



**MASSACHUSETTS**  
HEALTH POLICY COMMISSION

**2018 Annual Health Care**  
**COST TRENDS**  
**HEARING**

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OCTOBER 17, 2018

### **Morning Presentations:**

- Price as a driver of health care cost growth
- Affordability challenges for low to middle income individuals and families
- Market competition vs. government price setting
- Opportunities to unleash the promise of APMs and ACOs

### **Panel 1: Meeting the Health Care Cost Growth Benchmark – Top Trends in Care Delivery and Payment Reform**

- Opportunities to reduce administrative costs
- Expanding alternative payment methods and aligning incentives
- Community-appropriate care
- Challenges facing small businesses and employers
- Product design and engaging consumers

### **Panel 2: Innovations to Enhance Timely Access to Primary and Behavioral Health Care**

- Use of technology: EMRs and telemedicine
- Integration of behavioral health into primary care, and use of mobile integrated health to provide lower-cost care in the community
- Role of alternative care sites – such as urgent care centers – in providing access and supporting cost containment goals



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OCTOBER 17, 2018

**Up Next**

Spotlight on State Solutions to Health Care Spending



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**MASSACHUSETTS HEALTH POLICY  
COMMISSION**

**2018 HEALTH CARE  
COST TRENDS HEARING  
WEDNESDAY, OCTOBER 17, 2018**

**“SPOTLIGHT ON STATE SOLUTIONS TO  
HEALTH CARE SPENDING”**

***PRESENTED BY TRISH RILEY  
EXECUTIVE DIRECTOR  
NATIONAL ACADEMY FOR STATE HEALTH  
POLICY  
TRILEY@NASHP.ORG***

# National Academy for State Health Policy

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- Private, non-profit, bipartisan forum of and for state leaders
- Serving States for 31 years
- Cross disciplinary- Legislative and executive branches
  - AG's
  - Insurance departments
  - Exchanges
  - Cost Commissions
  - Medicaid
  - Public Health
  - State employee health plans
  - Governor's office
  - Legislators and staff
- Guided by cross disciplinary Steering Committees and work groups

*Louis Gutierrez*

*David Seltz*

*Daniel Tsai*



# What Motivates States to Act?

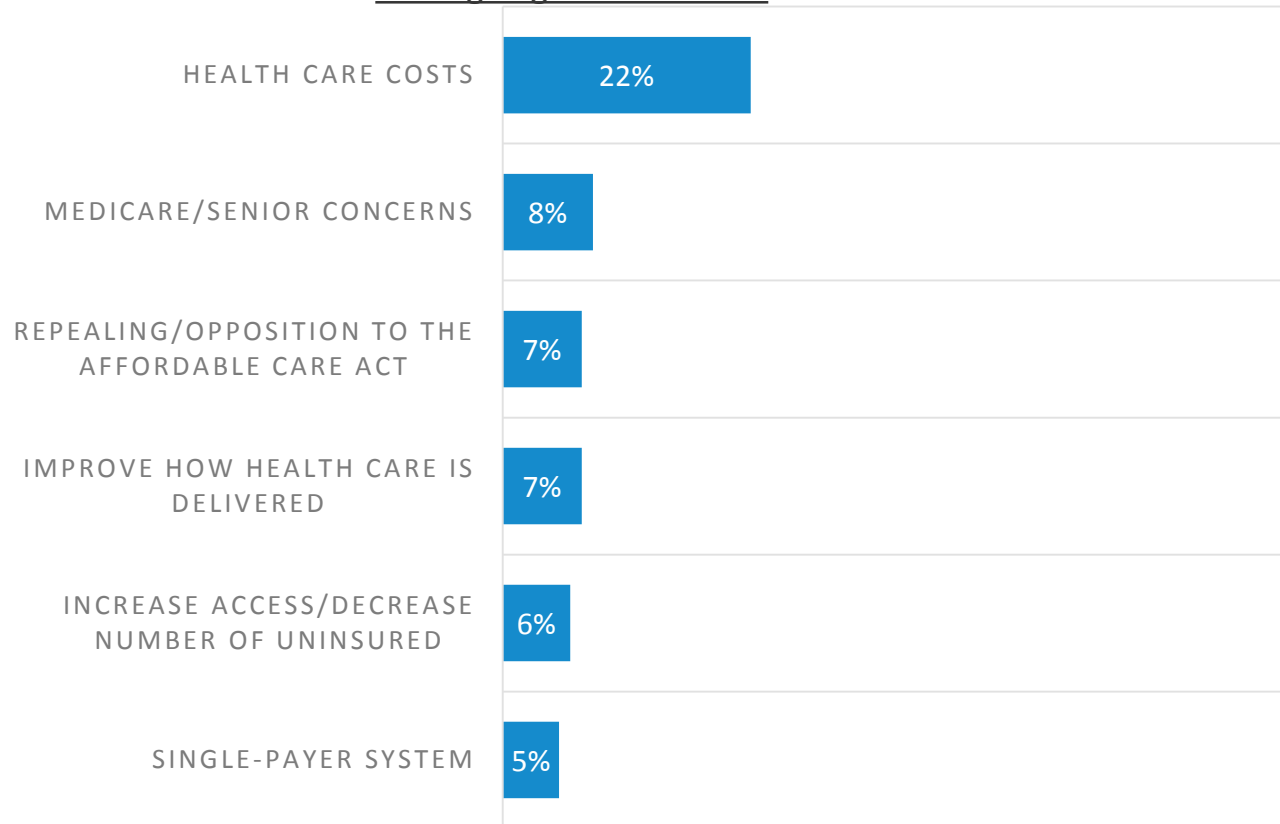
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- +/- 40% of healthcare in states paid by public dollars
- Balanced budget requirements
- Medicaid
- Market dynamics
  - Individual and small group
  - Increasing out of pocket exposure
- States as “Laboratories of Innovation”
  - ACA
  - Children’s health
  - Medical health parity
  - “Gag clauses”
- Public outcry

# Health care costs is the top health care issue voters want 2018 candidates to talk about

While this year's election is still a long way off, what health care issue do you most want to hear candidates talk about during their upcoming campaigns? (*open-end*)

Among Registered Voters:



NOTE: Only top six responses listed.

SOURCE: Kaiser Family Foundation Health Tracking Poll (conducted February 15-20, 2018)

# State of the State – Health Cost Reduction Strategies

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- Payment and delivery system reforms
  - Medicaid
  - ACO's / Integrated Delivery (VT all payer ACO)
  - WA Technology Assessment Program.
- Global budgets/ Sustainable growth rate
  - MA, VT, OR
- Ratesetting
  - MD
- Market oversight
  - DON/CON/COPA– MA, CT, ME, VA, TN
  - Insurance review and oversight e.g. 23 States “Surprise Billing” laws
- Transparency – cost compare websites
  - APCD's WA, NH, ME



# Cont.- State of the State – Health Cost Reduction Strategies

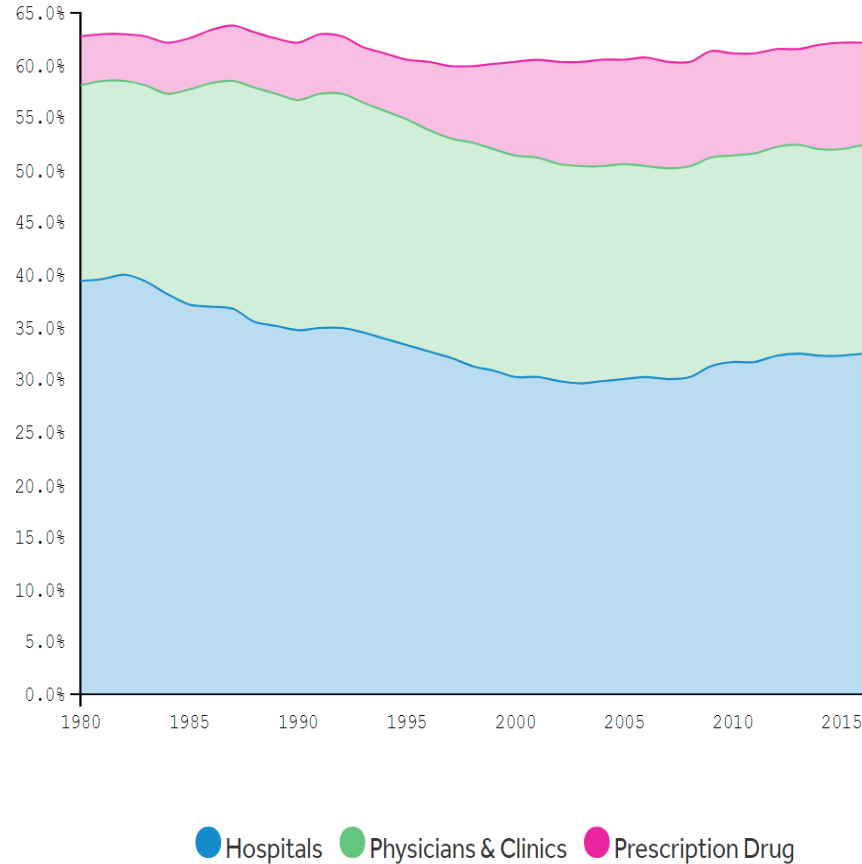
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- Reference pricing
  - MT – hospital rates
  - CA - “shoppable services”
- Consolidate state purchasing
  - WA Health Care Authority
  - Oregon Health Authority – Purchases for 1:3; Medicaid, public employees, educators; 3.4% SGR
  - TN – episode based payment across state employees, retirees, and Medicaid
  - WI Dept. of Employee Trust Funds – allows local government and public universities opt in

# Why Focus on Rx?

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Drug spending has grown rapidly recently, but most of the health dollar is spent on hospitals and physicians



**Source:** Kaiser Family Foundation analysis of National Health Expenditure (NHE) data from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group

# Why States Take on Rx?

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- Rx price increases rapid and unpredictable
- Specialty drugs, biologics, immunotherapy = costs will continue to rise
- 21<sup>st</sup> Century Cures -> Fast Tracking
- State Medicaid Spending
  - 25% 2016; 14% in 2015
  - CMS predicts 6% growth 2016-2025
  - PT. D “claw back”
- No federal consensus on action despite President’s “Blueprint”
  - States can’t wait on Feds
    - E.g. 28 states enacted “gag clauses” before Congress did
- Disrupt business model
- Rx issues cross the partisan divide

# NASHP's Center for State Rx Pricing

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- Laura and John Arnold Support
- Pharmacy Cost Work Group
- Model legislation, legal resources, track emerging activity, other technical assistance

<https://nashp.org/center-for-state-rx-drug-pricing/>

- Diverse state engagement

# How Are States Approaching Rx Costs?

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- 2018 Session: 171 Bills
- 28 States Passed 45 New Laws:
  - PBMs – 92 Bills (31 laws in 20 states eg: AR, AZ, FL, KS, KY, MO, SC, CA, CT etc)
  - Transparency – 26 Bills (7 laws: OR, VT, ME, NH, CT, CA\*, NV\*)
  - Importation – 9 Bills (1 law: VT; Utah – Proposal due to Legislature Oct 1)
  - Price Gouging – 13 Bills (1 law: MD\*)
  - Rate Setting – 3 Bills: MD, NJ, MN
  - Volume Purchasing – 4 Bills

(\* = enacted in 2017)

State Transparency Law	Requires reporting from...				
	Health Plans	PBM's	Manufacturer Price Increases	Manufacturer Launch Price	Other
California (SB 17)	X		X	X	
Connecticut (HB 5384)	X	X	X	X	
Maine (LD 1406) *Study only			X		
Nevada (SB 539) *Only relates to diabetes drugs		X	X		Pharmaceutical sales reps. & manufacturer donations to non-profit organizations
New Hampshire (HB 1418) *Study only		X	X		
Oregon (HB 4005)	X		X	X	
Vermont (S 92)	X		X	X	
Maryland's Price Gouging Law (MD 631) *law's main focus is not on transparency			X		
Louisiana's PBM Laws (SB 283 & HB 436) *law's main focus is not on transparency		X			

# Vermont: Transparency (S. 92)

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- Vermont was the first state to enact transparency laws in 2016. S. 92 adds reporting from health plans and public disclosure of manufacturer reports.
- Requires Reporting from:
  - **Health Plans** on most costly drugs, the impact of drugs costs on premium rates, and information on PBM use
  - **Manufacturers** on price increases and high launch prices.
    - ✦ **Price Increases:** reporting occurs on 15 drugs with WAC increases of 50% or more in past 5 years or 15% or more in previous year (must explain each factor that caused net cost increase)
    - ✦ **Launch Prices:** sponsors of new drugs with a WAC that exceeds the threshold for a specialty drug under Medicare Part D must report expected utilization, FDA approval designation, acquisition cost, and drug pricing plan

# California: Transparency

## (SB 17 Chapter 603, Statutes of 2017)

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### Manufacturer Reporting

- 1) Chap. 603 requires manufacturers to give 60 days advance notice of price increases when certain thresholds are met:
  - The wholesale acquisition cost (WAC) for a drug is more than \$40 for a course of treatment
  - The manufacture will increase the WAC more than 16% (including the proposed and cumulative increases that occurred within the previous two calendar years)
- 2) If a pending price increase triggers reporting requirements for advance notice, manufacturers must also report specified financial and non-financial factors that contributed to the price increase
- 3) When launching new drugs that exceed \$670, manufacturers must report expected utilization, acquisition cost if applicable, FDA approval designation, pricing plans, and launch price.

