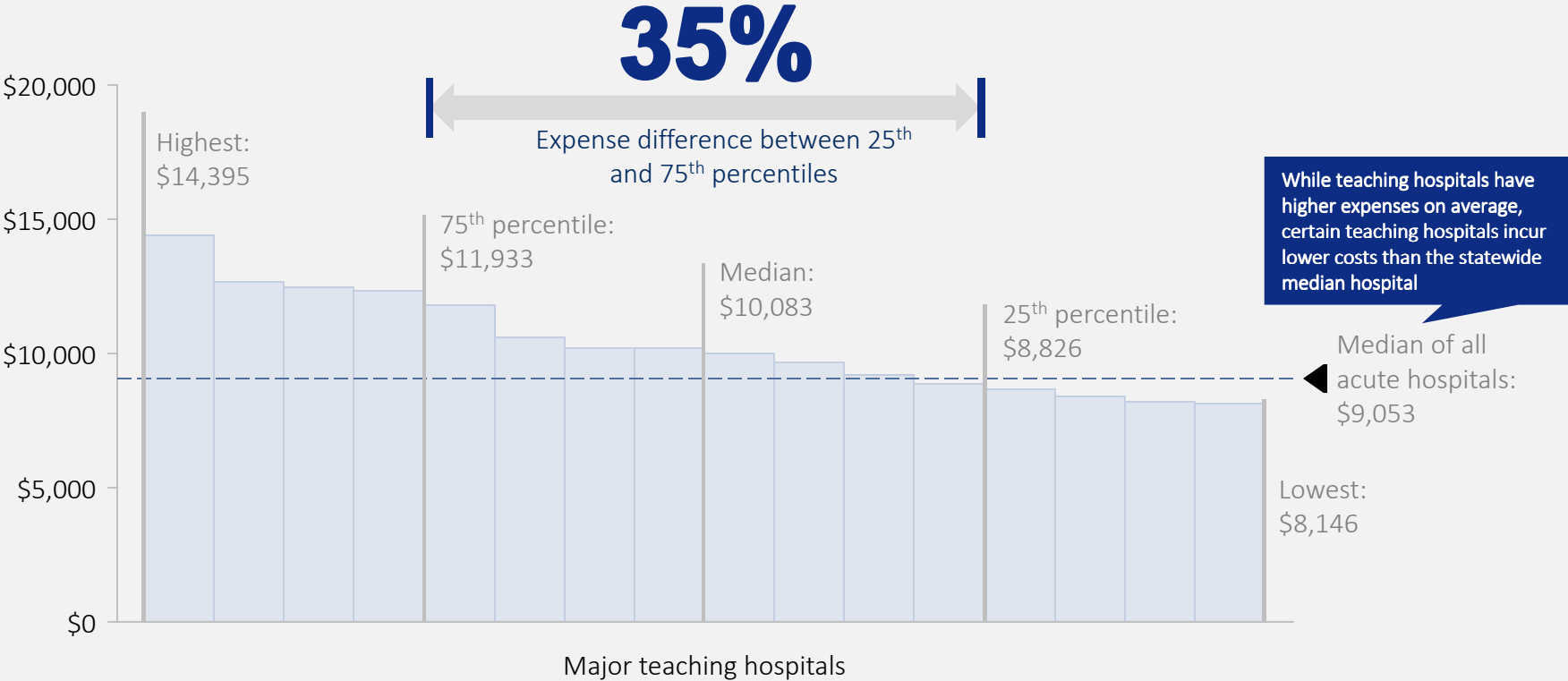
Inpatient operating expenses per discharge* for all Massachusetts acute hospitals
Dollars per case mix- and wage-adjusted discharge, 2012



* Inpatient patient service expenses divided by inpatient discharges. Adjusted for hospital case mix index (CHIA 2011) and area wage index (CMS 2012).
Source: Center for Health Information and Analysis; Center for Medicare & Medicaid Services; HPC analysis

Even among major teaching hospitals, there is a wide range of operating expense levels

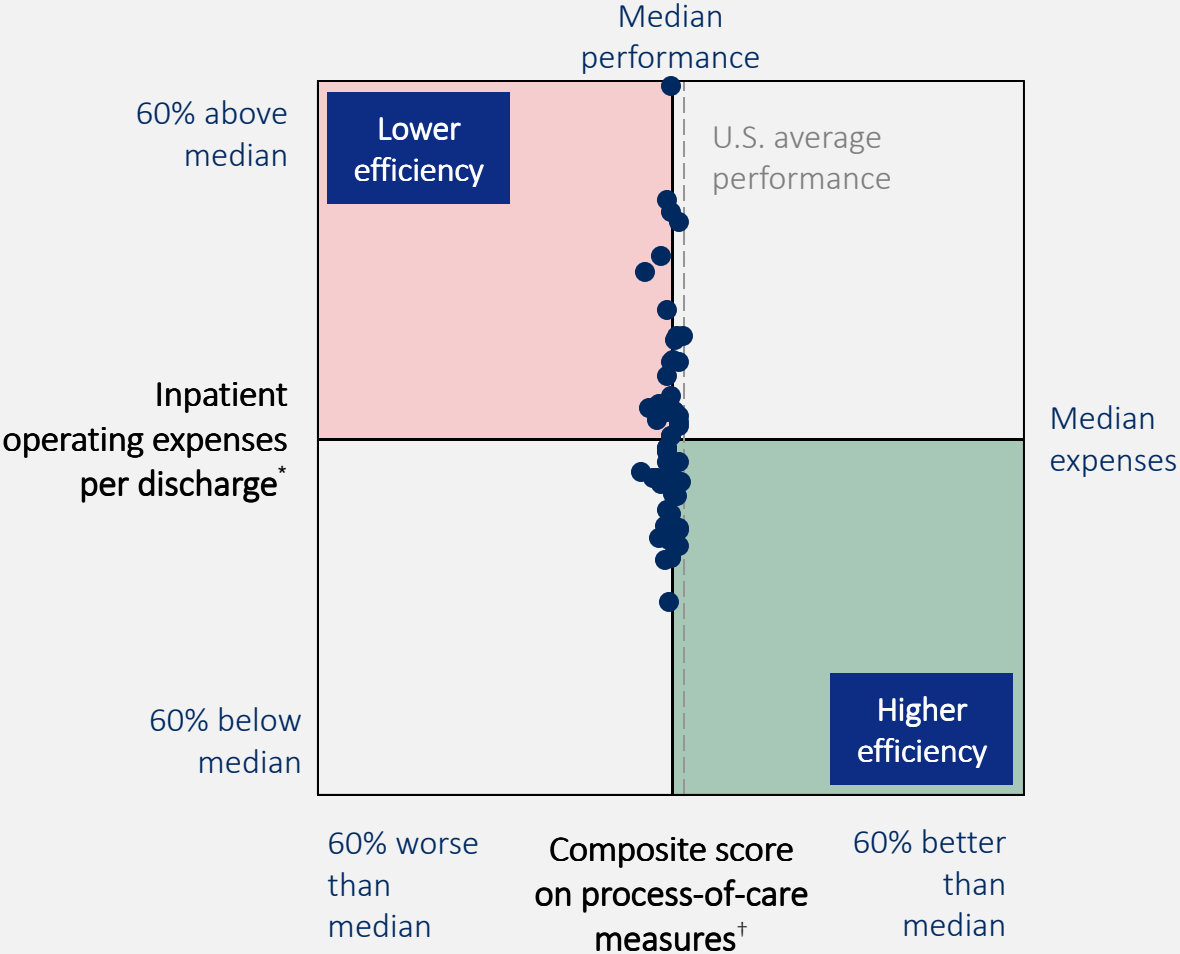
Inpatient operating expenses per discharge* for major teaching hospitals
 Dollars per case mix- and wage-adjusted discharge, 2012



