

OVERVIEW OF CHIA

MASSACHUSETTS HEALTH POLICY FORUM

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CENTER FOR HEALTH INFORMATION AND ANALYSIS



Overview

- CHIA's Mission, Data Assets, and Analytic Activities
- Examples from CHIA Publications
- Transparency Initiatives
- De-identification and Data Linking

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Mission, Data Assets, and Analytic Activities

CHIA's Mission

- Massachusetts places greater emphasis on measuring its healthcare system than any other state in the country.
- Massachusetts has a long history of innovation not only in healthcare delivery, but also in healthcare policy, which benefits from more data for evidence-based policy making.
- Healthcare matters in several important ways, and in each there is a premium on more information for better decisions:
 - Individual, family, and community health;
 - Family budgets through premiums and out-of-pocket costs;
 - Employer costs of hiring and locating a business,
 - The state's budget, mostly in EOHHS and the GIC; and
 - As a major economic sector in MA.

CHIA's Mission

- CHIA's goal is to support Moneyball in Massachusetts healthcare.
- CHIA has extensive authority to compel the submission of data from Massachusetts healthcare stakeholders.
- CHIA uses this authority to create and curate several major data assets that support evidence based policy making and program oversight. CHIA also releases numerous publications documenting key features and metrics of the system.

CHIA's Major Data Assets

CHIA receives more than 25,000 data submissions per year from over 1,500 data submitters. Major data assets include:

- **Hospital discharge database:** Patient-level information on every acute and behavioral health hospital discharge in the state.
- **Emergency department database:** Patient-level information on every ED visit in the state.
- **All-Payer Claims Database:** Despite gaps, the APCD is a massive, powerful repository of claim-level data about healthcare delivery and finance. APCD 2.0 is coming soon.
- **Payer expenditure reports:** Annual submissions of aggregate spending and cost data broken out by product, service category, ZIP code, market segment, cost sharing, and more.

CHIA's Major Data Assets (continued)

- **Provider financial reports:** CHIA collects financial and cost information from hospitals, nursing homes, community health centers, and other types of providers.
- **Statewide surveys of employers and households:** Large surveys provide rich information about individuals, households, and employers.
- **Registered Provider Organizations:** CHIA's newest area of data collection gathers information on the financial condition and the clinical and contractual affiliations of medical groups.

CHIA's Major Analytic Activities

- Alternative payment method adoption trends
- Consumer transparency website
- Healthcare affordability report
- Provider financial reports
- Hospital readmissions reports
- HPC data support and referrals
- Insurance coverage and enrollment trends
- Inter-agency data linking projects (e.g., Chapter 55)
- Inter-agency data sharing (AGO, SAO, EOHHS, Connector, GIC, DOI)
- Mandated benefit reviews for the Legislature
- Payer/Provider/Researcher data sharing
- Prescription drug spending report
- Provider price transparency
- Provider relative price
- Quality measurement and reporting
- Total healthcare expenditures (THCE)
- Total medical expenditures (TME)

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Examples from CHIA Publications

CHIA Hospital Profiles

BETH ISRAEL DEACONESS MEDICAL CENTER

2017 Hospital Profile

Boston, MA

Academic Medical Center

Metro Boston

Beth Israel Deaconess Medical Center is a large, non-profit academic medical center (AMC) located in the Metro Boston region. It is one of nine organ transplant centers in Massachusetts and is a member of CareGroup. It is a Level 1 Trauma center. Beth Israel Deaconess Medical Center saw increases in both inpatient discharges and outpatient visits between FY13 and FY17. It earned a profit each year from FY13 to FY17, with a 4.3% total margin in FY17 compared to the AMC median total margin of 2.0%.

At a Glance

Overview / Size

Hospital System Affiliation:	CareGroup
Change in Ownership (FY13-17):	Not Applicable
Total Staffed Beds:	688, 5th largest acute hospital
% Occupancy:	88.6%, > cohort avg. (86%)
Special Public Funding:	Not Applicable
Trauma Center Designation:	Adult: Level 1
Case Mix Index:	1.39, < cohort avg. (1.50); > statewide (1.12)

Financial

Inpatient NPSR per CMAD:	\$13,762
Change FY16-FY17:	-1.0%
Inpatient:Outpatient Revenue in FY17:	44%:56%
Outpatient Revenue in FY17:	\$561,777,181
Change FY16-FY17:	5.1%
Total Revenue in FY17:	\$1,732,988,057
Total Surplus (Loss) in FY17:	\$74,601,445

Payer Mix

Public Payer Mix:	57.2% (Non-HPP* Hospital)
CY16 Commercial Statewide Relative Price:	1.05
Top 3 Commercial Payers:	Blue Cross Blue Shield of Massachusetts Harvard Pilgrim Health Care Tufts Associated HMO, Inc.

Utilization

Inpatient Discharges in FY17:	40,490
Change FY16-FY17:	1.0%
Emergency Department Visits in FY17:	69,433
Change FY16-FY17:	1.5%
Outpatient Visits in FY17:	687,962
Change FY16-FY17:	0.3%

Quality

Readmission Rate in FY16:	16.9%
Change FY12-FY16 (percentage points):	-0.2
Early Elective Deliveries Rate:	0.0%

What were the most common inpatient cases (DRGs) treated at the hospital in FY17? What proportion of the region's cases did this hospital treat for each service?

Discharges by DRG

Normal Neonate Birth (4335)	18%	of regional discharges were treated at this hospital in FY17
Vaginal Delivery (3315)	18%	
Cesarean Delivery (1540)	18%	
Septicemia Infections (1002)	13%	
Heart Failure (870)	12%	
Maj SmI & Lrg Bowel Procs (536)	16%	
Other Vascular Procedures (464)	19%	
Other Digestive System Dx (463)	16%	

Where did most of the hospital's inpatients reside? What proportion of each community's total discharges was attributed to this hospital?