Health plans must report 1) the 25 most frequently used drugs; 2) the 25 most costly drugs by total spend; 3) the 25 drugs that contribute the most to year-over-year plan spending



# PhRMA Files Suit Against CA SB 17

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- In response to SB 17, PhRMA filed suit challenging the law. PhRMA claimed the law would cause market distortions, such as drug stockpiling and reduced competition. PhRMA also argued that SB 17 violates:
  - The Commerce Clause, which prohibits CA from regulating drug pricing beyond the state's borders;
  - The First Amendment, by compelling speech through manufacturers justifying price changes; and
  - The Fourteenth Amendment's due process clause because the law is unconstitutionally vague.

# PhRMA Files Suit Against CA SB 17

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- U.S. District Judge Morrison England dismissed the case on August 28, 2018. He argued PhRMA failed to show that the court has jurisdiction to hear the case
- The judge gave PhRMA 30 days to amend the complaint after finding its initial claim – that CA’s law attempted to “dictate national health policy”- without merit
- On September 28, PhRMA refiled.

# Connecticut: Transparency (HB 5384)

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- Connecticut's transparency law is one of the most robust—it requires reporting from health plans, PBMs, and manufacturers on both price increases and launch prices.
- Requires Reporting from:
  - **Health Plans** on the most costly drugs and the impact of drugs costs on premium rates
  - **Pharmacy Benefit Managers** on aggregate amount of rebates collected from manufacturers and amount of rebates going to carriers
  - **Manufacturers** on price increases and high launch prices
    - ✦ **Price Increases:** reporting occurs on 10 outpatient drugs where 1)WAC increased by at least 20% during previous year or by 50% over past three years or 2)WAC was more than \$60/month or course of treatment
      - Must report each factor that caused net cost increase, company level research & development costs
    - ✦ **Launch Prices:** ALL sponsors of new drugs or biologics must report expected utilization, clinical trial comparators, FDA approval designation, and estimated market entry date

# New Hampshire & Maine: Transparency Studies

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- New Hampshire and Maine enacted laws mandating further study of transparency
- New Hampshire created a commission to determine if increased transparency would lower drug costs. The commission will study:
  - PBMs' role in cost, administration, and distribution of prescription drugs.
  - Amount of rebates from manufacturers for certain high cost, high utilization drugs
- Maine requires the Maine Health Data Organization to develop a plan to collect data from manufacturers related to cost and pricing of drugs, including:

# Maryland's Price Gouging Bill

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- In 2017, lawmakers passed SB 631, which prohibited manufacturers and wholesale distributors from engaging in price gouging of generic drugs. This was the first price gouging legislation to become law.
- The Association for Accessible Medicines filed suit, claiming the law could hurt competition and drive up prices.
- The Fourth Circuit Court of Appeals found that the law regulates trade outside Maryland's borders and thus violates the Dormant Commerce Clause.

# Maryland's Rate Setting Bill

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- SB 1023/HB 1194, based on NASHP's rate setting model, would have created an all-payer drug rate setting program through a Drug Cost Review Commission.
  - Anticipate re-introduction in 2019
- Minnesota proposed a similar bill which failed to receive consideration, while New Jersey has a rate setting bill in the pipeline.

# Wholesale Importation

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- Section 804 of FDCA allows the HHS Secretary to approve a *program* of wholesale importation of prescription drugs that will:
  - Pose no additional risk to the public's health and safety; and
  - Result in a significant reduction in the cost of the covered products to the American consumer
- Vermont enacted S.175, which creates a wholesale importation program to purchase high-cost drugs in Canada and make them available to Vermonters through the existing supply chain
  - Vermont's Agency for Human Services is currently working to develop an application to HHS
- Utah's importation bill (HB 163) passed the House, but not the Senate
  - UT's Department of Health recently submitted a report on importation as requested state legislative leadership

# Louisiana's Subscription Model

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- In August, Louisiana issued an RFI on its plans to use a subscription-based model for Hep C medication.
- Under the subscription model, Louisiana would agree to pay a fixed amount of money over several years, and a manufacturer would provide the state with all the medication the state needs.
  - Payment to the manufacturer would be equal to or less than what the state currently spends to provide the medication.
  - In the first years, the state will get more drugs than they pay for; as fewer people need treatment, the manufacturer would get extra money.
  - Theoretically, a guaranteed fixed purchase price for a contracted period of time would allow the manufacturer to expand its product reach.



# Medicaid Initiatives

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## Challenging – Medicaid law

- Rebates
- Best price
- Cannot limit Rx
- Tools inadequate (PDL, PA. limits etc.)

## NEW YORK

- Budget cap on Rx spending
  - Target high cost Rx
  - Review value
  - Seek “supplemental/ supplemental”
  - Most cover all Rx but may:
    - ✦ Request more info on costs
    - ✦ Move rx to prior approval
    - ✦ Case study: Vertex’s Orkambi

# Medicaid Alternative Payment Models

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## OKLAHOMA

- OK Medicaid has entered into three separate APMs directly w/ drug manufacturers (first-in-nation)
- State and manufacturer agree upon outcome(s) to measure
- Additional rebates are based on performance against agreed-upon measure
- Example: As adherence targets are met- which result in greater usage, sales and outcomes- the price the state pays for the drug decreases

## COLORADO

- Colorado is surveying physicians to determine their actual acquisition cost (AAC) for physician administered drugs (PADs)
- Results will be used to design a more transparent APM based on average acquisition cost (2019)

# Next Steps

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- States testing approaches to inform Federal debate
  - 28 Politically diverse states have enacted “gag clauses” before Congress acted  
eg: MS, TX, KY, IN, GA, CO, WVA, VT, NH
  - 23 States have enacted “surprise billing” laws – Sen. Cassidy has proposed bipartisan draft legislation –no Congressional action yet
- New England states actively engaged on Rx issues
- NASHP eager to work with MA to push Rx pricing reforms



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**Up Next**

Presentation from the Office of the Attorney General: Health Care Division

# Examination of Health Care Cost Trends and Cost Drivers

Pursuant to G.L. c. 12C, § 17

October 17, 2018

OFFICE OF ATTORNEY GENERAL  
MAURA HEALEY  
ONE ASHBURTON PLACE  
BOSTON, MA 02108





# AGO Cost Trends Examinations

- Authority to conduct examinations:
  - G.L. c. 12, § 11N to monitor trends in the health care market.
  - G.L. c. 12C, § 17 to issue subpoenas for documents, interrogatory responses, and testimony under oath related to health care costs and cost trends.
- Findings and reports issued since 2010.
- This examination focuses on variation in payment methodologies for health care services in the commercial market.



# Questions Presented

- I. Are payment methods for health care services consistent across insurers and providers in the commercial market?
- II. What are the costs associated with administering complex and varied health care payment methods?
- III. How is this payment system a barrier to price comparisons for market participants?



# Hospital Outpatient Payment: Significant Complexity and Variation

Hospital Outpatient Fee Schedules Do Not Share A Consistent Structure Across Payers

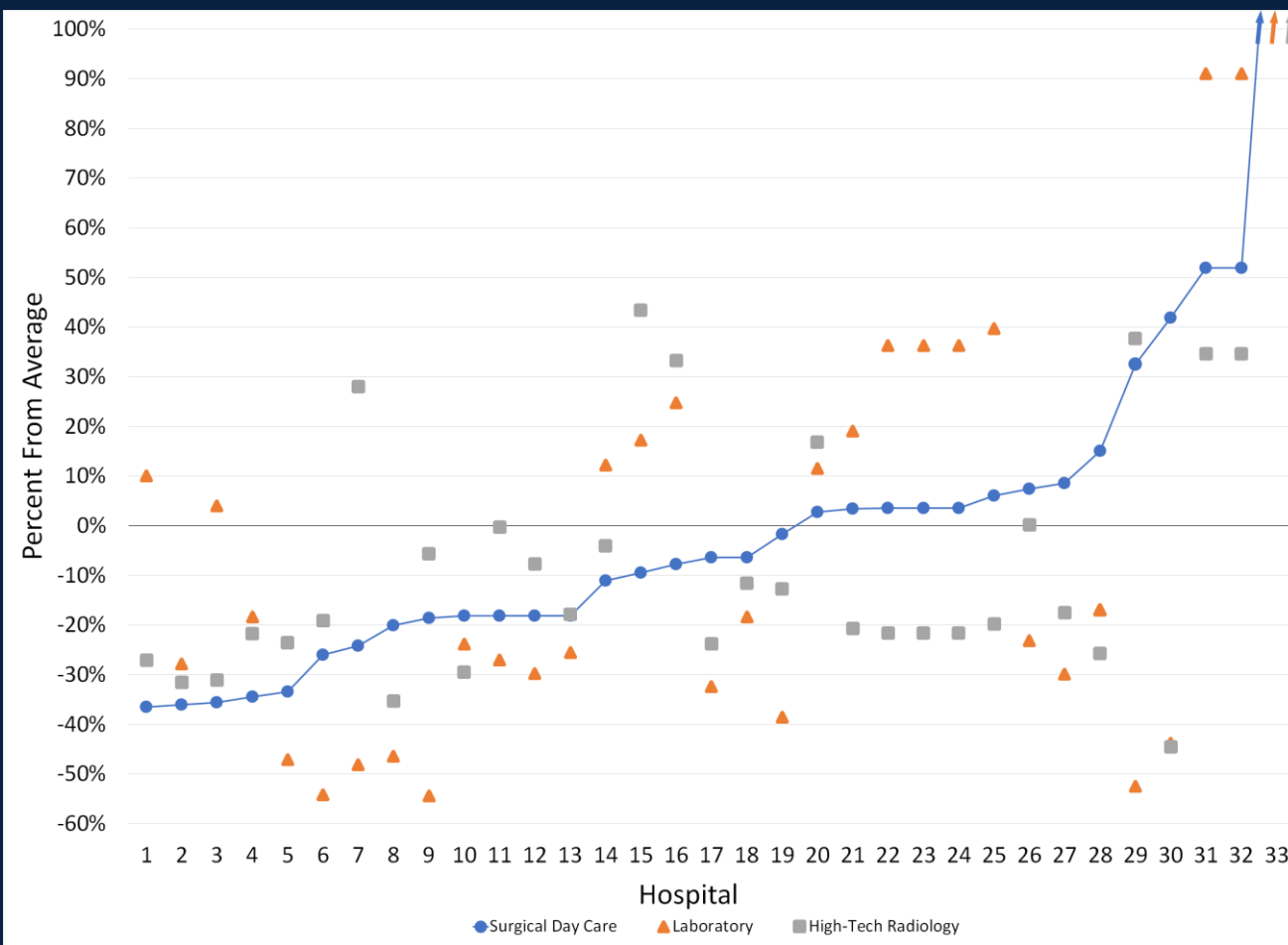
	Payer 1	Payer 2	Payer 3
Number of outpatient billing service categories	17	12	4
Rate multipliers negotiated by outpatient billing service category?	Yes	Yes	No





# Even Where Service Categories Align, Negotiations Over Fee Schedules Result In Significant Differences in Relative Price Across Services at a Single Hospital

## Hospital Rate Multipliers for Three Outpatient Services for One Massachusetts Payer (2018)





# Outpatient Payment Variation: Observation Services Case Study

## Payer 1

Six different time-based payment structures (each for different time ranges)

## Payer 2

Negotiated base rate multiplied by hours of observation and a negotiated multiplier