* Inpatient patient service expenses divided by inpatient discharges. Adjusted for hospital case mix index (CHIA 2011) and area wage index (CMS 2012).
 Source: Center for Health Information and Analysis; Center for Medicare & Medicaid Services; HPC analysis

Some hospitals achieve high quality with lower operating expenses

Quality performance relative to inpatient operating expenses per admission: process-of-care measures
 Composite of process-of-care measures versus dollars per case mix-adjusted discharge*



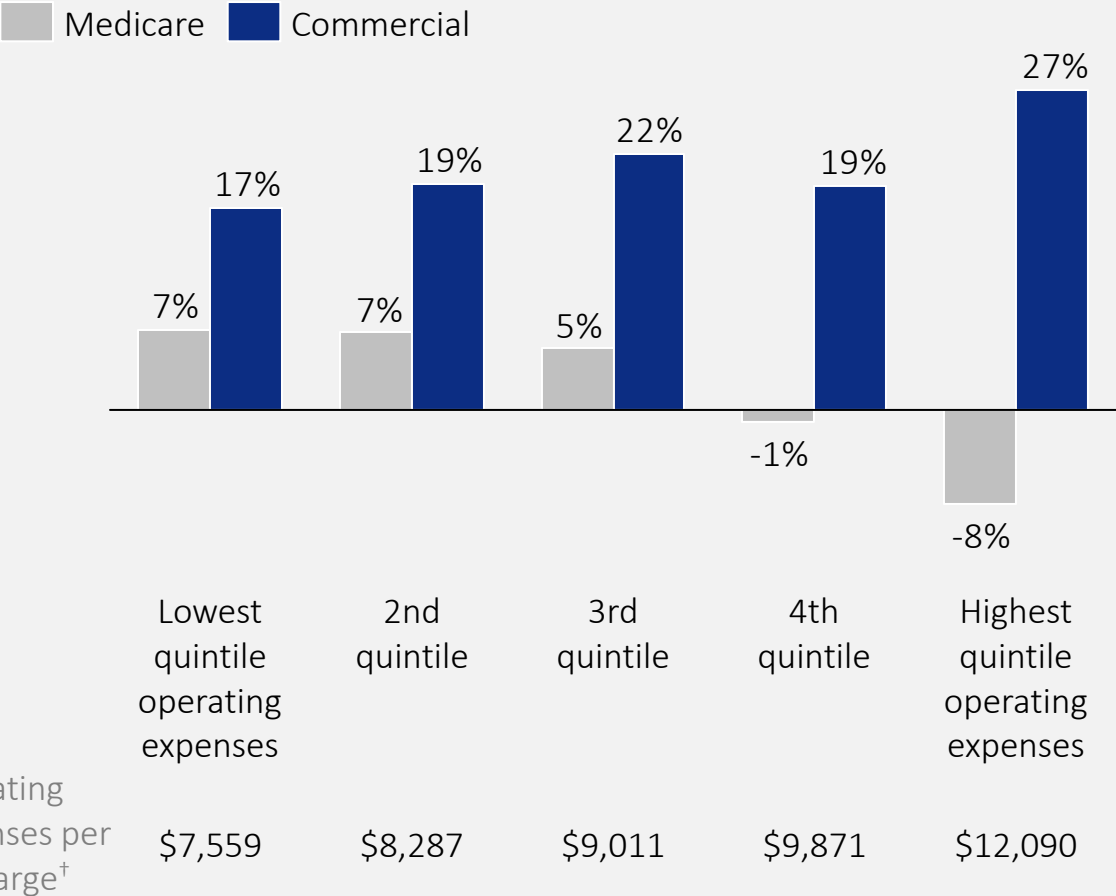
Similar results were observed for other measures of quality performance:

- Risk-adjusted mortality rates for acute myocardial infarction (AMI), heart failure (HF), and pneumonia (PN)
- Risk-adjusted excess readmission ratio for AMI, HF, and PN

* 2012 inpatient patient service expenses divided by inpatient discharges. Adjusted for hospital case mix index (CHIA 2011) and area wage index (CMS 2012).
 † Average across 10 process-of-care measures (CMS 2012): SCIP-Inf-1; SCIP-Inf-2; SCIP-Inf-3; SCIP-Inf-9; SCIP-Inf-10; AMI 2; AMI 8-a; PN 6; HF 2; and HF 3. Detail on measures available in Technical Appendix B2: Hospital Operating Expenses.
 Source: Center for Health Information and Analysis; Center for Medicare & Medicaid Services; HPC analysis

In Massachusetts, higher-expense hospitals make greater commercial margins, but sustain losses on Medicare populations

Operating margins by payer type for hospitals at different operating expense levels
 Operating income as proportion of net patient service revenue*, 2012