Discharges by Community

Boston MA (2,469)	13%	of community discharges were treated at this hospital in FY17
Quincy MA (1,448)	13%	
Brookline MA (1,348)	37%	
Dorchester MA (1,288)	13%	
Cambridge MA (857)	12%	
Jamaica Plain MA (855)	22%	
Dorchester Center MA (837)	13%	
Brockton MA (806)	5%	

Services

Hospital Readmissions Analysis

Readmissions

Hospital readmissions are a central issue in efforts to improve health care quality and reduce costs, due to readmissions being a costly and potentially preventable problem that impacts patient health and experience of care both nationally and in Massachusetts. CHIA currently releases three analytic products annually concerning readmissions:

- The report [*Hospital-Wide Adult All-Payer Readmissions in Massachusetts: SFY 2011-2017*](#), released in December 2018, takes a statewide look at readmissions in Massachusetts acute care hospitals, providing insights into statewide, regional, and hospital-specific readmission rates, including data cuts by payer type, discharge setting, and hospital characteristics.
- The [*Hospital Readmissions Profiles series*](#), released in June 2018, offers a graphical report for each acute care hospital in the Commonwealth. These profiles provide more in-depth readmission statistics for each hospital broken out by several factors and presented in the context of the statewide figures.
- [*Behavioral Health and Readmissions in Massachusetts Acute Care Hospitals*](#), released in August 2016, examines the readmission patterns for individuals with comorbid behavioral health conditions in Massachusetts acute care hospitals.

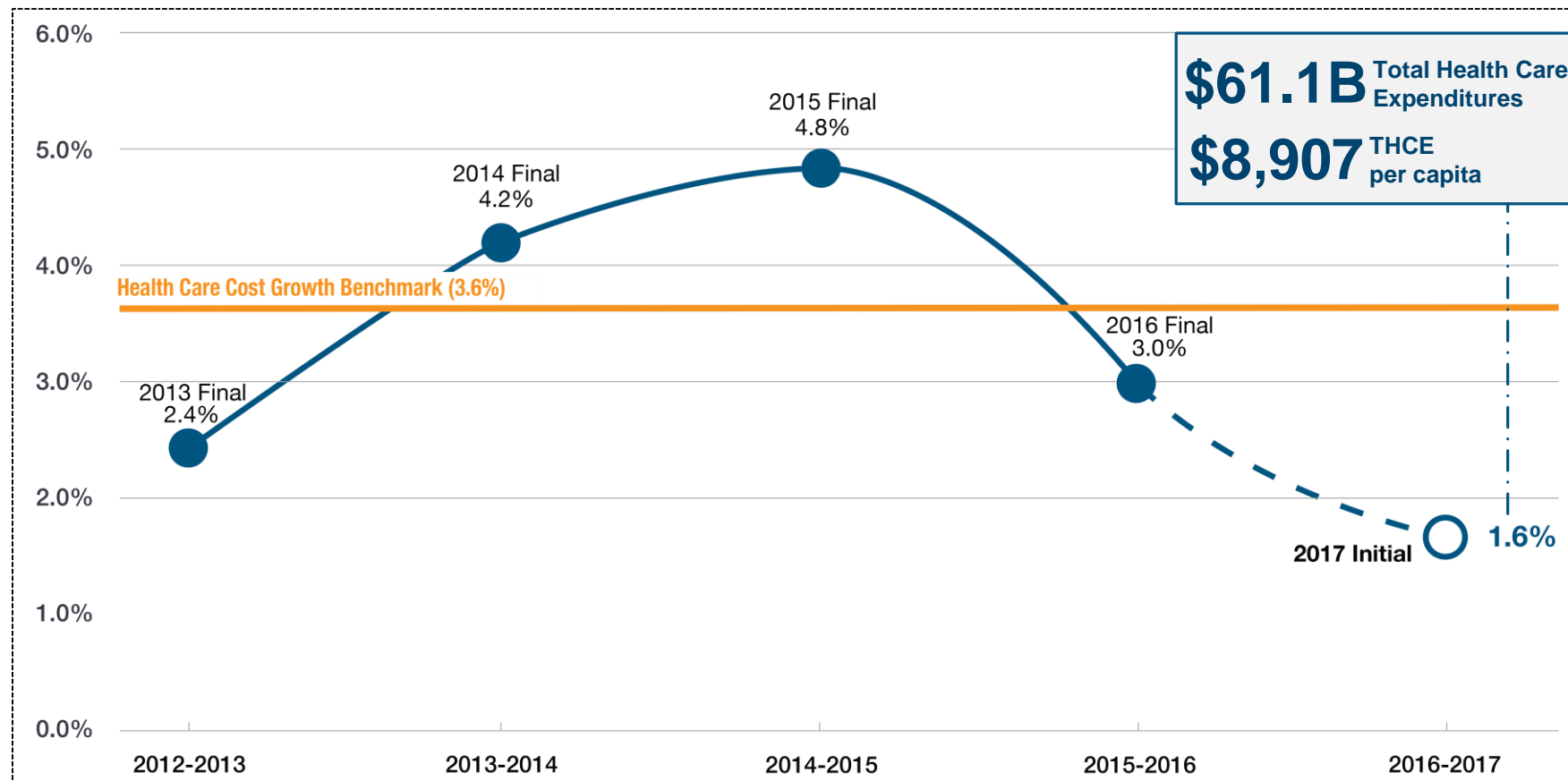
Revisits

Providers, payers, and policymakers are increasingly turning their attention to whether the patient returns to the acute care setting at any level (emergency department (ED), observation, or inpatient) within 30 days of inpatient discharge.

- In this new report [*Emergency Department Visits After Inpatient Discharge: SFY 2015*](#), CHIA analyzed revisits—defined here as a visit to the ED within 30 days of an inpatient discharge—and provides a first statewide examination of revisits for the all-payer adult population in Massachusetts acute care hospitals.