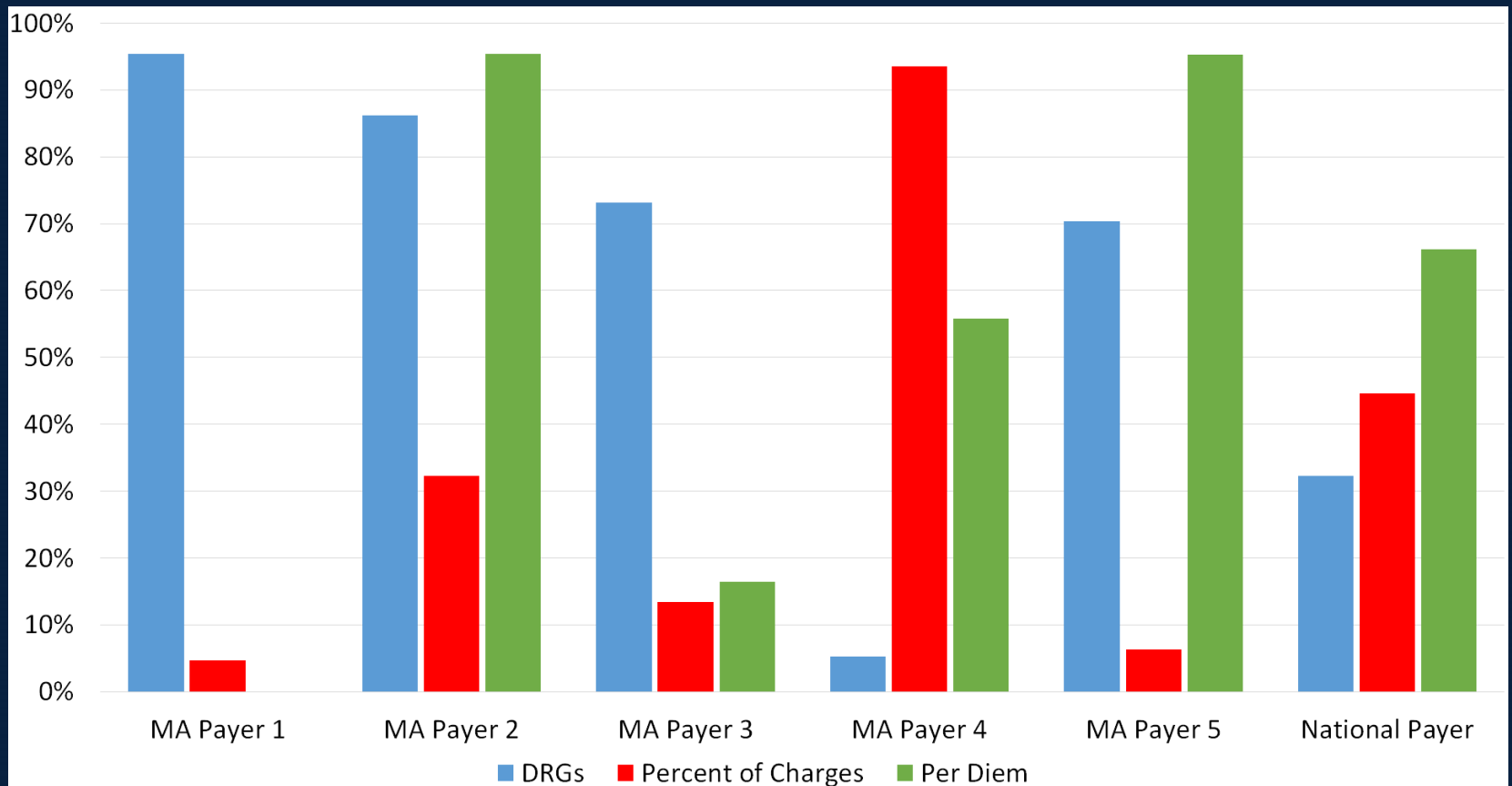
## Payer 3

24-hour all-inclusive rate



# Hospital Inpatient Payment Is Somewhat More Standardized Across Big Three Payers, But Variation Exists Across State

Percent of Payers' Massachusetts Hospital Contracts that Use DRG, Percent of Charges, and Per Diem for Inpatient Payment





# Questions Presented

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- I. Are payment methods for health care services consistent across insurers and providers in the commercial market?
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# Administrative Costs

- Recent national studies have documented the high costs of administrative complexity in health care.
  - 25% of hospital costs are administrative.
  - For every 10 MDs, there are 7 FTEs engaged in billing activities.
  - Growth of billing costs from 14% in 2009 to 17% in 2014.
  - Administrative costs are a major driver in the difference in overall cost between the US and other countries.
  - Reducing US spending for hospital administration to that of Canada or Scotland would have saved ~\$158 billion in 2011 dollars.
  - Higher administrative costs do not appear to be connected to higher quality care.



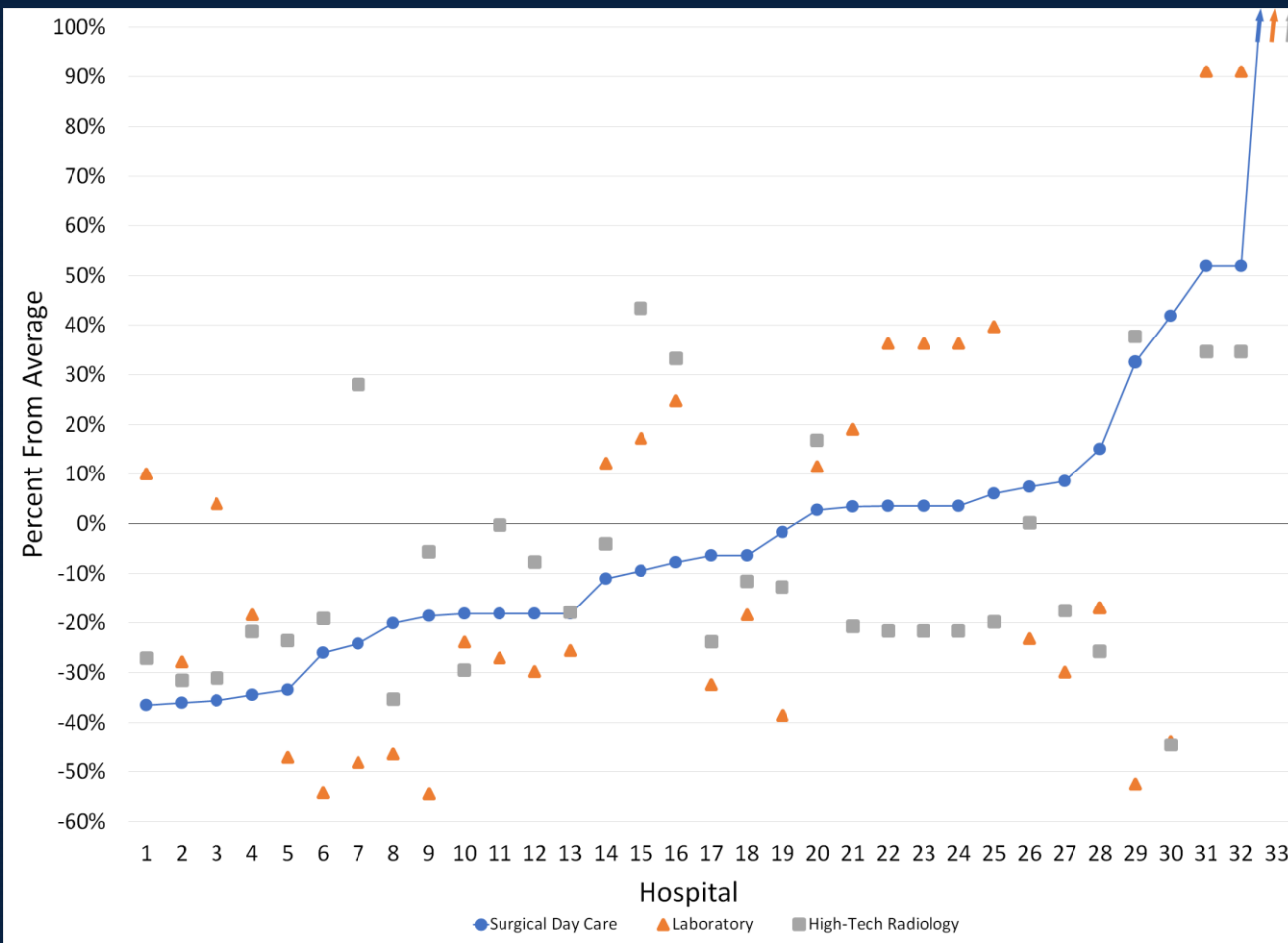
# Questions Presented

- I. Are payment methods for health care services consistent across insurers and providers in the commercial market?
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# Comparing Prices Across Providers Is Challenging

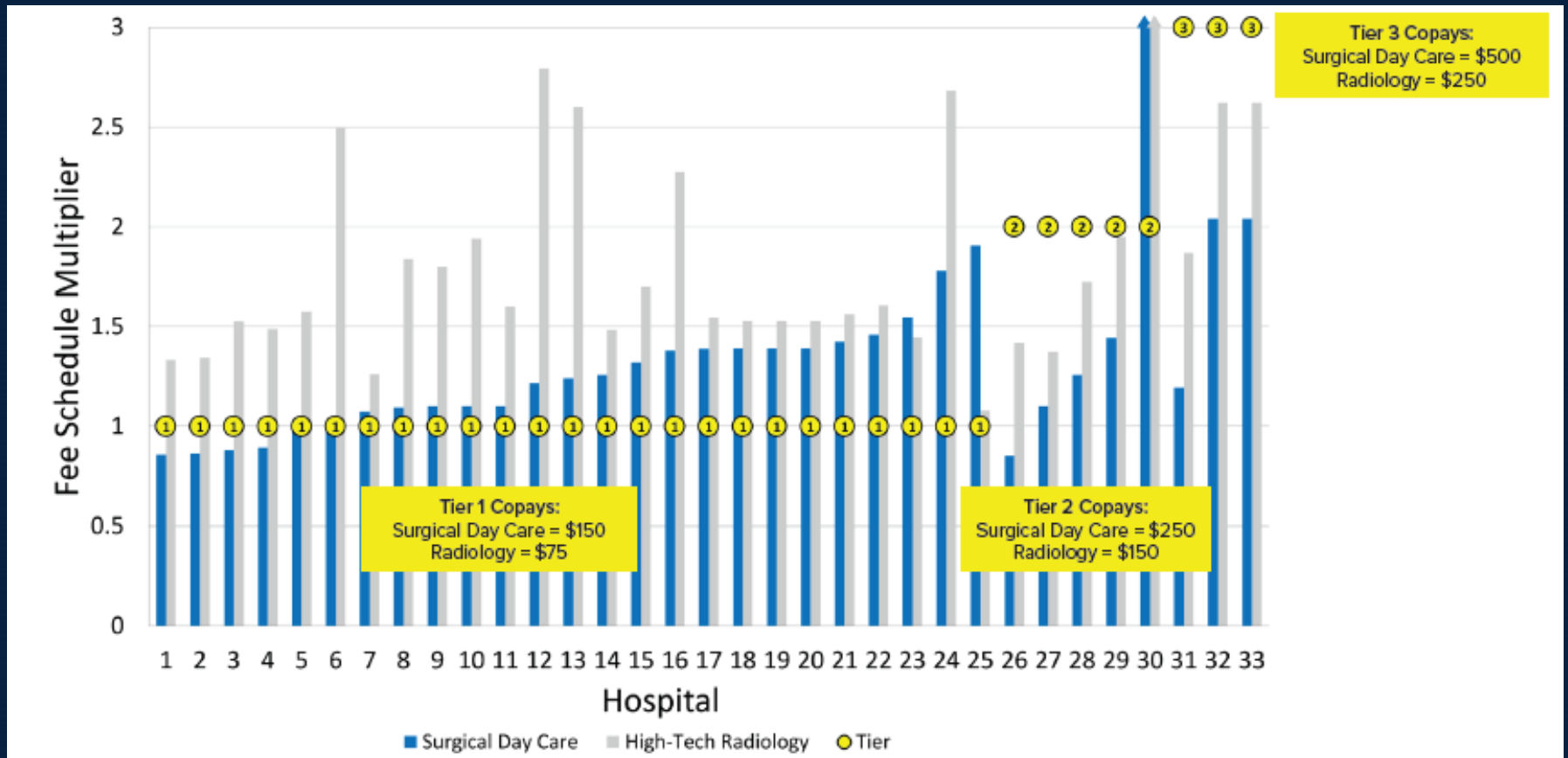
Hospital Rate Multipliers for Three Outpatient Services for One Massachusetts Payer (2018)