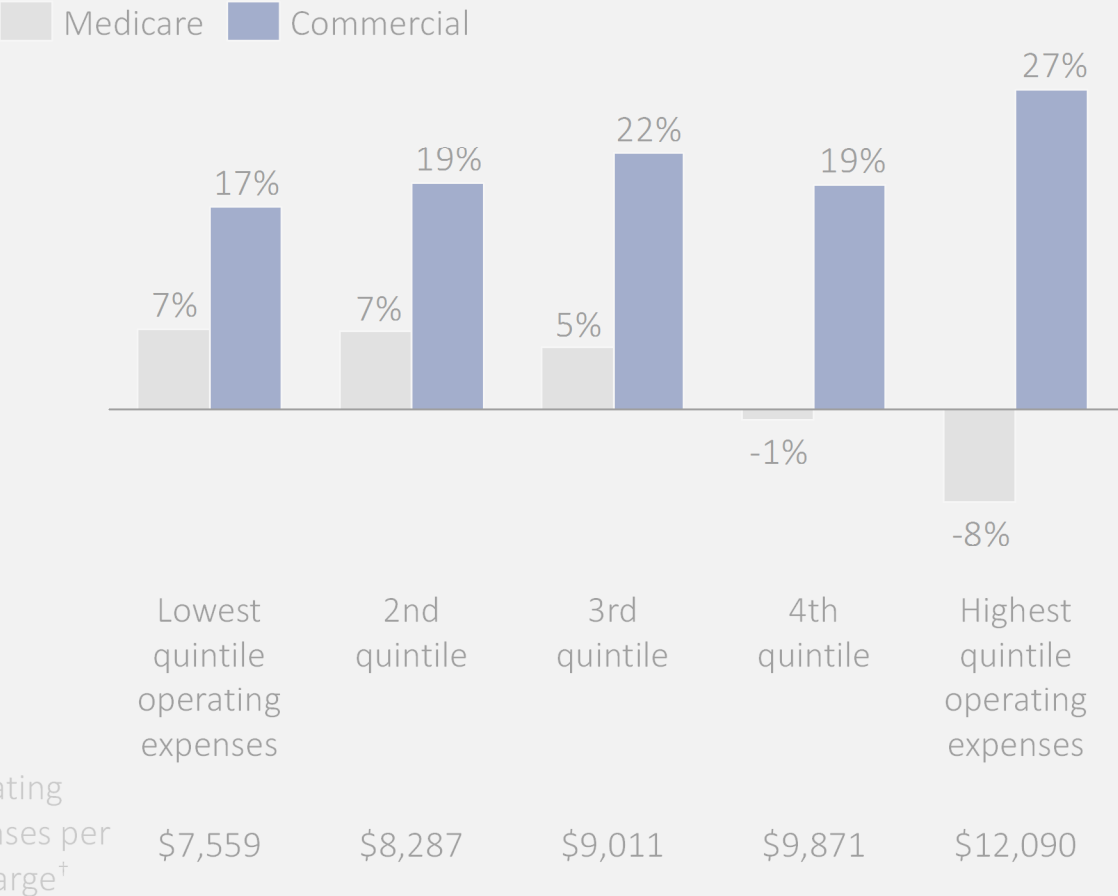
* Operating income defined as total net patient service revenue less total patient service expenses. Payer-specific expenses are estimated by applying hospital-specific cost-to-charge ratios to hospital's charges by payer.

† 2012 inpatient patient service expenses divided by inpatient discharges. Adjusted for hospital case mix index (CHIA 2011) and area wage index (CMS 2012).

Source: Center for Health Information and Analysis; HPC analysis

Market structure influences hospital operating efficiency

Operating margins by payer type for hospitals at different operating expense levels
 Operating income as proportion of net patient service revenue*, 2012



- Some hospitals successfully negotiate greater payments from commercial payers, which can help cover potential losses on public payer populations (often described as “cost-shifting”)
- Providers with limited market leverage receive **lower rates of commercial payer reimbursement** and, under greater financial pressure, tend to be more aggressive at **maintaining lower operating expenses**
- Hospitals with lower expense structures earn higher margins at Medicare and Medicaid levels of reimbursement

* Operating income defined as total net patient service revenue less total patient service expenses. Payer-specific expenses are estimated by applying hospital-specific cost-to-charge ratios to hospital’s charges by payer.

† 2012 inpatient patient service expenses divided by inpatient discharges. Adjusted for hospital case mix index (CHIA 2011) and area wage index (CMS 2012).

Source: Center for Health Information and Analysis; HPC analysis

Hospitals may pursue a number of strategies to reduce operating expenses

Procurement and supply chain management	<ul style="list-style-type: none">▪ Inefficiencies may include issues like lack of coordination by hospitals within a system, failure to align orders to benefit from bulk purchasing, and ineffective supply management that can result in stock-outs or high inventory levels▪ Efforts to improve procurement can reduce expenses associated with equipment, supplies, and purchased services
“Lean” management principles	<ul style="list-style-type: none">▪ Hospitals are adopting “lean” management principles (commonly associated with the Toyota Production System in manufacturing), seeking to reduce waste in the care delivery process and increase value for the patient▪ Successful implementation can yield benefits such as fewer infections and medication errors, less nursing time away from the bedside, faster operating room turnover, improved care-team communication, and faster emergency response time
Cost accounting	<ul style="list-style-type: none">▪ Operating expenses associated with a particular procedure are often not measured directly, and current allocation methods introduce distortions▪ Hospitals may invest in improved measurement to enable better management and improvement of expenses

Topics in the 2013 cost trends report

HOSPITAL OPERATING EXPENSES



WASTEFUL SPENDING



HIGH-COST PATIENTS



Why this topic is important to cost trends

- Wasteful spending is health care spending that could be eliminated without harming consumers or reducing the quality of care people receive
- Often, the causes of wasteful spending also result in poorer outcomes for patients

Research questions

- What proportion of health care expenditures does wasteful spending represent in Massachusetts?
- What are specific examples of wasteful spending that Massachusetts can target for improvement, and how many dollars are spent in these areas?

Statewide estimate: estimates for wasteful spending in the U.S. vary

Organization	Year	Estimate <i>(as percent of U.S. spending)</i>	Approach	Types of waste examined
PricewaterhouseCoopers	2005	54%	<ul style="list-style-type: none"> Literature review Interviews with health industry executives and government officials Survey of 1,000 US consumers 	<ul style="list-style-type: none"> Behavioral inefficiencies Clinical inefficiencies Operational inefficiencies
RAND Corporation	2008	50%	<ul style="list-style-type: none"> Meta-analysis of research on waste in the health care system 	<ul style="list-style-type: none"> Administrative inefficiencies Operational inefficiencies Clinical inefficiencies
McKinsey Global Institute	2008	31%	<ul style="list-style-type: none"> Comparison of health care spending and income by country 	<ul style="list-style-type: none"> Spending in excess of expected level of spending based on national wealth
Institute of Medicine	2012	30%	<ul style="list-style-type: none"> Meta-analysis of literature; expert interviews 	<ul style="list-style-type: none"> Unnecessary services Delivery inefficiencies High prices Unnecessary administrative costs Missed prevention opportunities Fraud and abuse
“Eliminating Waste in US Health Care” Berwick and Hackbarth (JAMA, 2012)	2011	27%	<ul style="list-style-type: none"> Meta-analysis of literature 	<ul style="list-style-type: none"> Overtreatment Failures of care delivery Failures of care coordination Pricing failures Administrative complexity Fraud and abuse
NEHI	2008	27%	<ul style="list-style-type: none"> Meta-analysis of expert interviews, case studies, and a review of relevant literature 	<ul style="list-style-type: none"> Emergency department overuse Antibiotic overuse Patient medication non-adherence Vaccine underuse Hospital readmissions Hospital admissions for ambulatory care-sensitive conditions Medical errors