Total Health Care Expenditures

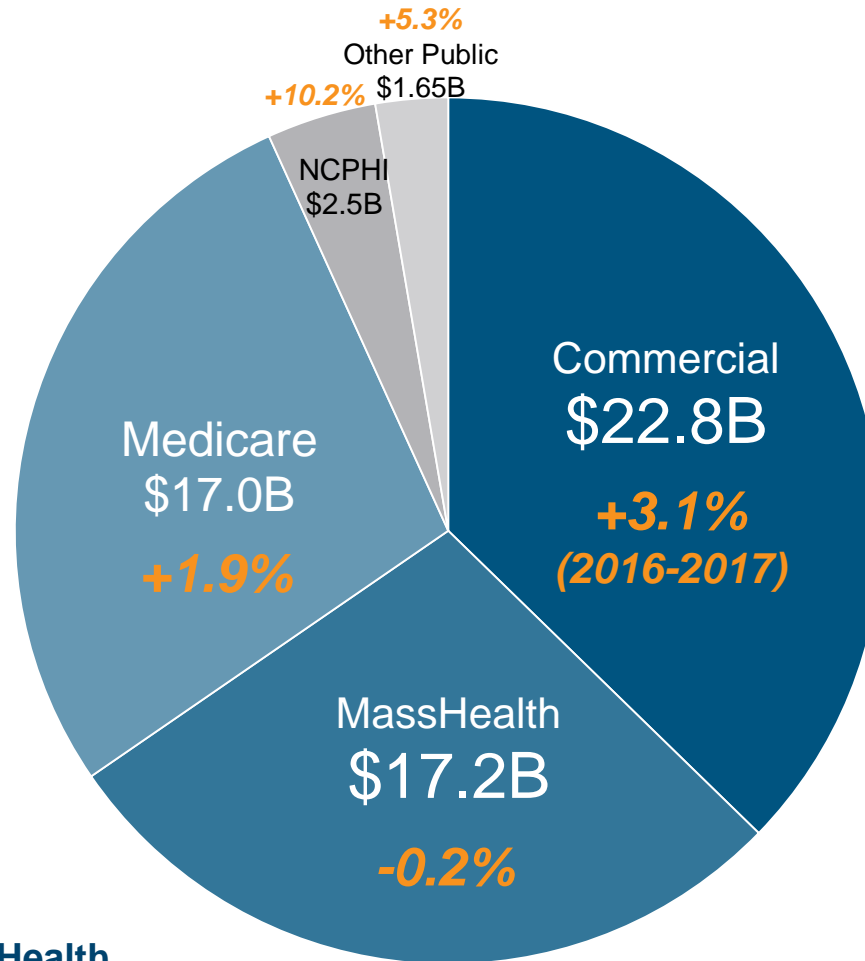
Growth Rates, 2012-2017



THE INITIAL ESTIMATE OF THCE PER CAPITA GROWTH IS 1.6% FOR 2017, THE SECOND CONSECUTIVE YEAR IT FELL BELOW THE HEALTH CARE COST GROWTH BENCHMARK.