# Comparing Prices Across Providers Is Challenging for Consumers

## Hospital Surgical Day Care and High-Tech Radiology Prices by Tier for One Massachusetts Payer (2018)

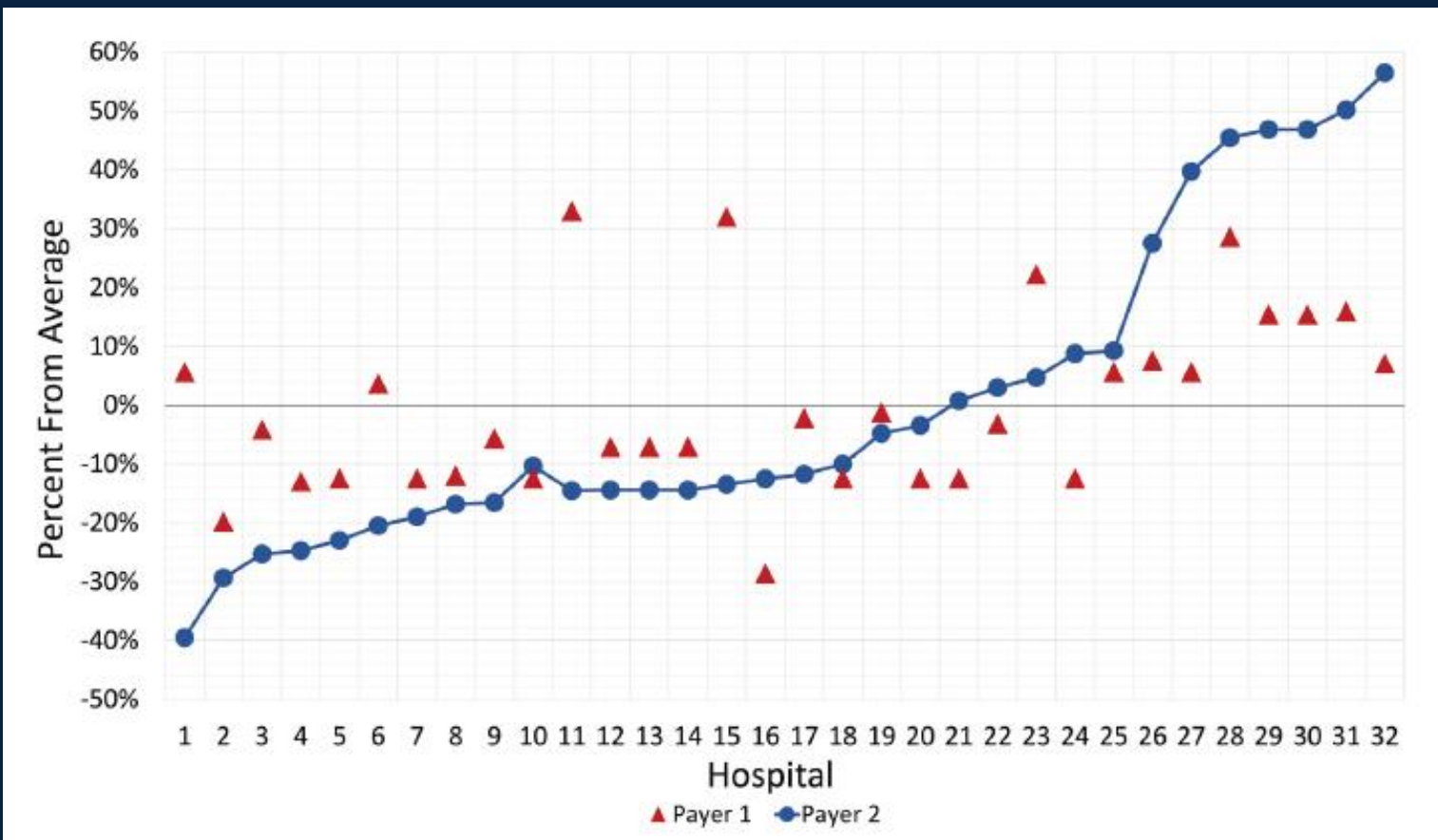






# Comparing Prices Across Payers Is Challenging for Employers and Referring Providers

## Hospital High-Tech Radiology Prices for Two Massachusetts Payers (2018)





# Recommendations

1. Study further the administrative costs associated with current complex and varied approaches to payment for health care services with the goal of developing strategies to reduce these costs.
2. Reduce complexity and explore increasing standardization where appropriate in the methods for determining health care payment rates to reduce the cost of claims and contract administration and facilitate “apples-to-apples” price comparisons.
3. Establish real-time, service-level price transparency for employers, consumers, policymakers, and providers.



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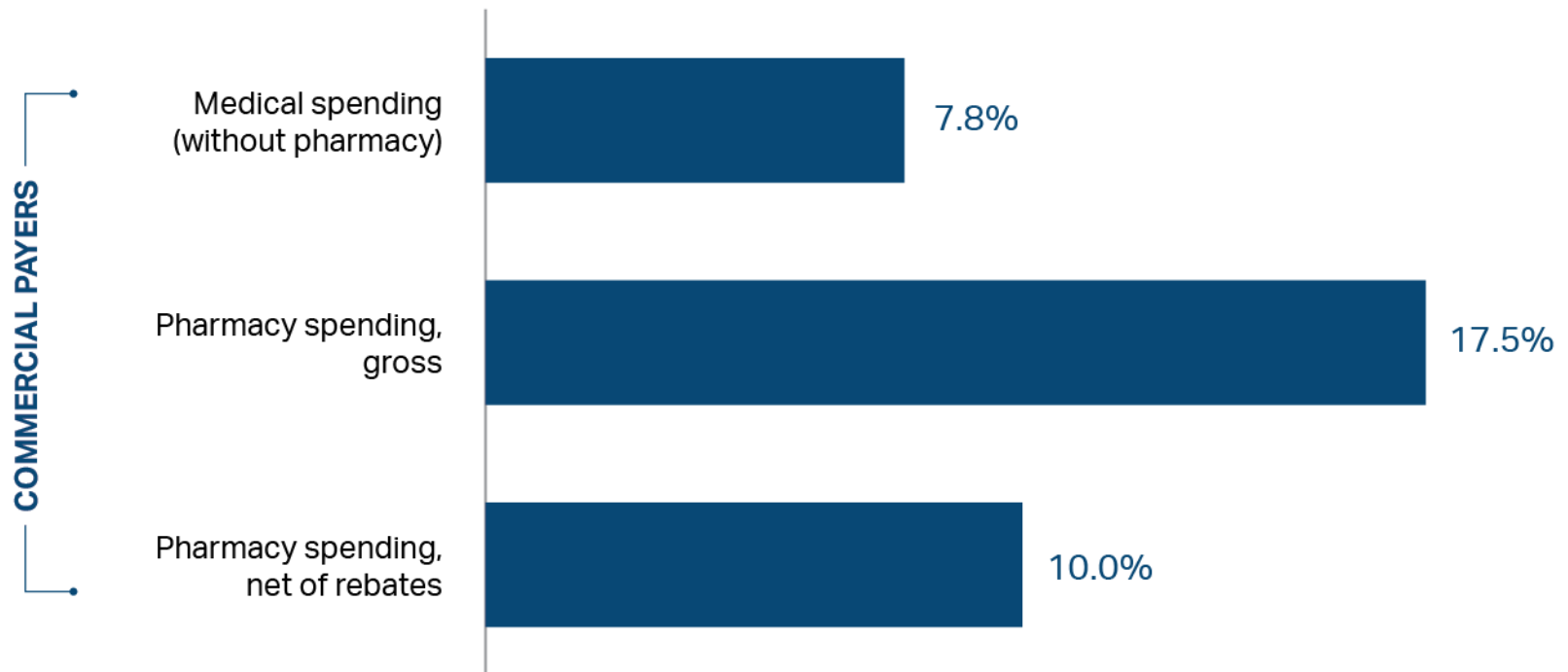
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**Up Next**

Reaction Panel 3: Strategies to Address Pharmaceutical Spending Growth

## For commercial payers, pharmacy spending growth exceeds medical growth over recent years

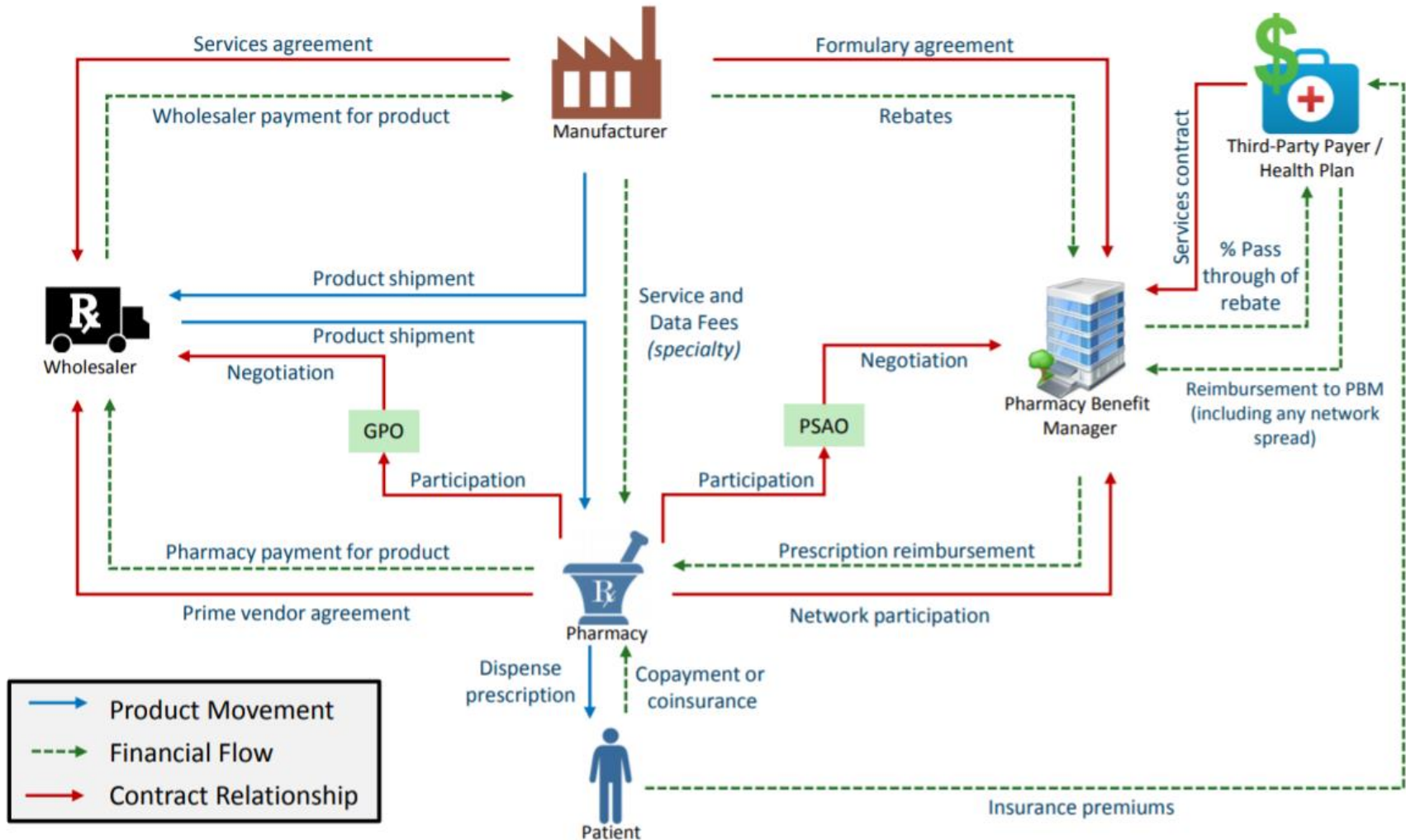
3 year cumulative spending growth per member per month for commercial payers (full claims), 2015 – 2017