Source: PricewaterhouseCoopers; RAND Corporation; McKinsey & Company; Institute of Medicine; Journal of the American Medical Association; NEHI; HPC analysis

Statewide estimate: in Massachusetts, there was \$14.7 to \$26.9B of wasteful spending in 2012

Wasteful spending in the Massachusetts health care system

Percent of personal health care expenditures, 2012



Replicated Berwick and Hackbarth national approach (JAMA 2012) for Massachusetts based on distinct, mutually-exclusive areas of waste

Source: Massachusetts Division of Health Care Finance and Policy; Dartmouth Atlas; Department of Public Health; All-Payer Claims Database; American Journal of Public Health; Berwick D and Hackbarth A. Journal of the American Medical Association. 2012; Institute of Medicine (IOM); analysis by Chapin White of a report from the 1995-2009 Truven Health Analytics MarketScan® Commercial Claims and Encounters Database (copyright © 2011 Truven Health Analytics, all rights reserved); Harvard University research conducted for IOM; Office of the Attorney General; HPC analysis

Reduction opportunities: there are a wide range of opportunities to reduce wasteful spending

	Estimate of wasteful spending	Definition of category
Opportunities for coordinated action across care settings	Preventable acute hospital readmissions \$700M (2009)	<ul style="list-style-type: none"> Hospital readmissions that could have been prevented through quality care in the initial hospitalization, adequate discharge planning, adequate post-discharge follow-up, and/or improved coordination between inpatient and outpatient health-care teams
	Unnecessary ED visits \$550M (2010)	<ul style="list-style-type: none"> Visits to the emergency room that could have been avoided with timely and effective primary care
Opportunity for hospital action	Health care-associated infections \$10 to 18M (2011)	<ul style="list-style-type: none"> Infections contracted while patients are in a hospital receiving health care treatment for other conditions
Opportunities for physician and patient action	Early elective inductions \$3 to 8M (2012)	<ul style="list-style-type: none"> Elective inductions before 39 weeks, which increase the health risks for newborn babies and dramatically raise the likelihood of those infants being admitted to neonatal intensive care
	Inappropriate imaging for lower back pain \$1 to 2M (2011)	<ul style="list-style-type: none"> Diagnostic imaging (X-rays, CT scans, and MRIs) used against clinical guidelines in office visits for lower back pain

Source: Massachusetts Division of Health Care Finance and Policy; Massachusetts Department of Public Health; All-Payer Claims Database; Choosing Wisely; Leapfrog Group, American Journal of Obstetrics and Gynecology; Journal of the American Medical Association Internal Medicine; HPC analysis

Reduction opportunities: there are ongoing efforts to address many of these examples

	Massachusetts	United States
Opportunities for coordinated action across care settings	Preventable acute hospital readmissions <ul style="list-style-type: none"> ▪ STAAR (State Action on Avoidable Rehospitalizations) initiative ▪ Re-Engineered Discharge (RED) system ▪ INTERACT II (Interventions to Reduce Acute Care Transfers) 	<ul style="list-style-type: none"> ▪ CMS Readmissions Reduction Program ▪ Care Solutions' (Cleveland Regional Medical Center) community-care management system
	Unnecessary ED visits <ul style="list-style-type: none"> ▪ Pioneer ACO and PCMH care delivery models 	<ul style="list-style-type: none"> ▪ PCMH care delivery models ▪ Enhancing primary care service locations and hours, and use of NPs and PAs ▪ Improving care transitions
Opportunity for hospital action	<ul style="list-style-type: none"> ▪ MDPH Infection Prevention and Control Program: checklists and best practice guidelines for the prevention of SSIs, CLABSIs, VAP, and UTIs. ▪ Massachusetts Coalition for the Prevention of Medical Errors 	<ul style="list-style-type: none"> ▪ CDC collaboration with regional partners (e.g. the Pittsburgh Regional Health Initiative for the Catheter-Associated BSI Prevention Strategy) ▪ Models: education, toolkits, and comparison data
Opportunities for physician and patient action	Early elective inductions <ul style="list-style-type: none"> ▪ Massachusetts Perinatal Quality Collaborative (MDPH) 	<ul style="list-style-type: none"> ▪ The Leapfrog Group (comparison data) ▪ IHI Elective Induction Bundle ▪ Strong Start for Mothers and Newborns (CMMI) ▪ The Neonatal Outcomes Improvement Project
	Inappropriate imaging for lower back pain	<ul style="list-style-type: none"> ▪ Choosing Wisely and ICSI (guidelines) ▪ ACP guidelines

Source: Massachusetts Coalition for the Prevention of Medical Errors; Agency for Healthcare Research and Quality; Massachusetts Senior Care Foundation; Brookings Institute; Massachusetts Department of Public Health; Center for Medicare & Medicaid Services; Cleveland Regional Medical Center; Center for Disease Control and Prevention; Thorpe KE. Statement before the Senate Special Committee on Aging; 2013 Feb 27; Institute for Healthcare Improvement; Leapfrog Group; Center for Medicare & Medicaid Innovation; National Initiative for Children's Healthcare Quality; Choosing Wisely; Institute for Clinical Systems Improvement; HPC analysis

Topics in the 2013 cost trends report

HOSPITAL OPERATING EXPENSES



WASTEFUL SPENDING



HIGH-COST PATIENTS



Why this topic is important to cost trends

- A small group of patients represent the majority of Massachusetts health care expenditures
- Reducing the spending for the highest-expenditure quartile of patients by 3.5 percent would save the same amount as a 20 percent reduction for the other three-fourths of the population.