Total Health Care Expenditures

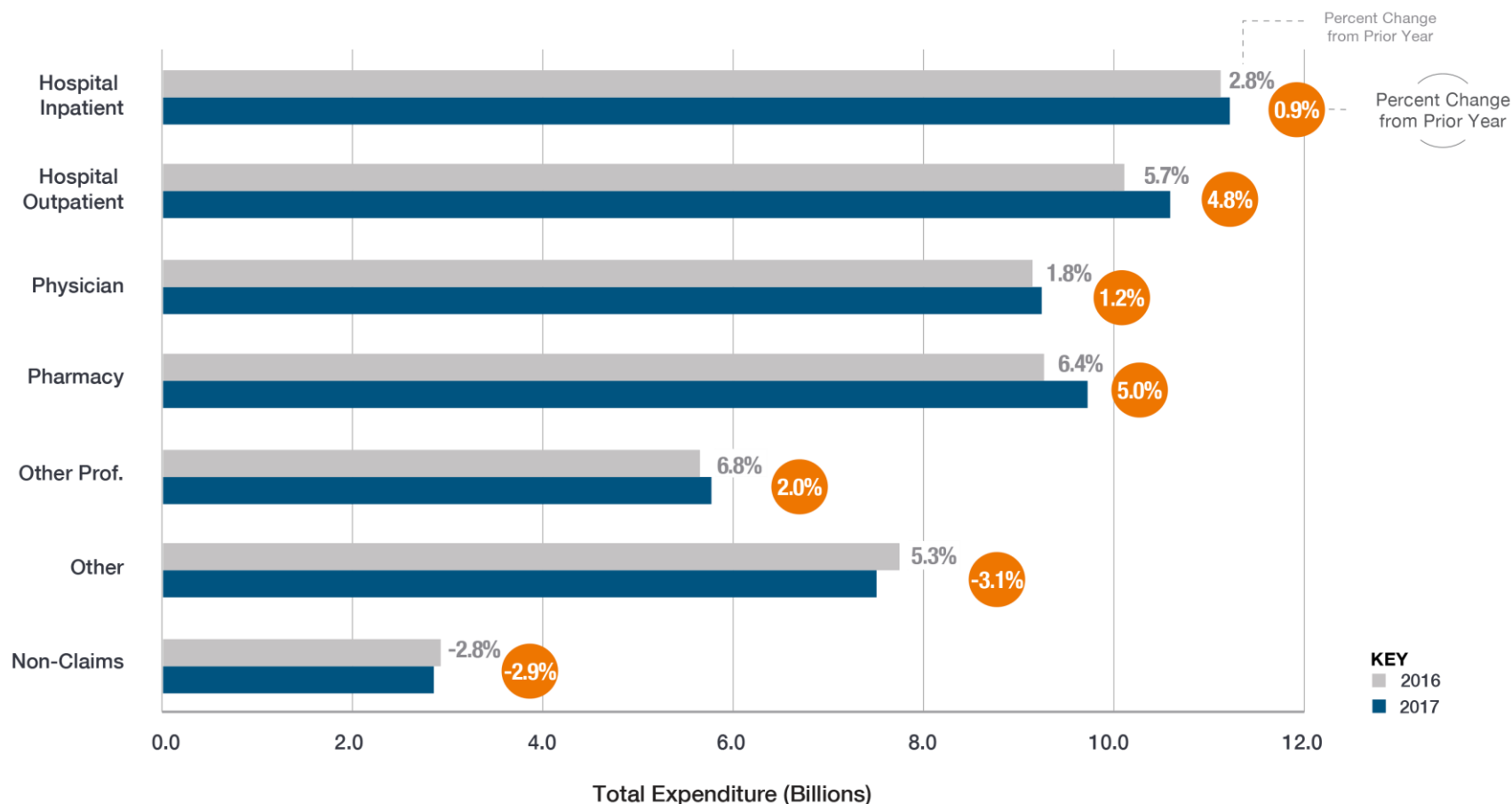
Insurance Categories, 2017



\$61.1B Total Health Care Expenditures

Total Health Care Expenditures

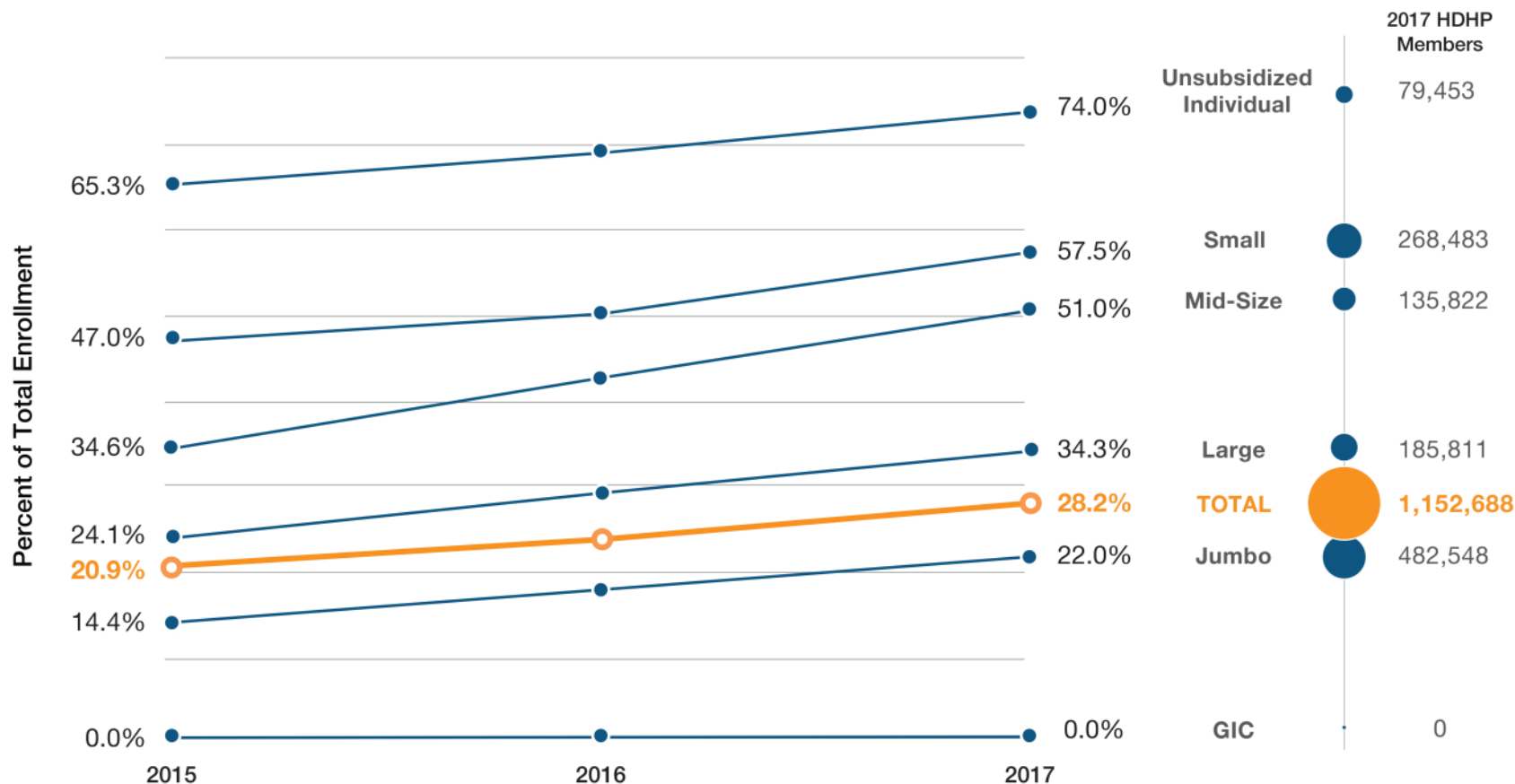
Service Categories, 2016-2017



HEALTH CARE SPENDING DECELERATED ACROSS ALL SERVICE CATEGORIES, WITH THE HIGHEST GROWTH IN PHARMACY AND OUTPATIENT SPENDING.