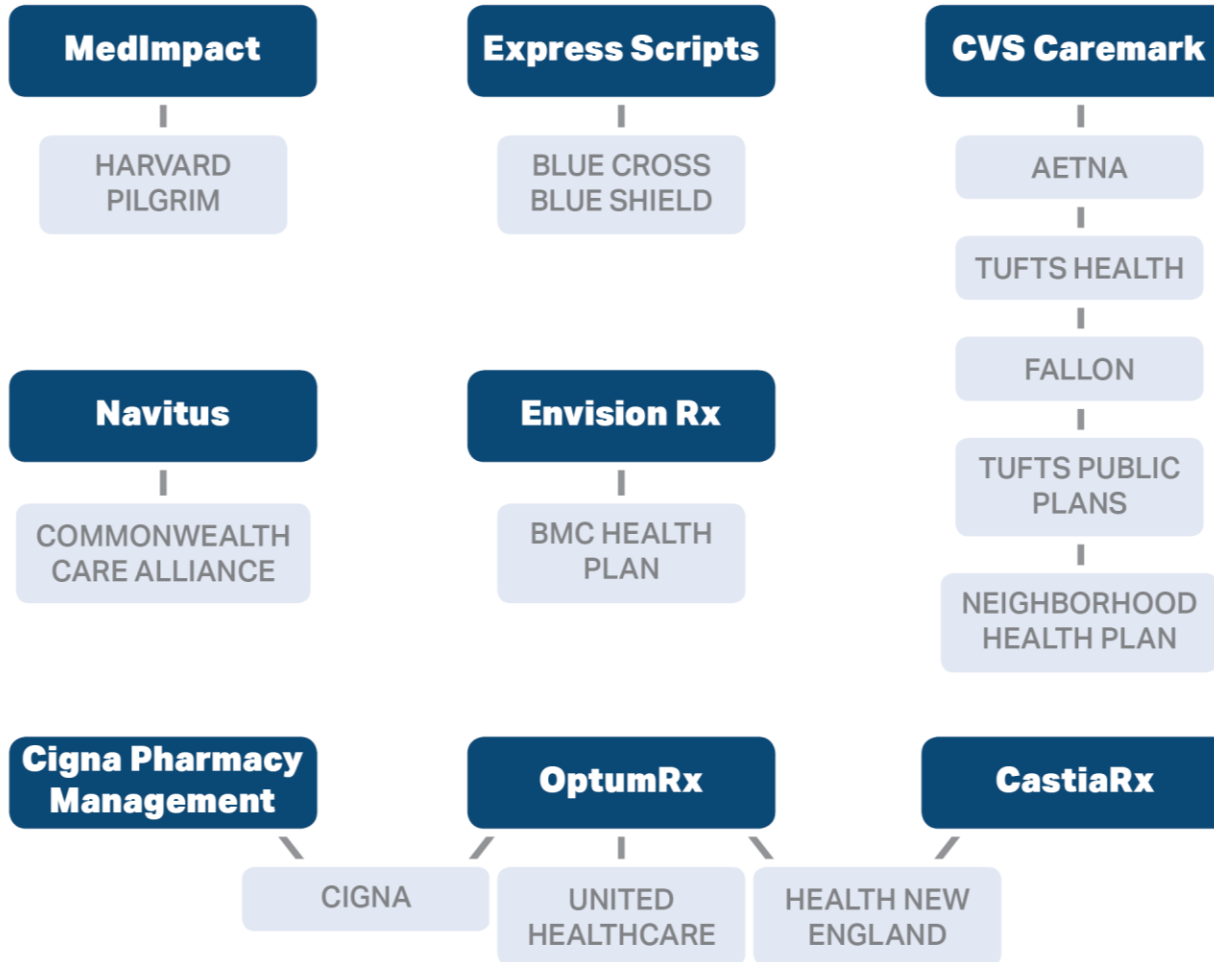
Net of rebates, prescription drug spending (pharmacy only) represented 17% of health care spending for commercial payers in 2017

# The complexity of the drug distribution and sales chain illustrates the need for transparency and action at many levels

*Flow of drug products, services, and funds for drugs purchased in a retail setting\**



# Multiple pharmacy benefit managers (PBMs) contracting with different health plans for a variety of functions adds to the complexity in MA



## PBMS PERFORM A VARIETY OF FUNCTIONS FOR THE 12 PAYERS SURVEYED

**12**  
pharmacy contracting

**12**  
pharmacy claims processing

**11**  
negotiate prices and discounts with drug manufacturers

**11**  
negotiate rebates with drug manufacturers

**7**  
provide clinical management care programs to clients

**5**  
develop and maintain the drug formulary

## Drug spending a top concern for payers and providers

In pre-filed testimony (PFT), most payers (12 of 14) and half of providers (17 of 35) listed **rising pharmaceutical costs as a top area of concern** for the state's ability to meet the cost growth benchmark, with an emphasis on prices including:

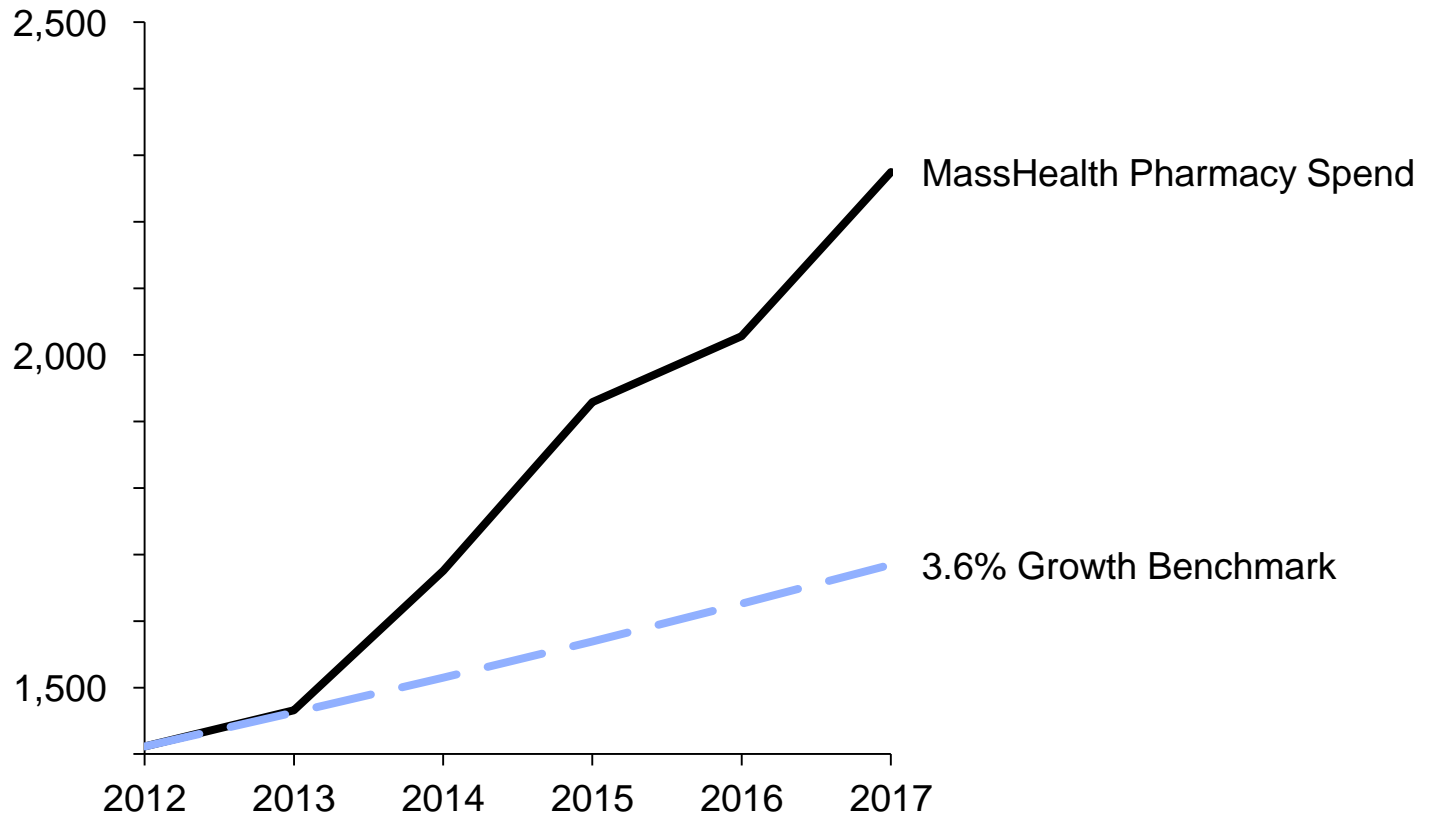
- High prices for new, specialty drugs
- Price increases for existing drugs

Payers and providers recommended numerous strategies to contain cost growth, such as:

- Maximize high-value, low cost drugs through **formulary design**, prior authorization requirement for certain high-cost drugs
- Greater availability of biosimilars and generic specialty drugs
- Increasing **competition and transparency from manufacturers and pharmacy benefit managers**, e.g., notice and rationale for price increases
- Enhancing government oversight and monitoring of market tactics: “evergreening”, “pay-for-delay”, “product hopping”
- Promote clinical guidance on appropriate prescribing and **best practices for medication adherence** and medication reconciliation for complex patients

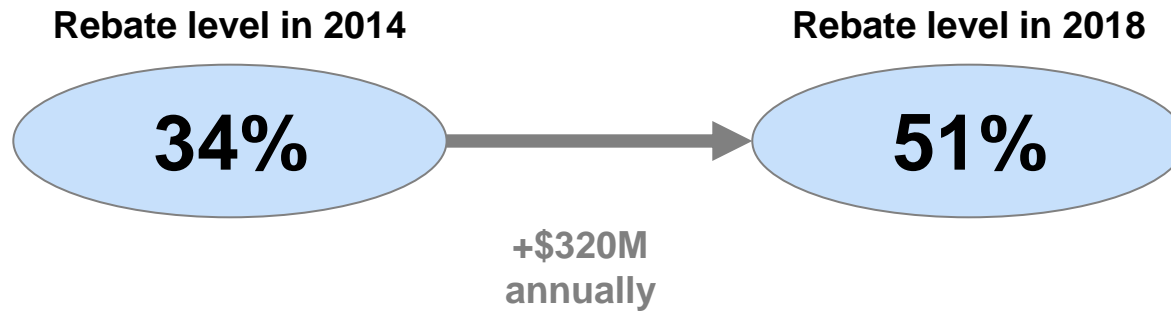
# MassHealth Rx spending has grown \$900M over 5 years

MassHealth pharmacy spend  
\$ Millions





# MassHealth has emerged as a national leader in pharmacy cost management



## Initiatives

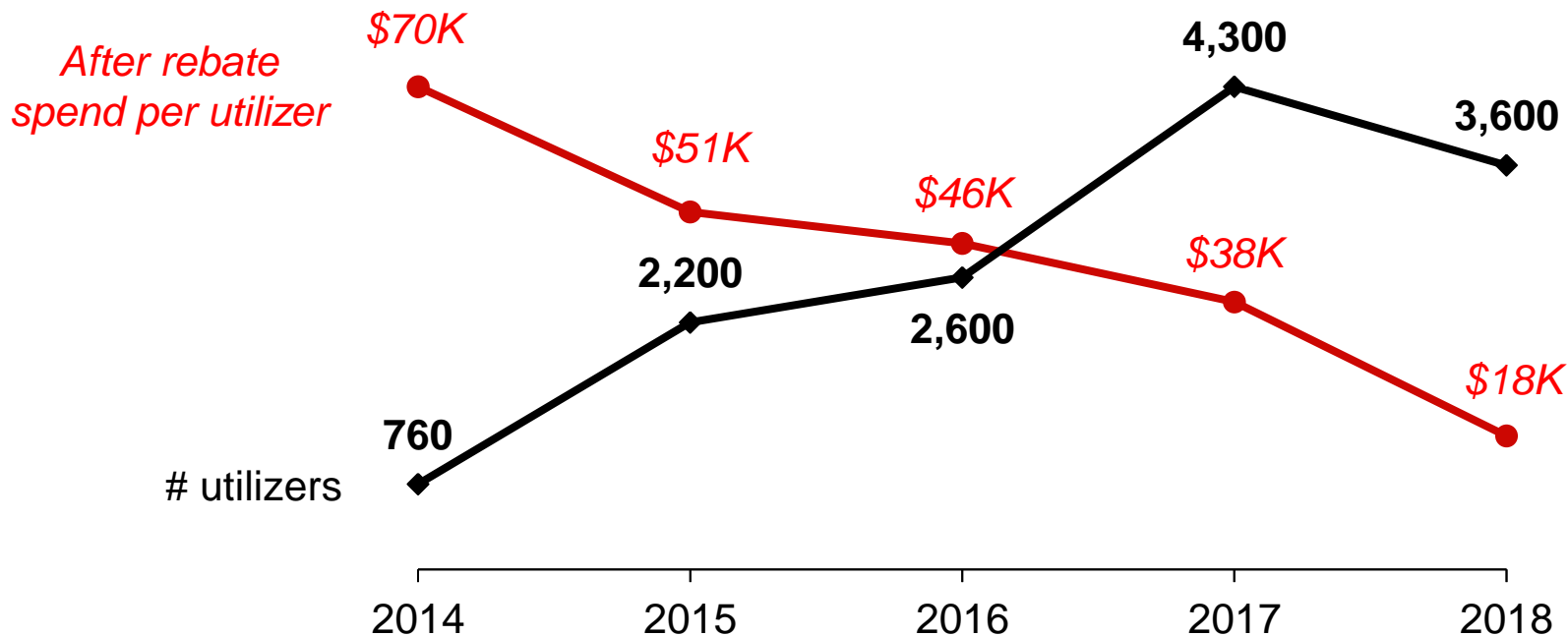
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- Aggressive rebate negotiations has led to +\$320M annually
- Established preferred drug list
- Leveraged purchasing power to expand rebates



# The Positive Effect of Competition: Hepatitis C drug example

MassHealth Hep C net spend per utilizer & utilizers  
\$ spend, # utilizers



## Drug Launches

No competition	Some competition	High competition
GILEAD (1)	GILEAD (2)   abbvie (1)   MERCK (1)	GILEAD (3) abbvie (2) MERCK (1)

# Reaction Panel 3

## Strategies to Address Pharmaceutical Spending Growth



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# Reaction Panel 3: Strategies to Address Pharmaceutical Spending Growth

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## Panelists

**Ms. Sarah Emond, Executive VP and COO**

**Dr. Rochelle Henderson, VP of Research**

**Ms. Amy Rosenthal, Executive Director**

**Mr. Daniel Tsai, Assistant Secretary for MassHealth**

**Ms. Leslie Wood, Deputy VP for State Policy**

Institute for Clinical and Economic Review

Express Scripts, Inc.