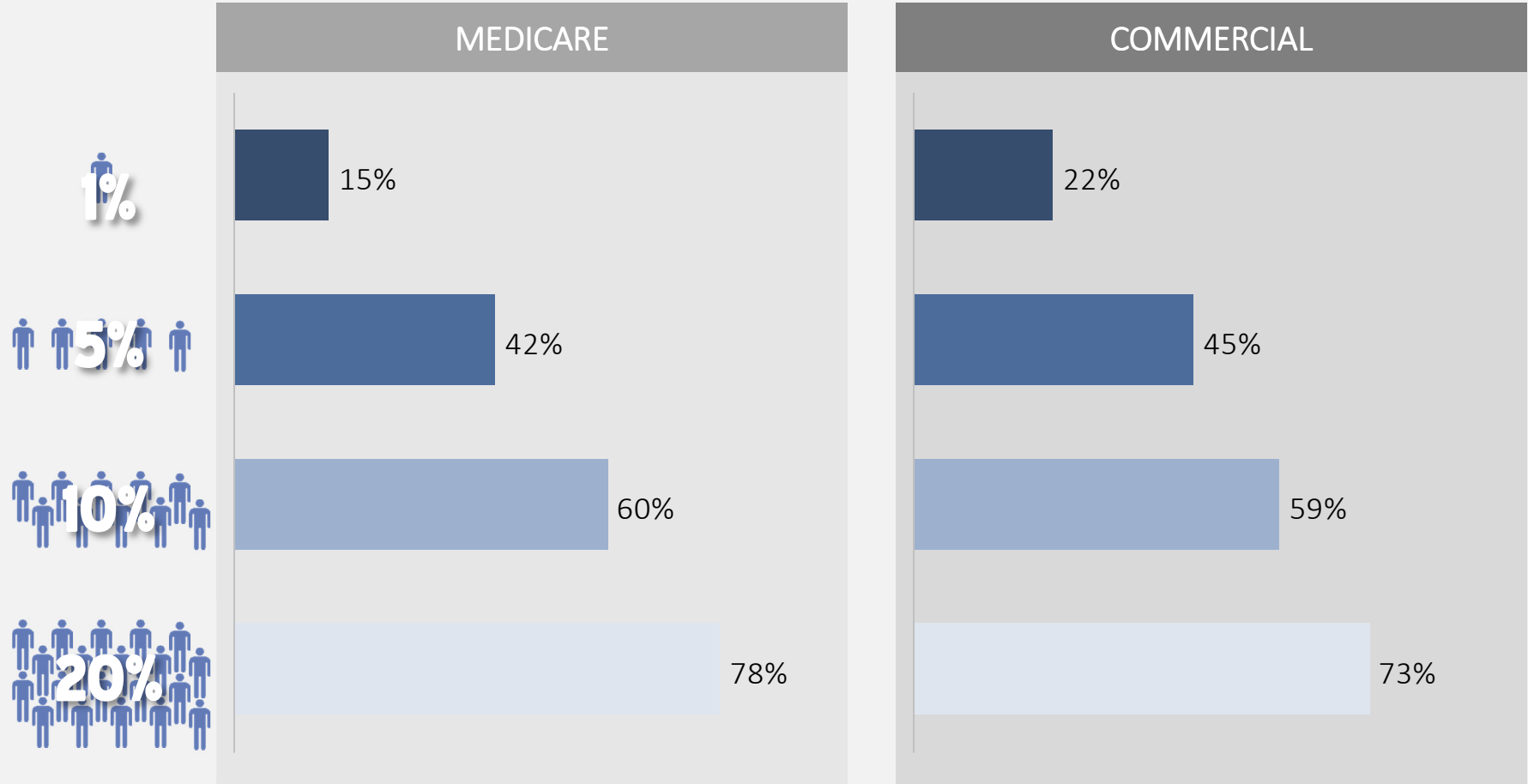
Research questions

- How concentrated is health care spending in Massachusetts?
- What share of high-cost patients remain high-cost the following year?
- What patient characteristics are associated with high-cost patients?

Small subgroup of population represents large proportion of spending among Medicare and commercial populations

Spending concentration in Massachusetts

Percent of claims-based medical expenditures (excluding pharmacy spending), 2010



Notes: The sample was limited to patients who had at least six months of enrollment in both 2010 and 2011 and costs of at least \$1 in each year. Figures do not capture pharmacy costs, payments outside the claims system, Medicare cost-sharing, or end-of-life care for patients who died in 2010 or the first half of 2011.

Source: All-Payer Claims Database; HPC analysis

Clinical conditions: high-cost patients are characterized by the presence of certain conditions and by multiple conditions