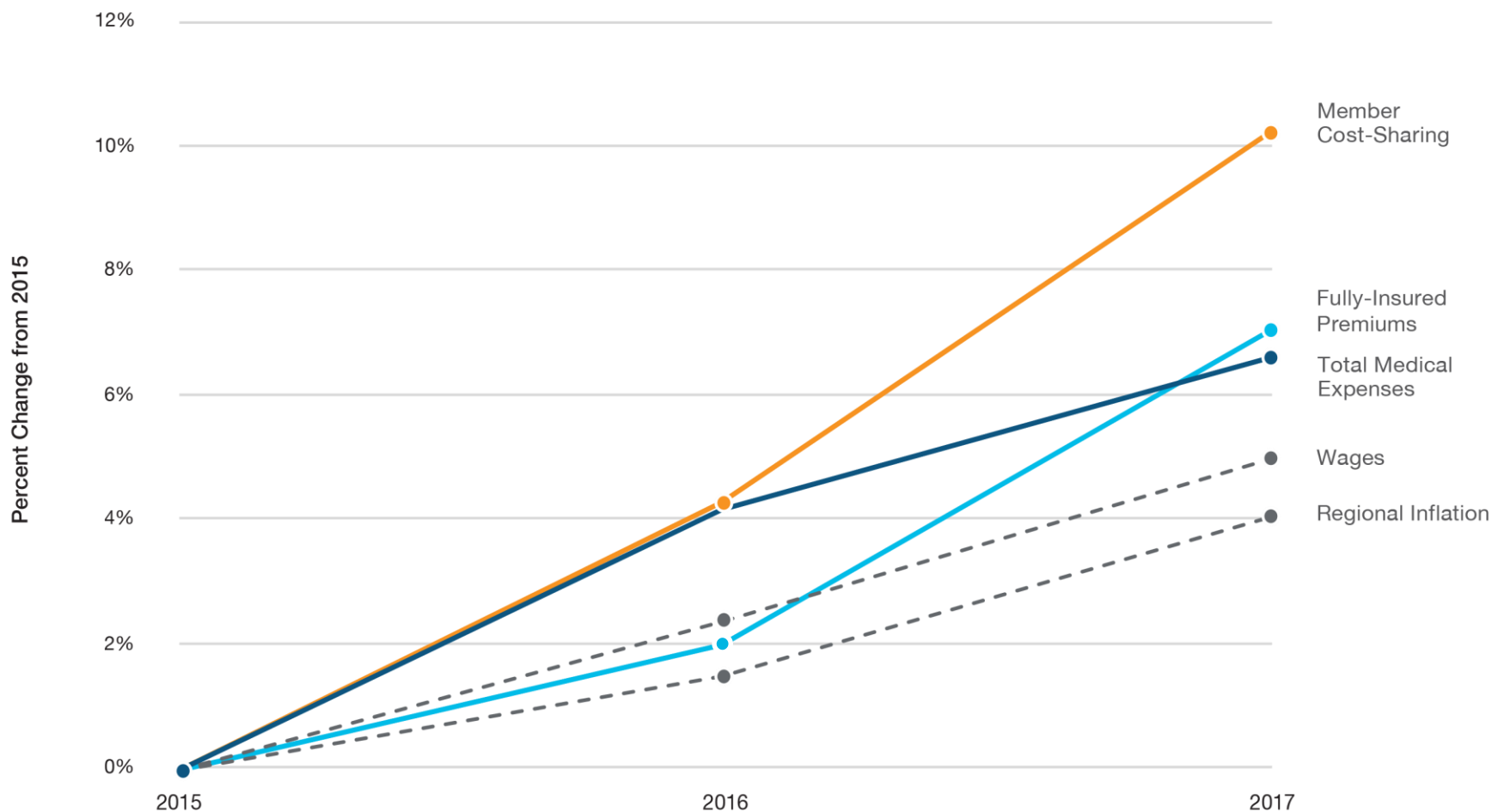
Commercial Insurance

High Deductible Health Plans by Market Sector, 2015-2017



IN 2017, MORE THAN ONE IN FOUR (28.2%) MASSACHUSETTS CONTRACT MEMBERS WERE ENROLLED IN AN HDHP. THESE PLANS WERE MORE COMMON AMONG SMALLER EMPLOYER GROUP PURCHASERS.

Commercial Insurance Expense Trends, 2015-2017



MEMBER COST-SHARING AND FULLY-INSURED PREMIUMS GREW FASTER THAN WAGES AND INFLATION IN 2017.

Biennial Household and Employer Surveys

Massachusetts Health Insurance Survey

Monitors health care coverage, access, utilization and affordability

- 3.7% of Massachusetts residents uninsured
- 89% respondents had usual source of care
- 35% respondents visiting the emergency department who sought care for a non-emergency condition
- 45% of respondents reported a health care affordability issue