Health Care For All

Executive Office of Health and Human Services

PhRMA

## Goals

Building off the preceding expert presentation, the goal of this panel is to discuss emerging policies and strategies that can be implemented at the state level to promote greater affordability and value in pharmaceutical spending. Focus areas will include: enhancing the transparency of pharmaceutical prices, promoting value-based contracting and pricing, establishing high-value formularies, improving consumer affordability, supporting innovation, and understanding the role of pharmacy benefit managers.



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**Up Next**

Spotlight on Impact of Nurse Staffing Ratios

# Mandated Nurse-to-Patient Staffing Ratios in Massachusetts: Analysis of Potential Cost Impact

**Dr. David Auerbach**

Director of Research and Cost Trends, Massachusetts Health Policy Commission

**Dr. Joanne Spetz**

Professor, Institute for Health Policy Studies, University of California, San Francisco (UCSF)



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# HPC's oversight authority and role in analyzing mandated nurse staffing ratios

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- The HPC was established to oversee the Commonwealth's health care delivery and payment system and monitor growth in health care spending against the cost growth benchmark; it has a **specific statutory responsibility to examine factors that contribute to cost growth** within the Commonwealth's health care system as part of the Annual Cost Trends Hearing
- In 2018 Pre-filed Cost Trends Hearing testimony, a **majority of stakeholders identified proposed mandatory nurse staffing ratios as a top area of concern** regarding the Commonwealth's ability to meet the health care cost growth benchmark
- As an independent agency principally focused on containing health care costs, the **HPC conducted an objective, data-driven cost impact analysis** of mandated nurse staffing ratios to further inform continuing policy discussions on the matter
- The HPC **presented its research and cost impact analysis** at the HPC's Market Oversight and Transparency Committee Meeting on October 3, 2018
- Today, the HPC is presenting an abridged version of its research and analysis in advance of **Reaction Panel 4: Impact of Nurse Staffing Ratios on Cost, Quality, and Access**

The HPC's full-length presentation on mandated nurse-to-patient staffing ratios is available on the HPC's [website](#)<sup>1</sup>

# Overview of HPC research and cost impact analysis

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This research and analysis includes:

- Summary of the proposed initiative petition and comparison to the California law and regulation
- Summary of California's experience with mandated staffing ratios
- Comparison of CA and MA hospitals on quality measure performance
- Background on the RN workforce in MA
- Methodology and analysis of cost impact, including the breakdown of additional RNs required and the cost impact for hospitals, freestanding psychiatric/SUD hospitals, other providers, and the Commonwealth
- Additional costs not included in the cost impact analysis, including potential impact on emergency departments
- Potential cost savings
- Potential sources for additional RNs required and discussion of MA labor market
- Implications for statewide health care spending



## HPC's work was led by nationally-recognized nurse workforce experts

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David Auerbach, Ph.D., and Joanne Spetz, Ph.D., led the HPC's research and analysis.



**Dr. David Auerbach**, Director for Research and Cost Trends at the Health Policy Commission, is a health economist whose work has spanned a number of focus areas, including the health care workforce. Dr. Auerbach has specialized in, and is a nationally-recognized expert on the Registered Nurse workforce including advanced practice nurses.



**Dr. Joanne Spetz** is a Professor at the Institute for Health Policy Studies at the University of California, San Francisco. Her fields of specialty include economics of the health care workforce, shortages and supply of registered nurses, and organization and quality of the hospital industry. Dr. Spetz is an Honorary Fellow of the American Academy of Nursing. The HPC engaged the University of California, San Francisco in mid-August 2018 in furtherance of its research agenda with respect to health care workforce issues.

## Comparison of CA law and MA proposed initiative

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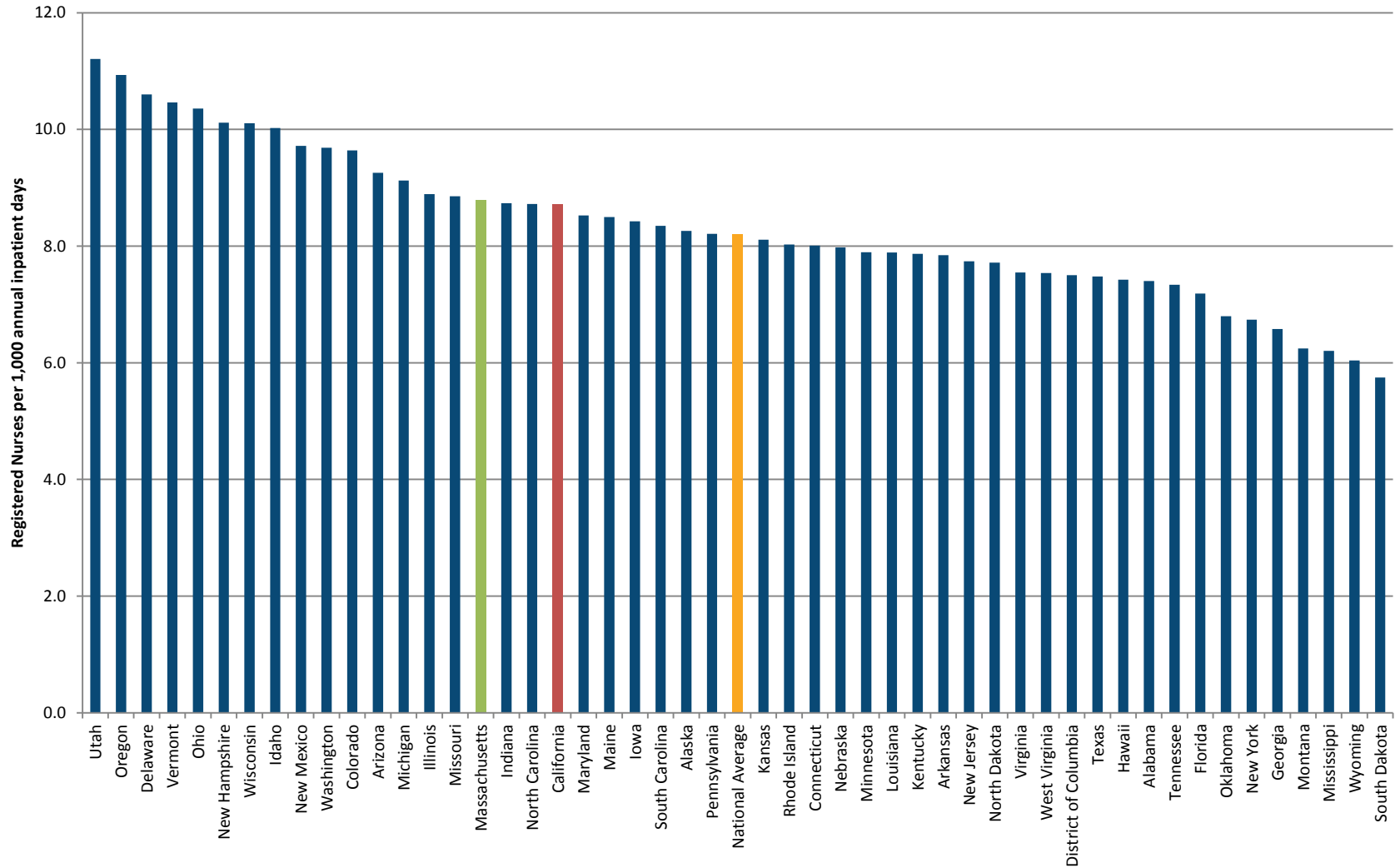
- **California** is the only state with mandated nurse staffing ratios in all hospital units
  - The California legislature passed a law in 1999 that was implemented beginning in 2004
  
- There are a **number of important differences** between California's law and regulation and the proposed initiative in Massachusetts, including in the following areas:
  - Implementation process/method for determining ratios
  - Scope and level of ratios
  - Substitution of licensed nursing personnel to meet the ratios
  - Consideration of non-RN healthcare workforce
  - Authorization for waivers and scope of exemptions for emergencies
  - Enforcement

## Summary of California's experience with mandated staffing ratios

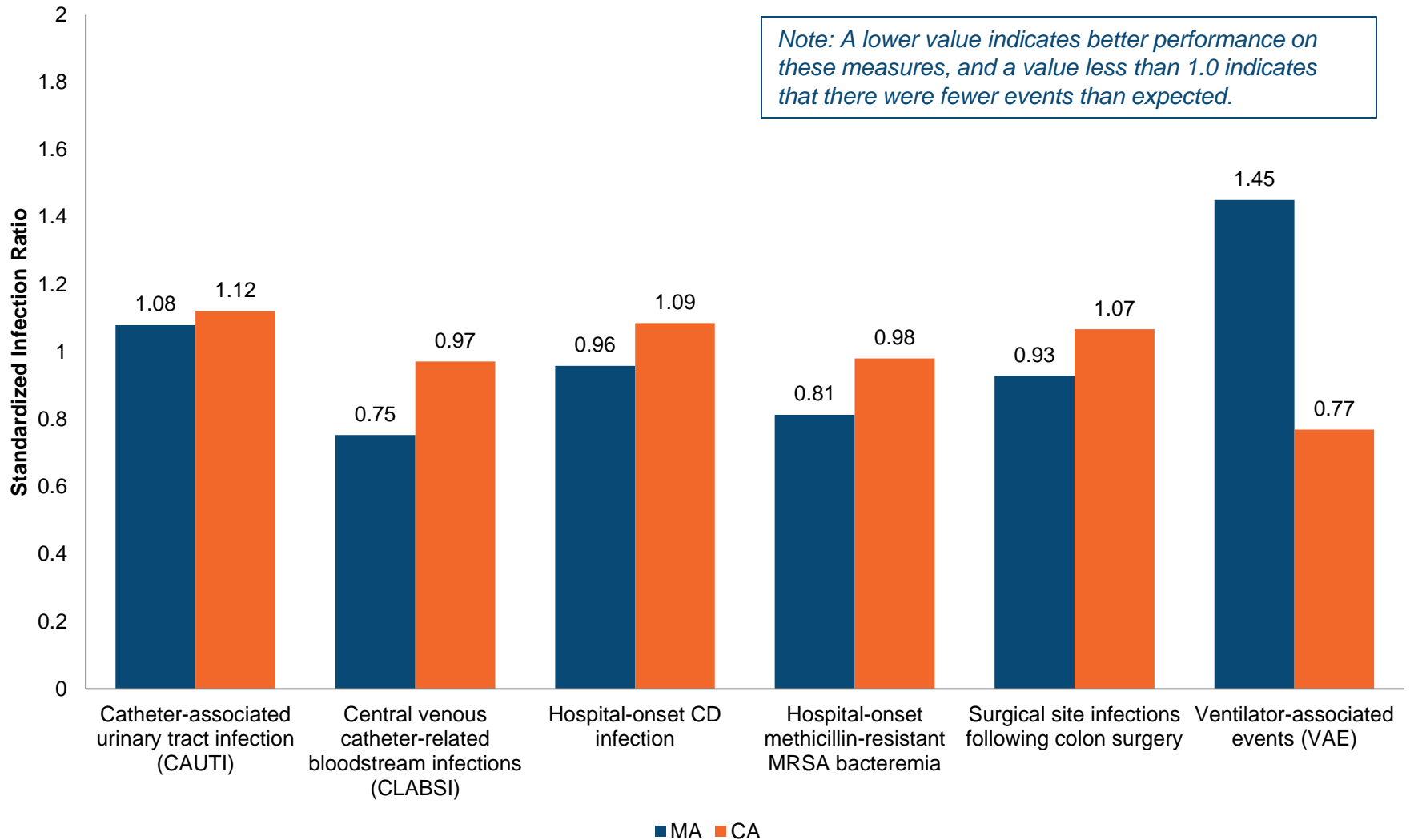
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- In the 14 years since mandated nurse staffing ratios in California were implemented, many studies have been published on the impact of the law and subsequent regulation
- Below are **four key takeaways** from California's experience and the resulting literature following implementation of the mandated staffing ratios:
  - 1 There was a significant increase in nurse staffing in California hospitals post-implementation of ratios
  - 2 There was a moderate effect on RN wages post-implementation of ratios
  - 3 There was no systematic improvement in patient outcomes post-implementation of ratios
  - 4 There has been no comprehensive, retrospective analysis of implementation costs

# As of 2016, Massachusetts had higher hospital RN staffing levels (FTEs per 1,000 inpatient days) than California and the U.S.