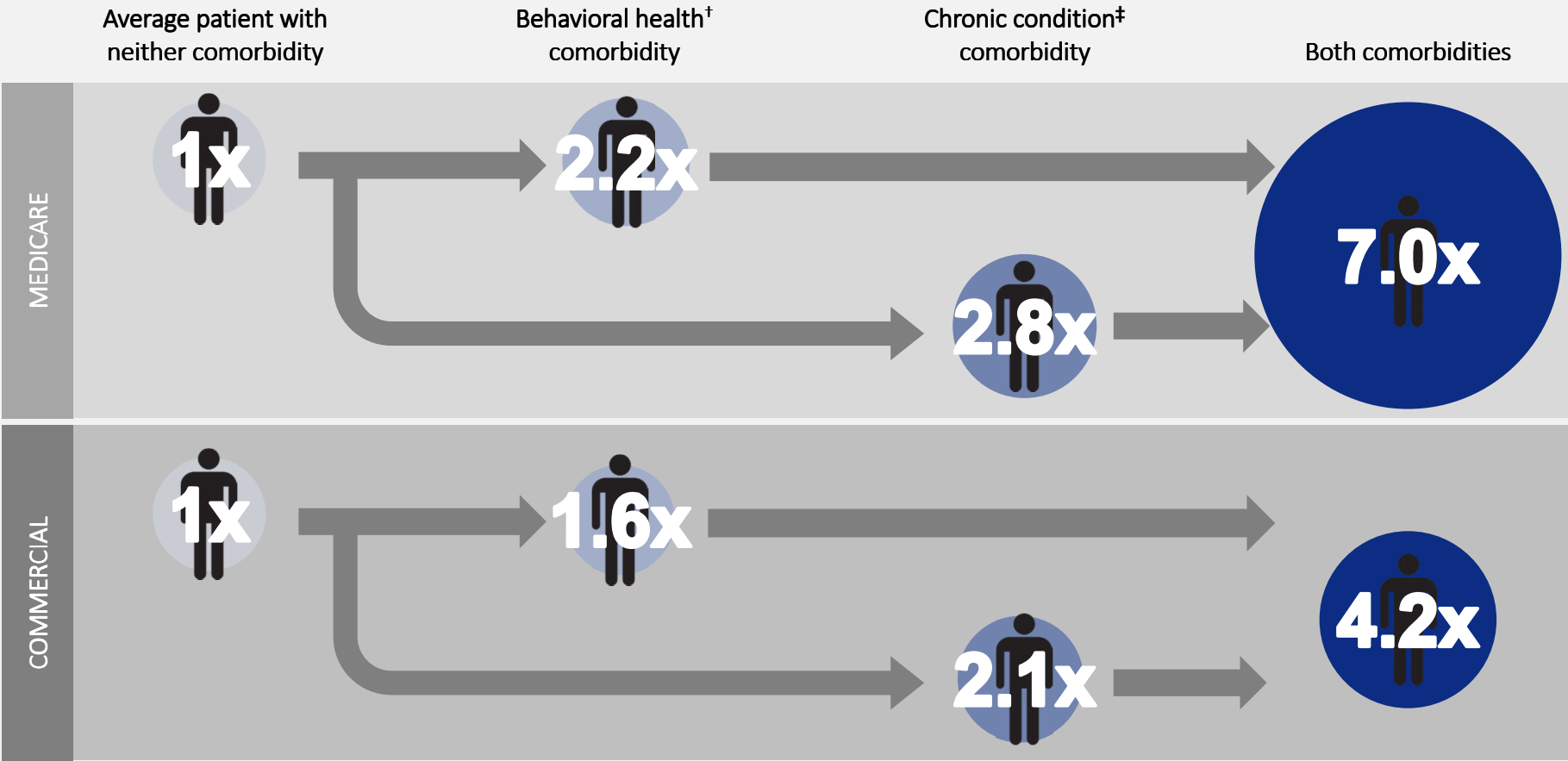
	MEDICARE	COMMERCIAL
Prevalence of clinical conditions relative to rest of population	<ul style="list-style-type: none"> 7 clinical conditions occur more than four times as often among high-cost patients Many other conditions are also more common 	<ul style="list-style-type: none"> 13 clinical conditions occur more than four times as often among high-cost patients Many other conditions are also more common
Average number of clinical conditions	<ul style="list-style-type: none"> High-cost patients have on average 4 more clinical conditions 	<ul style="list-style-type: none"> High-cost patients have on average 2 more clinical conditions
Both behavioral health and chronic condition	<ul style="list-style-type: none"> Prevalence of both a behavioral health and chronic condition is 2.7 times greater among high-cost patients 	<ul style="list-style-type: none"> Prevalence of both a behavioral health and chronic condition is 3.4 times greater among high-cost patients

Notes: (A) High-cost patients defined as 5% of patients with highest claims-based medical expenditures (excluding pharmacy spending) in a given year. (B) The sample was limited to patients who had at least six months of enrollment in both 2010 and 2011 and costs of at least \$1 in each year. Figures do not capture pharmacy costs, payments outside the claims system, Medicare cost-sharing, or end-of-life care for patients who died in 2010 or the first half of 2011. (C) Clinical conditions as defined by Lewin's ERG grouper. 23 clinical conditions selected for presentation include common chronic conditions and conditions particularly prevalent among high-cost patients. (D) Behavioral health comorbidity includes child psychology, severe and persistent mental illness, mental health, psychiatry, and substance abuse. Chronic condition includes arthritis, epilepsy, glaucoma, hemophilia, sickle-cell anemia, heart disease, HIV/AIDS, hyperlipidemia, hypertension, multiple sclerosis, renal, asthma, and diabetes.

Source: All-Payer Claims Database; HPC analysis

Clinical conditions: interaction of conditions can result in higher than expected spending

Claims-based medical expenditures per patient (excluding pharmacy spending)
 Relative to average patient with no behavioral health or chronic comorbidity in 2010



[†] Behavioral health comorbidity includes child psychology, severe and persistent mental illness, mental health, psychiatry, and substance abuse
[‡] Chronic condition includes arthritis, epilepsy, glaucoma, hemophilia, sickle-cell anemia, heart disease, HIV/AIDS, hyperlipidemia, hypertension, multiple sclerosis, renal, asthma, and diabetes

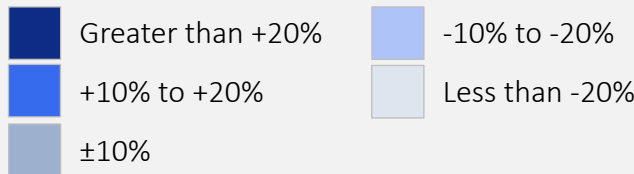
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Source: All-Payer Claims Database; HPC analysis

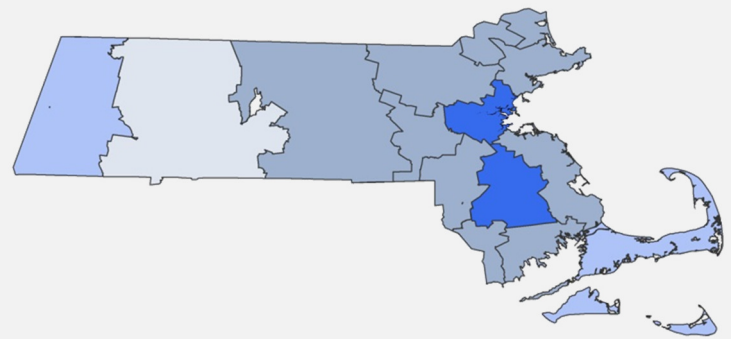
Region of residence: modest regional variation in concentration of high-cost patients

Concentration of high-cost patients by region

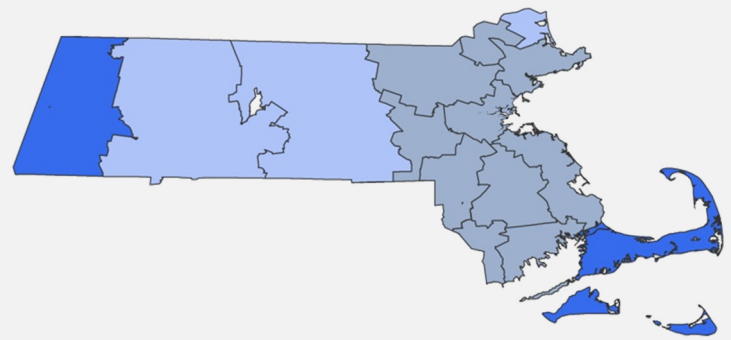
Percent difference from statewide average, adjusting for age and sex



MEDICARE



COMMERCIAL



- Dynamics differ between commercial and Medicare populations
- The Pioneer Valley / Franklin region had a low concentration of high-cost patients for Medicare and commercial populations
- Differences may be due to patient characteristics (e.g., condition prevalence), social characteristics (e.g., education) or health system characteristics (e.g., high-priced providers, practice variation)

Notes: (A) High-cost patients defined as 5% of patients with highest claims-based medical expenditures (excluding pharmacy spending) in a given year.
 (B) The sample was limited to patients who had at least six months of enrollment in both 2010 and 2011 and costs of at least \$1 in each year. Figures do not capture pharmacy costs, payments outside the claims system, Medicare cost-sharing, or end-of-life care for patients who died in 2010 or the first half of 2011.