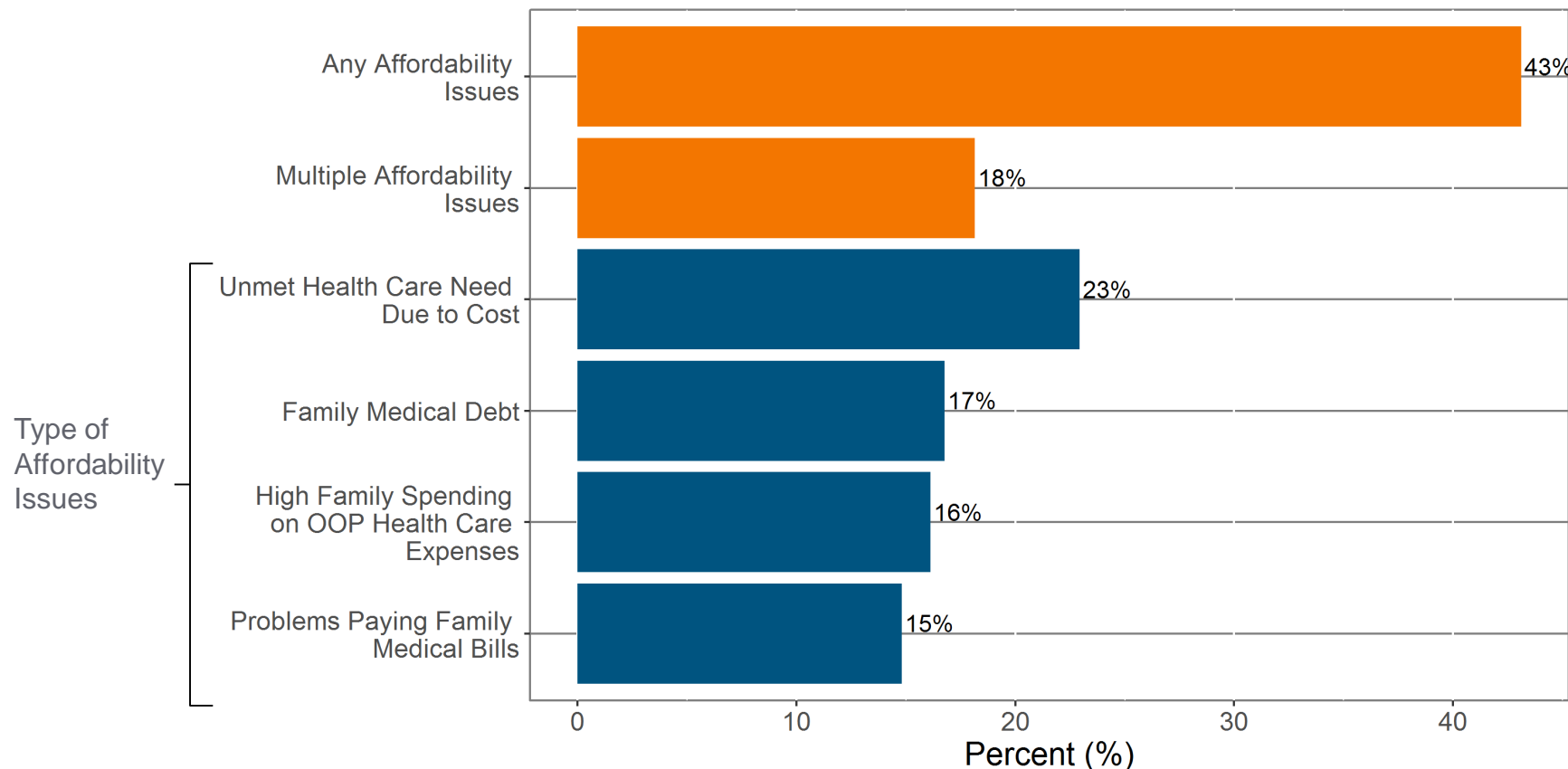
Massachusetts Employer Survey

Monitors employer insurance market, cost-sharing, and benefit decision making

- 71% of Massachusetts firms offered health insurance
- 51% eligible employees enrolled in their employer's health plans
- 36% of firms who offer insurance offered it to their part-time employees. One in ten part-time employees enrolled in their employer's health plan.
- The 2018 average total monthly premium was \$617 for single coverage and \$1,687 for family coverage. The average percent employee contribution was 26% for single coverage and 30% for family coverage.

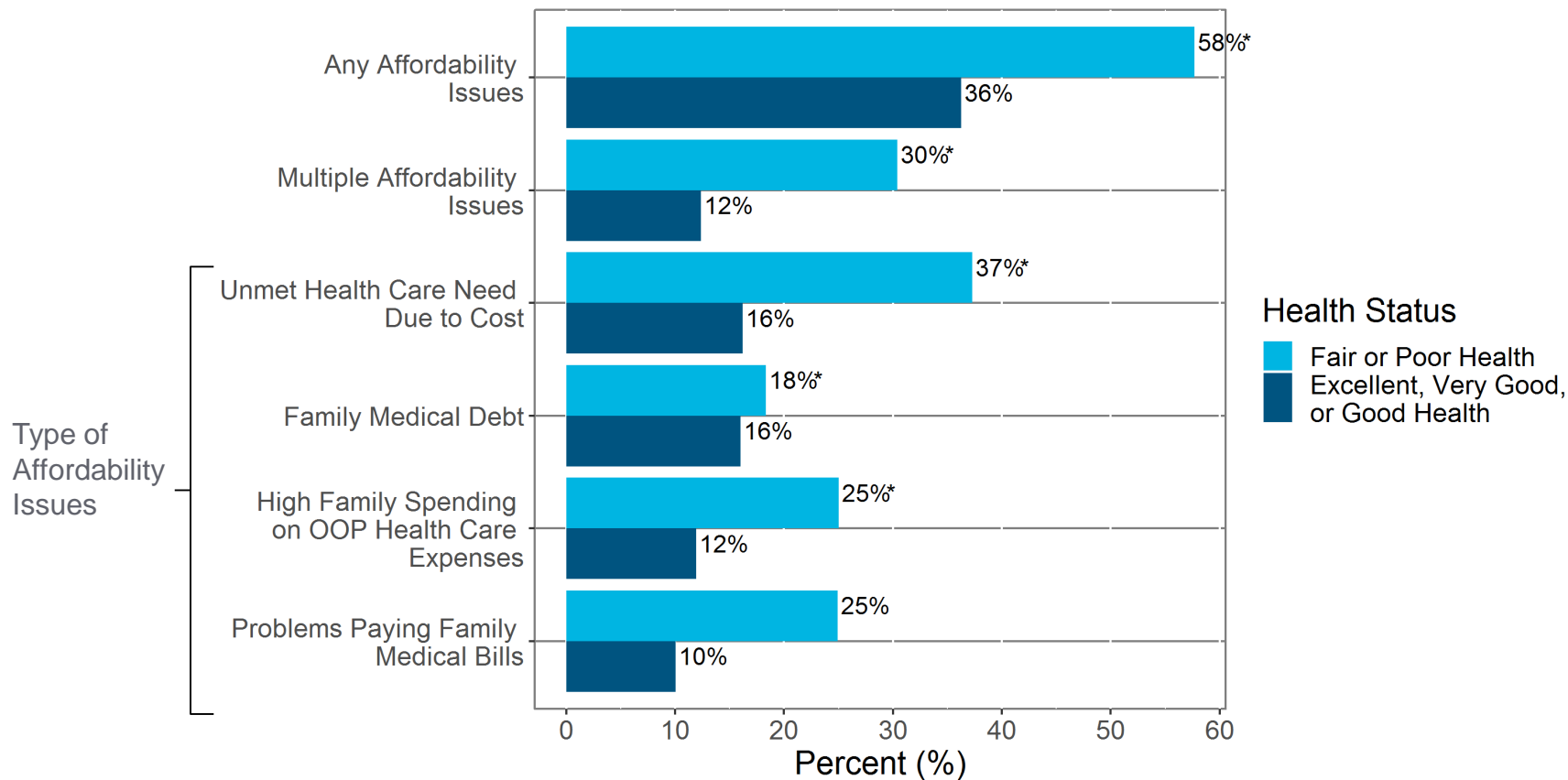
Extent of Health Care Affordability Issues in MA