# Massachusetts hospitals performed better than California hospitals on 5 of 6 nursing-sensitive quality measures reviewed

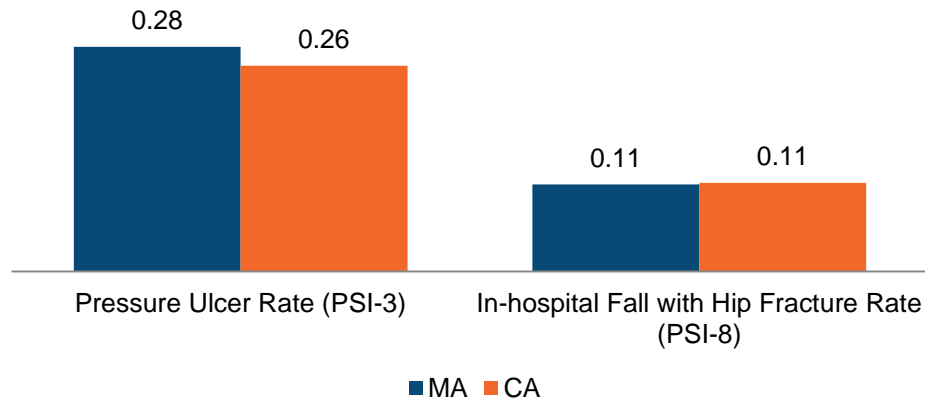


Centers for Disease Control and Prevention/Agency for Healthcare Research and Quality/National Healthcare Safety Network (2015). The “Standardized Infection Ratio” is a measure of observed over expected hospital-acquired infections and adjusts for patient-level factors that contribute to hospital-acquired infection risk. A ratio of less than 1.0 indicates that there were fewer events than expected.

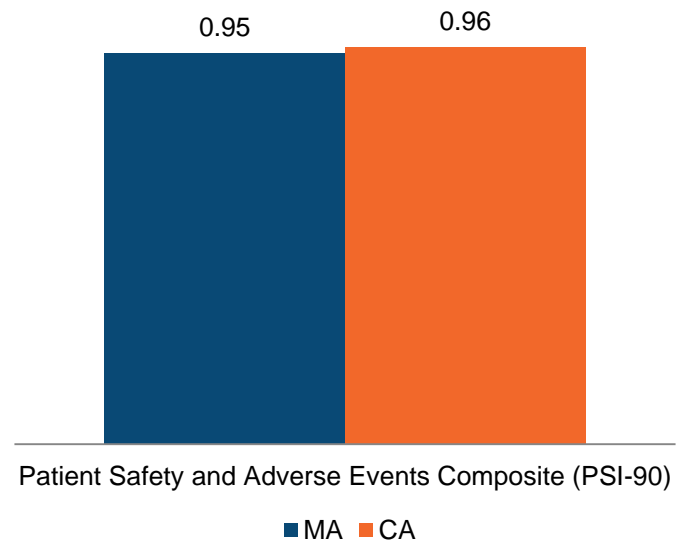
# Massachusetts and California perform similarly on 3 additional nursing-sensitive quality measures covering states' Medicare populations

Note: A lower value indicates better performance on these measures.

## Events per 1,000



## Composite index performance



# Summary of HPC cost impact analysis methodology

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The HPC developed the following methodology for the analysis:

- **Examined FY2017 staffing levels** in MA hospitals, using publicly available PatientCareLink data<sup>1</sup>
  - Units included in HPC analysis: medical, surgical, psychiatric/behavioral health, pediatrics, step-down, rehabilitation, neonate intermediate care, labor/delivery, maternal child care, post-anesthesia care, operating room
  - For additional information about units not included, see slide on data limitations and additional costs
- **Calculated expected number of additional RNs required** to meet the mandated ratios in all units according to the proposed initiative, as follows:
  - Analyzed FY2017 staffing reports by hospital unit, by shift and compared average RN staffing to the ratios in the proposed initiative; and
  - Adjusted estimated number of additional RNs needed to comply with the “at all times” mandate<sup>2</sup>
- **Calculated potential impact on psychiatric/SUD hospitals**
- **Estimated impact on RN wages**
- **Considered additional costs** associated with the proposed initiative (e.g., acuity tool costs), as well as **opportunities for cost savings**

As detailed in the following slides, the HPC presents the results of its cost impact analysis as **Analysis A** and **Analysis B**.

<sup>1</sup>PatientCareLink.org is a joint venture of the Massachusetts Health & Hospital Association (MHA), Organization of Nurse Leaders of MA, RI, NH, CT, VT (ONL), Home Care Alliance of Massachusetts (HCA) and Hospital Association of Rhode Island (HARI). See [www.patientcarelink.org](http://www.patientcarelink.org). Staffing data for certain units not included in PatientCareLink were made available to the HPC by the Massachusetts Health & Hospital Association.

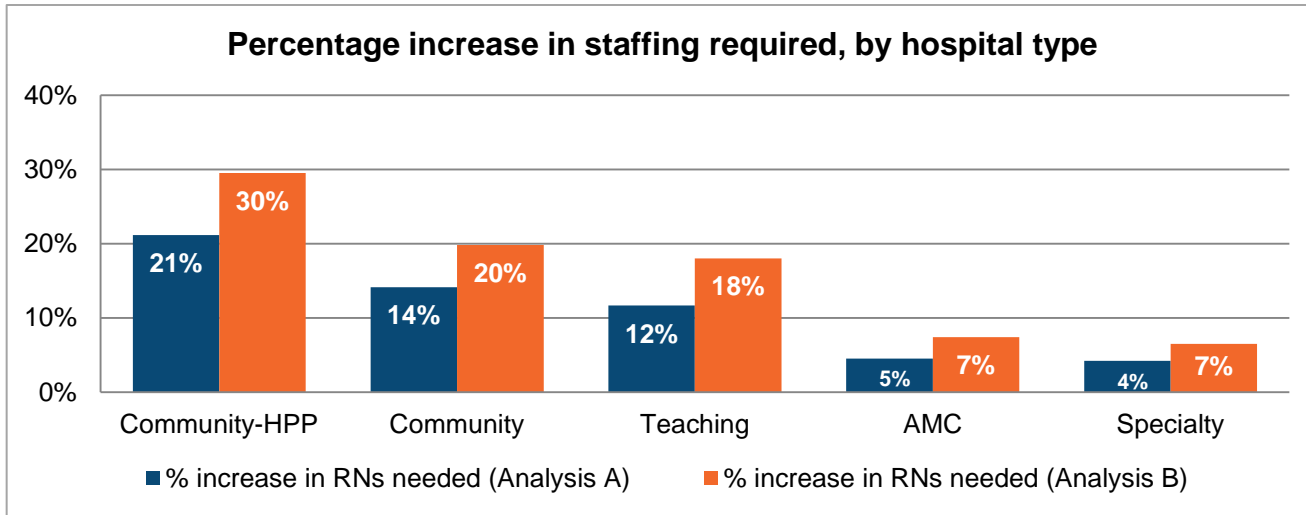
<sup>2</sup>Accounts for RN coverage required in a variety of circumstances, such as federally mandated meal breaks, patient census variability (i.e., surges in patient flow), RN time off the unit, and other instances where coverage is needed to comply with the “at all times” mandate in the proposed initiative.

## Estimated additional RNs required for compliance with mandated levels

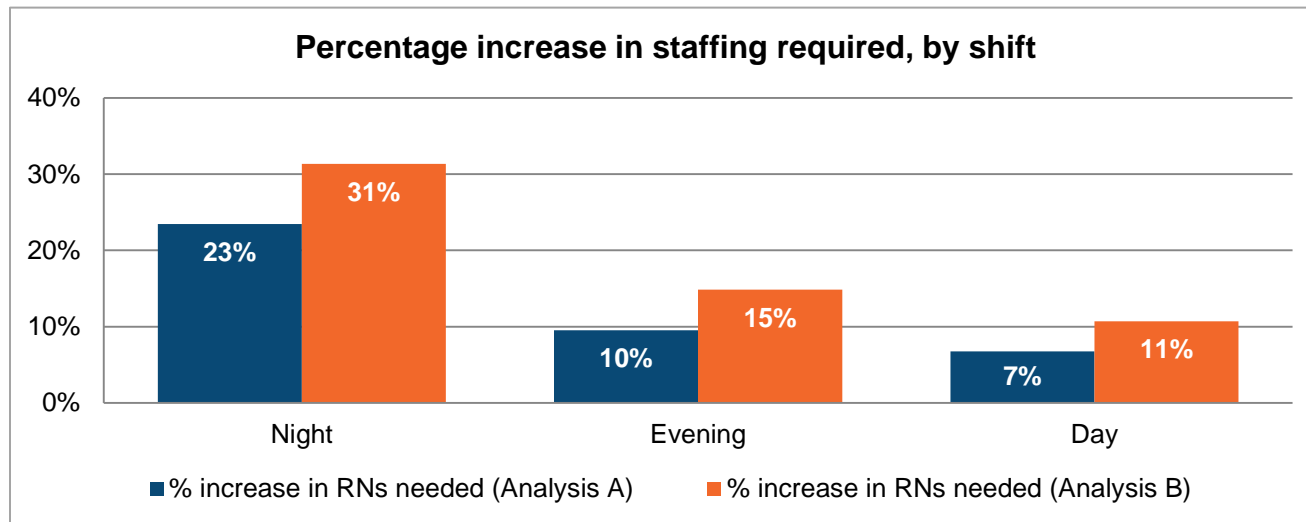
	Difference Between Average Staffing and Proposed Ratios	Analysis A	Analysis B
<b>Key Results</b>			
Percentage of all shifts that would be required to increase RN staffing to meet mandate	<b>34%</b> (726 of 2,143 shifts)	<b>46%</b> (980 of 2,143 shifts)	<b>54%</b> (1,156 of 2,143 shifts)
Additional full-time equivalent RN staff required to meet mandate (% RN workforce increase)	<b>1,144</b> (8% more RNs)	<b>1,809</b> (12% more RNs)	<b>2,624</b> (17% more RNs)
Additional full-time equivalent RN staff required to meet mandate in psychiatric/substance use disorder hospitals		<b>477</b>	<b>477</b>
<b>Estimated total additional RNs required</b>		<b>2,286</b> (15% more RNs)	<b>3,101</b> (20% more RNs)



# Increase in RNs required to meet the mandate would be greatest in community hospitals and night shifts

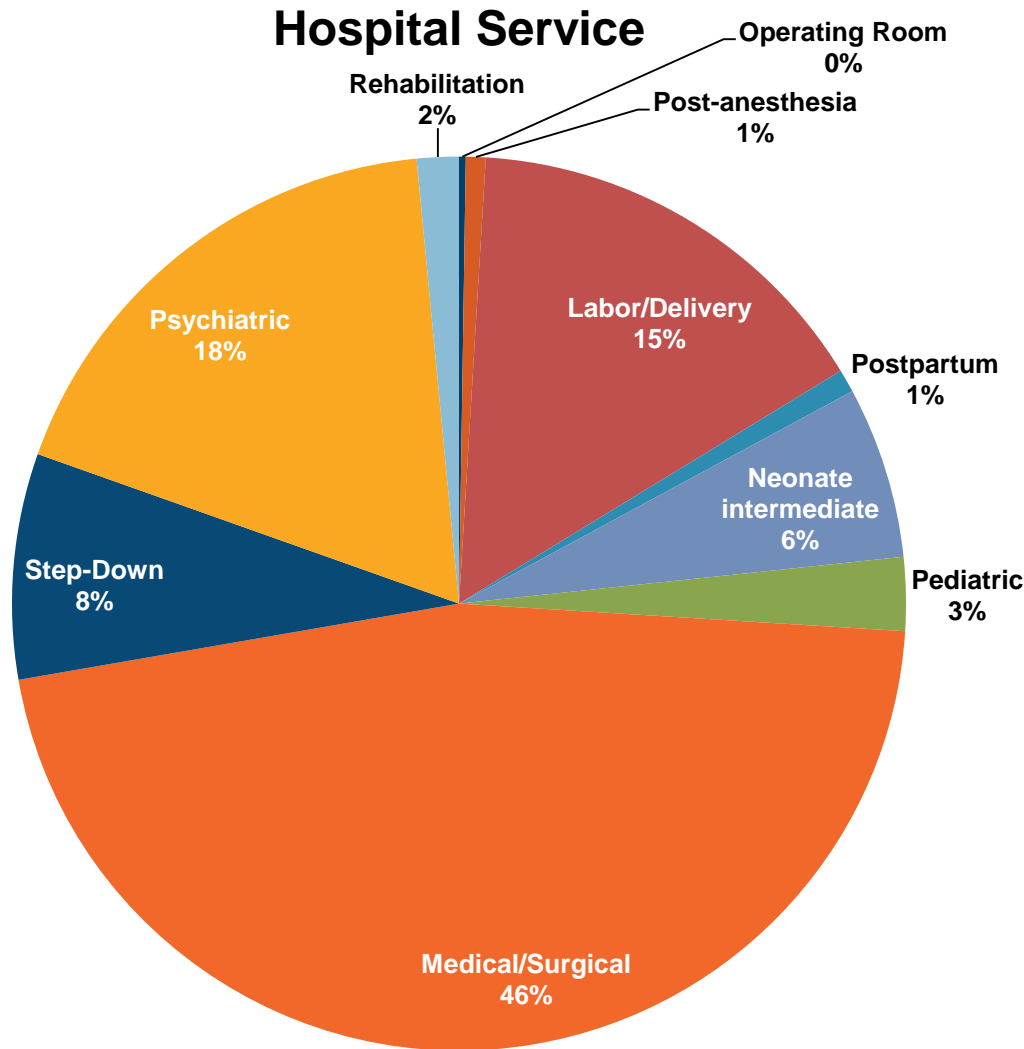


*Community – High Public Payer hospitals would be most affected*



*Night shifts would be most affected*

# Number of RNs required to meet the mandate would be greatest in Medical/Surgical units



**Medical/surgical units** account for the largest additional workforce (an additional 837 FTE RNs) needed for mandate compliance, followed by **psychiatric units in acute care hospitals** (an additional 327 FTE RNs)