Source: All-Payer Claims Database; HPC analysis

Income: there is a greater concentration of high-cost patients in lower income zip codes

Concentration of high-cost patients by income*
Percent difference from statewide average

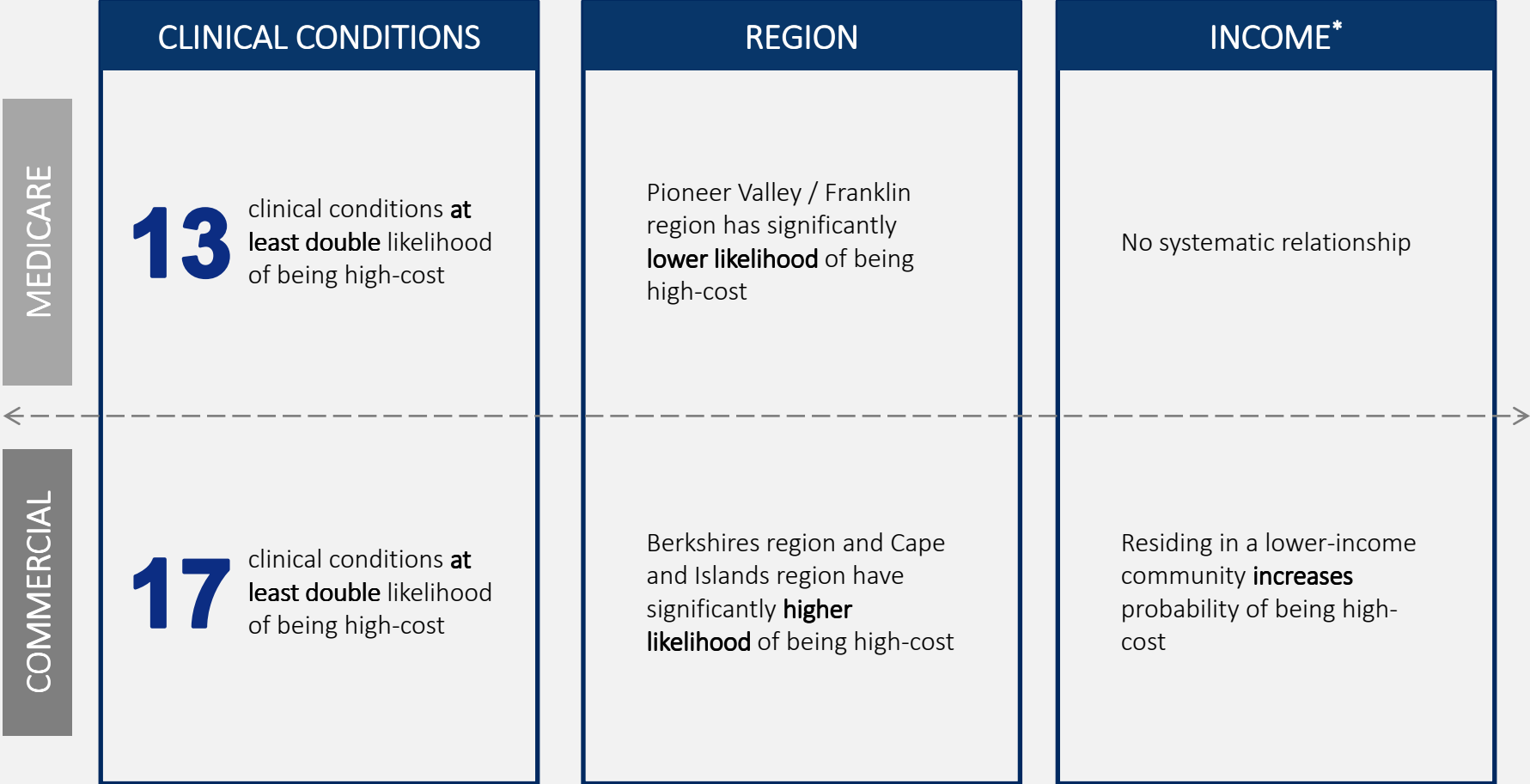


* Patient income is not directly available in the APCD. We used community income, the median household income in a patient's zip code of residence, as an estimate of individual income.

Notes: (A) High-cost patients defined as 5% of patients with highest claims-based medical expenditures (excluding pharmacy spending) in a given year.
(B) The sample was limited to patients who had at least six months of enrollment in both 2010 and 2011 and costs of at least \$1 in each year. Figures do not capture pharmacy costs, payments outside the claims system, Medicare cost-sharing, or end-of-life care for patients who died in 2010 or the first half of 2011.

Source: All-Payer Claims Database; Census Bureau; HPC analysis

Predictors: select clinical conditions and income help predict high-cost patients



* Patient income is not directly available in the APCD. We used median household income in a patient’s zip code of residence as a proxy for individual income.