In 2017, 43% of insured residents reported having an affordability issue in the past 12 months and 18% of insured residents reported having multiple affordability issues



Health Care Affordability by Health Status

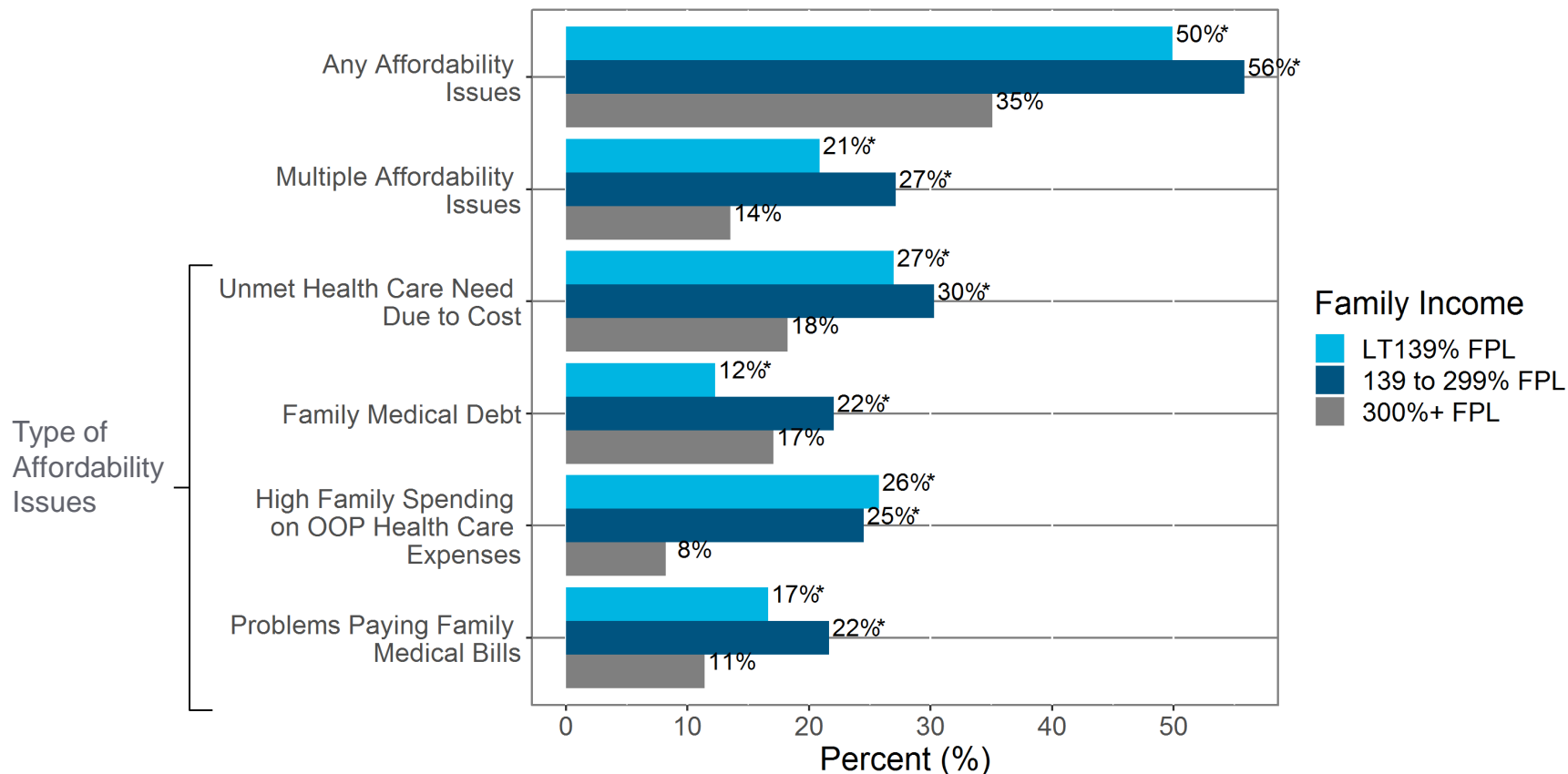
Insured residents in fair or poor health, who have more need for health care services, have high rates of affordability issues



*Difference from value for "Excellent, Very Good, or Good Health" is statistically significant at the 5% level.

Health Care Affordability by Family Income

Insured residents with low to moderate family income are more likely to struggle with affordability



*Difference from value for "300%+ FPL" is statistically significant at the 5% level.

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Transparency Initiatives

CHIA's Transparency Agenda - CompareCare

What you should know about cost

The cost quotes you are about to see are an estimation of the entire cost of the procedure in 2015. It is the total amount that was paid to the provider, based on what both the insurance plan paid and what the patient paid. To find out what this procedure will cost you, please visit your insurance plan's cost estimator.

Get a better estimate from your health insurer:

Aetna

ConnectiCare

Neighborhood Health Plan

Blue Cross Blue Shield MA

Fallon Health

Tufts Health Plan

Boston Medical Center
HealthNet Plan

Harvard Pilgrim Health Care

UniCare

Health New England

CeltiCare



Smart patients know to consider more than just price when making health care decisions.

To learn more about getting the most out of your health care before viewing cost estimates, check out CompareCare's procedure-based [Conversation Guides](#), or continue to [CompareCare's cost estimates](#).

CHIA's Transparency Agenda - CompareCare



CompareCare

A TRUSTED SERVICE OF THE COMMONWEALTH OF MASSACHUSETTS

Find the right healthcare options for you and your family



Compare Treatment Costs

Check the average cost for common procedures.



Get Quality Care

Find quality ratings for health care providers.



Ask Informed Questions

Ask the most important questions to get better care.