## Estimated impact on RN wages

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- The required increase in RNs hospital staff would likely **increase the demand** for RNs in Massachusetts, leading to an **increase in RN earnings over time**
- Researchers of the impacts of mandated nurse staffing ratios in **California** found that wages for all RNs in the state rose faster during the period of implementation than they did in other states at the same time using 5 separate data sources. The difference **ranged from 0 to 8% and averaged approximately 4%**<sup>1</sup>
- The impacts **could be larger in Massachusetts** due to, for example: stricter ratios, monetary penalties, and the prohibition on using other licensed nursing staff to meet the ratios
- Based on California literature, HPC **estimated wage increases for all RNs in MA:**
  - **4%** in Analysis A
  - **6%** in Analysis B
- RN wage increases for existing RNs resulting from mandated nurse staffing ratios **would likely not occur immediately** (e.g., due to pre-existing labor contracts)

# The HPC's analysis of mandated nurse staffing ratios estimates \$676 to \$949 million in annual increased costs once fully implemented

Category	Analysis A	Analysis B
<b><u>Costs to Hospitals</u></b>		
<b><i>Acute Care Hospitals</i></b>		
Additional RNs required <sup>1</sup>	\$256 million	\$379 million
Wage increase for existing RNs	\$184 million	\$276 million
Acuity tools (ongoing costs) <sup>2</sup>	\$26 million	\$26 million
<b><i>Psychiatric/Substance Use Disorder Hospitals</i></b>		
Additional RNs required <sup>1</sup>	\$48 million	\$51 million
Wage increase for existing RNs	\$1 million	\$2 million
<b><u>Costs to Other (Non-Hospital) Providers</u></b>		
Wage increase for existing RNs	\$93 million	\$140 million
<b><u>Costs to the Commonwealth</u></b>		
Implementation at state-operated hospitals <sup>3</sup>	\$67.8 million	\$74.8 million
<b>TOTAL ESTIMATED ANNUAL COSTS</b>	<b>\$676 million</b>	<b>\$949 million</b>

The estimated costs are likely to be **conservative** as they do not include any costs related to implementation in emergency departments, observation units, and outpatient departments, as well as other one-time costs. See next slide for additional information.

<sup>1</sup>The estimated cost for each new nurse is \$133,285 to \$138,765. This includes both the estimated salary (with an estimated wage increase of 4%-6%) and the estimated cost of benefits.

<sup>2</sup>Hospitals would incur certain costs associated with acuity tools on an ongoing basis (e.g., maintenance), while other costs are likely to be one-time costs (see next slide). Figure does not include estimated costs for psychiatric/SUD hospitals.

<sup>3</sup>Secretary of the Commonwealth, Massachusetts Information for Voters, 2018 Ballot Questions, State Election, Tuesday, November 6, 2018.

# The estimated costs are likely to be conservative due to data limitations for additional units and other anticipated costs

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## Ongoing annual costs not included:

- Increased RN staffing costs from hospital units not included in the analysis:
    - Emergency departments (see next two slides)
    - Outpatient departments
    - Observation units
  - Increased RN staffing costs to non-acute hospitals \*
  - State agency implementation costs
  - Penalties for non-compliance
- 

## One-time costs not included:

- Acuity tool costs
  - In addition to ongoing costs (see previous slide), hospitals would incur costs on a one-time basis (e.g., purchasing, initial development, and implementation costs)
  - HPC estimates \$57.9 million in one-time acuity tool costs for acute care hospitals<sup>1</sup>
- Turnover costs
  - Including recruitment, onboarding, and training
  - Recent literature suggests the range of average turnover costs could be \$38,000 to \$61,100 per bedside RN<sup>2</sup>
  - For purposes of illustration, turnover of 1,000 RNs would cost \$49.5 million<sup>3</sup>

\*Due to ambiguity about the application of the proposed initiative to certain non-acute hospitals (e.g., institutional rehabilitation facilities, long term care hospitals), these units are not included in the HPC's current cost impact analysis.

<sup>1</sup>Does not include one-time acuity tool costs for psychiatric/SUD hospitals. <sup>2</sup>NSI Nursing Solutions, Inc., 2018 National Health Care Retention & RN Staffing Report (2018), <http://www.nsinursingsolutions.com/files/assets/library/retention-institute/nationalhealthcaremretentionreport2018.pdf>. <sup>3</sup>Calculated using the average cost of turnover for a bedside RN of \$49,500, as reported in the National Health Care Retention & RN Staffing Report (see note 2).

# The mandate would impact Massachusetts emergency departments

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- The proposed initiative includes **mandated ratios in emergency departments (EDs) at all times** that range from 1:1 to 1:5 based on patient acuity
- The HPC was **unable to include EDs in its cost impact analysis** due to significant data limitations, including the fact that publicly available data on ED staffing lacks information on patient acuity or patient time spent in the ED<sup>1</sup>
- While data limitations preclude the HPC from modeling the anticipated impact on EDs using its established methodology, the HPC has **analyzed the publicly available ED staffing data to the extent possible** and determined the following:
  - Data represent 3,193 FTE RNs working in 77 ED units in acute hospitals
  - The worked hours per patient visit for RNs ranges from 1.38 (10<sup>th</sup> percentile) to 2.28 (90<sup>th</sup> percentile)
  - For purposes of illustration, a range of 479-639 additional FTE RNs in Massachusetts EDs (15-20% of 3,193 RNs) would cost \$79 million to \$110 million<sup>2</sup> annually

<sup>1</sup>These data are publicly available on [www.PatientCareLink.org](http://www.PatientCareLink.org).

<sup>2</sup>The workforce percentages needed used in this example correspond with the average additional workforce percentage needed in Analysis A and Analysis B, see technical appendix in the HPC's full research presentation, available at <https://www.mass.gov/doc/presentation-analysis-of-potential-cost-impact-of-mandated-nurse-to-patient-staffing-ratios>. Other key parameters (estimated wage, benefits for newly hired RNs, and the wage impact across all existing RNs and new RNs) also correspond directly to figures used in other examples with Analysis A and B.

# Additional information about the impact on Massachusetts emergency departments from stakeholders

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- **Mandated ratios would impact EDs**, including but not limited to the potential for significant impacts on:
  - Access to emergency care
  - Wait times
  - Patient flow
  - Boarding
  - Ambulance diversion
- The HPC **solicited additional information from stakeholders** to further inform discussions around the potential impact of mandated ratios in Massachusetts EDs:
  - The Massachusetts Nurses Association provided the HPC with a *Journal of Emergency Nursing* study (2017) that found a relationship between nurse staffing and time to diagnostic evaluation in Massachusetts EDs<sup>1</sup>
  - The Massachusetts Health & Hospital Association provided the HPC with a report published by the Massachusetts College of Emergency Physicians and Emergency Nurses Association (September 2018), which estimated an annual statewide cost for additional nurse staffing needed to comply with the mandate<sup>2</sup>

<sup>1</sup>Shindul-Rothschild, Judith, et al. "Nurse staffing and hospital characteristics predictive of time to diagnostic evaluation for patients in the emergency department." *Journal of Emergency Nursing* 43.2 (2017): 138-144.

<sup>2</sup><http://www.macep.org/Files/NSR%20ED%20Paper.pdf>

## Potential cost savings

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- Researchers estimate that an increase in RN staffing may be associated with savings from reduced hospital length of stay and reduced adverse events<sup>1</sup>
  - ~\$15,000 savings per additional FTE RN hired
- Extrapolating from this research, the HPC calculated a range of **estimated potential savings of \$34 to \$47 million** with the hiring of additional RNs
  - However, it is uncertain if RN staffing increases from current MA staffing levels would result in these savings
- Other savings could be realized due to reduced RN turnover<sup>2</sup> and workforce injuries<sup>3</sup>

<sup>1</sup>Needleman, Jack, et al. "Nurse staffing in hospitals: is there a business case for quality?." *Health Affairs* 25.1 (2006): 204-211. The authors estimated \$1.72 billion in savings corresponding with a nationwide increase in 114,456 FTE RNs – i.e., if all hospitals increased staffing (if needed) to the level of the 75th percentile of all hospitals at that time. <sup>2</sup>See, e.g., Aiken, Linda H., et al. "Implications of the California nurse staffing mandate for other states." *Health services research* 45.4 (2010): 904-921; Spetz, Joanne. "Nurse satisfaction and the implementation of minimum nurse staffing regulations." *Policy, Politics, & Nursing Practice* 9.1 (2008): 15-21. <sup>3</sup>Leigh, J. Paul, et al. "California's nurse-to-patient ratio law and occupational injury." *International archives of occupational and environmental health* 88.4 (2015): 477-484.



## Hospitals would have to recruit additional RNs to meet the mandate from various sources

**2,286 – 3,101**  
estimated  
additional RNs  
required

RNs working in other hospitals in MA

RNs working in non-hospital care settings in MA

New RN graduates

Temporary/traveling RNs

RNs from out of state

RNs from other countries

Part-time RNs who convert to full-time RNs

RNs who delay retirement

# Implications for statewide health care spending

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- If the proposed initiative becomes law, the increased costs to hospitals may result in impacts such as:
  - Reductions in hospital margins or assets<sup>1</sup>
  - Reduced capital investments
  - Closure of unprofitable (and/or other) service lines
  - Reductions in non-health care workforce staffing levels
- These costs could also lead to higher commercial prices for hospital care, potentially leading to higher premiums
- Overall, the higher estimated annual costs of \$676 million to \$949 million represent:
  - **1.1 to 1.6% of total health care expenditures in Massachusetts in 2017** as measured for the purposes of performance against the health care cost growth benchmark; and
  - **2.4% to 3.5% of total hospital spending**

<sup>1</sup>Reiter, Kristin L., et al. "Minimum Nurse Staffing Legislation and the Financial Performance of California Hospitals." *Health services research* 47.3pt1 (2012): 1030-1050.

<sup>2</sup>Total health care spending based on total estimated costs in Analyses A and B divided by total health care expenditures (THCE) as reported by the Center for Health Information and Analysis (CHIA) in CHIA's 2018 Annual Report. Percentage of hospital spending includes acute and psychiatric hospital costs in Analyses A and B divided by total hospital spending as reported in CHIA's 2018 Annual Report.



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**2018 Annual Health Care**  
**COST TRENDS**  
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OCTOBER 17, 2018

**Up Next**

Reaction Panel 4: Impact of Nurse Staffing Ratios on Cost, Quality, and Access

# Reaction Panel 4

## Impact of Nurse Staffing Ratios on Cost, Quality, and Access



**MASSACHUSETTS**  
HEALTH POLICY COMMISSION

# Reaction Panel 4: Impact of Nurse Staffing Ratios on Cost, Quality and Access

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## Panelists

**Ms. Vicki Bermudez, Regulatory Policy Specialist**  
**Ms. Deborah Devaux, Chief Operating Officer**

**Dr. Nancy Gaden, Senior VP and Chief Nursing Officer**  
**Dr. Judith Shindul-Rothschild, Associate Professor**  
**Dr. Joanne Spetz, Professor**

California Nurses Association  
Blue Cross and Blue Shield of  
Massachusetts  
Boston Medical Center  
Connell School of Nursing, Boston College  
Institute for Health Policy Studies, University  
of California, SF

## Goals

Building off the preceding expert presentation, the goal of this panel is to discuss the implications of mandated nurse staffing ratios for health care spending in the Commonwealth. Topics will include evidence and experience of implementing hospital nurse staffing ratios in California, and the potential impact on health care cost, quality, and access in Massachusetts.



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**Up Next**  
Concluding Discussion

# Thank You!



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