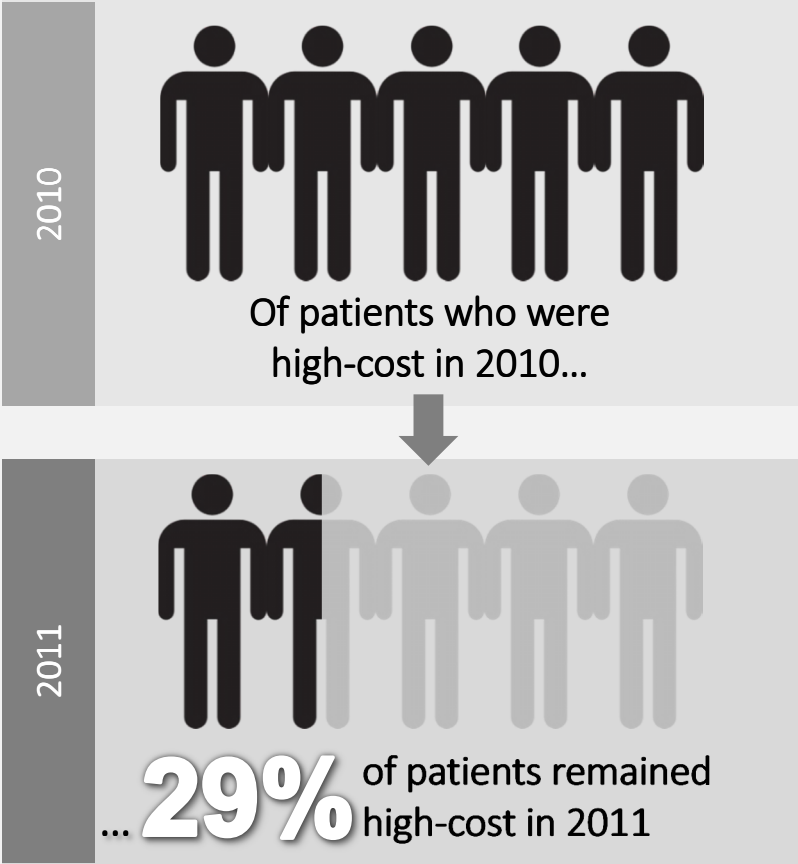
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Source: All-Payer Claims Database; Census Bureau; HPC analysis

Persistence: 29 percent of high-cost patients among the Medicare and commercial populations remained high-cost the following year

Persistently high-cost patients from 2010 to 2011

Claims-based medical expenditures (excluding pharmacy spending)



Predictors of whether a patient remains high-cost in 2011 if high-cost in 2010

- Many of the same conditions that predicted being high-cost in 2010
- Within commercial population, presence of multiple conditions
- Residence in certain regions
- No consistent income effect

Notes: (A) High-cost patients defined as 5% of patients with highest claims-based medical expenditures (excluding pharmacy spending) in a given year. (B) The sample was limited to patients who had at least six months of enrollment in both 2010 and 2011 and costs of at least \$1 in each year. Figures do not capture pharmacy costs, payments outside the claims system, Medicare cost-sharing, or end-of-life care for patients who died in 2010 or the first half of 2011. (C) Clinical conditions as defined by Lewin's ERG grouper. 23 clinical conditions selected for presentation include common chronic conditions and conditions particularly prevalent among high-cost patients. (D) Results control for age, sex, region of residence, income, clinical conditions, and interactions among conditions. Patient income is not directly available in the APCD. We used community income, the median household income in a patient's zip code of residence, as an estimate of individual income.

A range of interventions exist to tackle the clinical, geographic, and demographic predictors identified

	Description	Examples
Preventive strategies	<ul style="list-style-type: none"> Reduce the incidence of conditions prevalent among high-cost patients that drive expensive health crises 	<ul style="list-style-type: none"> Targeted, intensive lifestyle management (e.g., Medicare’s Diabetes Prevention Program) Comprehensive medication management Health coaching
Process and operation improvement strategies	<ul style="list-style-type: none"> Optimize the efficiency of episodes of care frequently occurring among high-cost patients through sound operational practices and the adherence to evidence-based guidelines 	<ul style="list-style-type: none"> Standardization of inpatient care via checklists, care bundles, more systematic applications of process engineering tools, and assuring a set amount of daily onsite monitoring of ICU patients Dispersion of information to support the practice of evidence-based medicine (e.g., Choosing Wisely and the National Priorities Partnership) Increasing cost-consciousness among health care providers
Care management strategies	<ul style="list-style-type: none"> Help high-cost patients with more intensive support resources to help manage their care more effectively Support may focus on complex hand-offs between care settings and teams, the integration of care across multiple episodes, and varying external social and environmental factors 	<ul style="list-style-type: none"> Transitional care (e.g., Transitional Care Nurse model) Health homes Hot-spotting (e.g., Camden experiment)

Source: Hospital and Health Networks Magazine; Milstein A, Shortell S. *Journal of the American Medical Association*. 2012; Joynt KE, Gawande AA, Orav EJ, Jha AK. *Journal of the American Medical Association*. 2013; Thorpe KE. Strengthening Medicare for Today and the Future (statement before the Senate Special Committee on Aging). 2013; Partnership for Prevention; Institute of Medicine; Centers for Medicare & Medicaid Services

Key findings from analysis of select cost drivers



Hospital operating expenses

- The operating expenses that hospitals incur for inpatient care differ by thousands of dollars per discharge, even after adjusting for regional wages and complexity of care provided
- Some hospitals deliver high-quality care with lower operating expenses, while many higher-expense hospitals achieve lower quality performance
- Hospitals able to negotiate high commercial rates have high operating expenses and cover losses they experience on public payer business with income from their higher commercial revenue, while hospitals with more limited revenue must maintain lower operating expenses



Wasteful spending

- In 2012, an estimated \$14.7 to \$26.9 billion (21 to 39 percent) of health care expenditures in Massachusetts are estimated to be wasteful, reflecting both clinical and structural opportunities
- There are opportunities to reduce wasteful spending in preventable hospital readmissions, unnecessary emergency department visits, health care-associated infections, early elective inductions, and unnecessary imaging for lower back pain



High-cost patients

- In 2010, five percent of patients accounted for nearly half of all spending among both the Medicare and commercial populations in Massachusetts
- Certain characteristics differed between high-cost patients and the rest of the population:
 - A number of conditions occurred more often among high-cost patients, and high-cost patients generally had more clinical conditions than the rest of the population
 - The interaction of conditions increased spending more than the individual condition contributions
 - There is modest regional variation in the concentration of high-cost patients
 - Lower-income zip codes have a higher concentration of high-cost patients
- Persistently high-cost patients – those who remain high-cost in consecutive years – represent 29 percent of high-cost patients and 15 to 20 percent of total spending

Conclusions for 2013 cost trends report

We find that there are significant opportunities in Massachusetts to enhance the value of health care, addressing cost and quality. We identify four primary areas of opportunity for improving the health care system in Massachusetts:

- 1 **Fostering a value-based market** in which payers and providers openly compete to provide services and in which consumers and employers have the appropriate information and incentives to make high-value choices for their care and coverage options,
- 2 **Promoting an efficient, high-quality health care delivery system** in which providers efficiently deliver coordinated, patient-centered, high-quality health care that integrates behavioral and physical health and produces better outcomes and improved health status,
- 3 **Advancing alternative payment methods** that support and equitably reward providers for delivering high-quality care while holding them accountable for slowing future health care spending increases, and
- 4 **Enhancing transparency and data availability** necessary for providers, payers, purchasers, and policymakers to successfully implement reforms and evaluate performance over time.