Troubleshoot an Issue

Get help resolving common issues with health insurance and care.

Learn more about the Massachusetts health care system.



Learn the basics about getting insurance in Massachusetts

Find out how to get insurance through your school, employer, the state, or directly from an insurer.

[Learn More](#)



Costs for great health care vary widely

Learn how to use cost information to make better health care decisions.

[Learn More](#)



Quality of care varies across health care facilities and providers

Learn how to use quality rating information to find high-quality health care options.

[Learn More](#)

CHIA's Transparency Agenda - CompareCare

Colonoscopy-45378

Diagnostic examination of large bowel - 45378 - includes costs for facility, physician, and anesthesiologist, but not for surgical pathology
Procedure code 45378.



To get a precise cost, ask for a quote from your insurance company.

The cost of a service will vary based on your insurance company and health care provider.

[Learn why.](#)

GET A QUOTE



Talking to your doctor about this treatment can help you get better outcomes.

[Learn the right questions to ask](#) before having this procedure.

I'M LOOKING FOR CARE PROVIDERS


Within from of

FIND A PROVIDER BY NAME

MY INSURANCE COMPANY IS

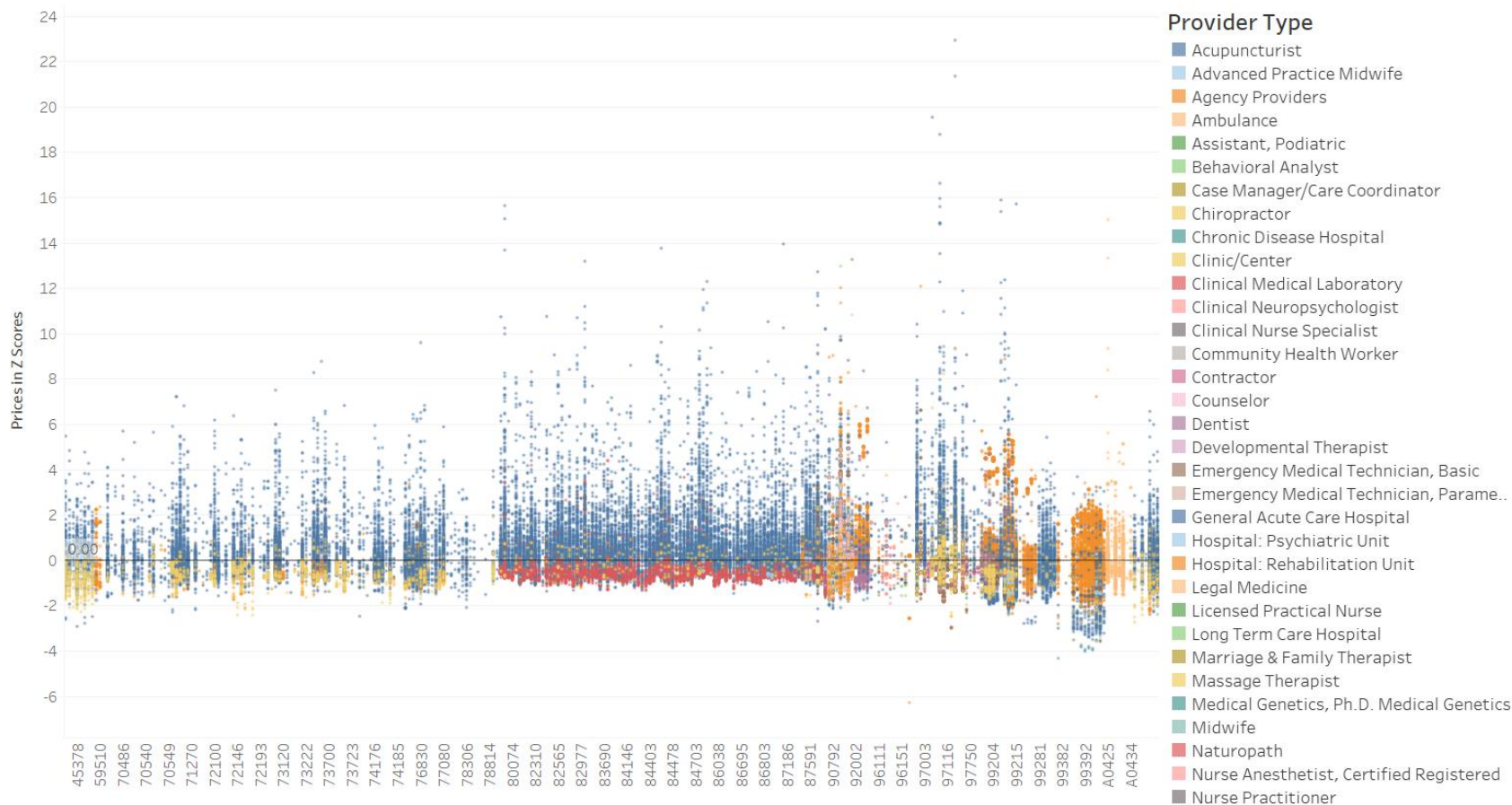
(What if I'm not insured?)

COMPARE SELECTED

Provider	Type of provider	Town/City	What might this procedure cost? 	Details
<input type="checkbox"/> South Shore Endoscopy Center, Inc	Surgery Center	Braintree	\$ 969	<input type="button" value="QUALITY"/>
<input type="checkbox"/> Reliant Medical Group The Endoscopy Center,LLC	Surgery Center	Worcester	\$ 989	<input type="button" value="QUALITY"/>
<input type="checkbox"/> Weymouth Endoscopy, LLC	Surgery Center	South Weymouth	\$ 1,058	<input type="button" value="QUALITY"/>
<input type="checkbox"/> DHA Endoscopy LLC	Surgery Center	Stoneham	\$ 1,104	<input type="button" value="QUALITY"/>

Price Variation — “Wide Field” View

Provider Price Variation Across 300 Procedures



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De-Identification and Data Linking

Emerging Capability: De-identification

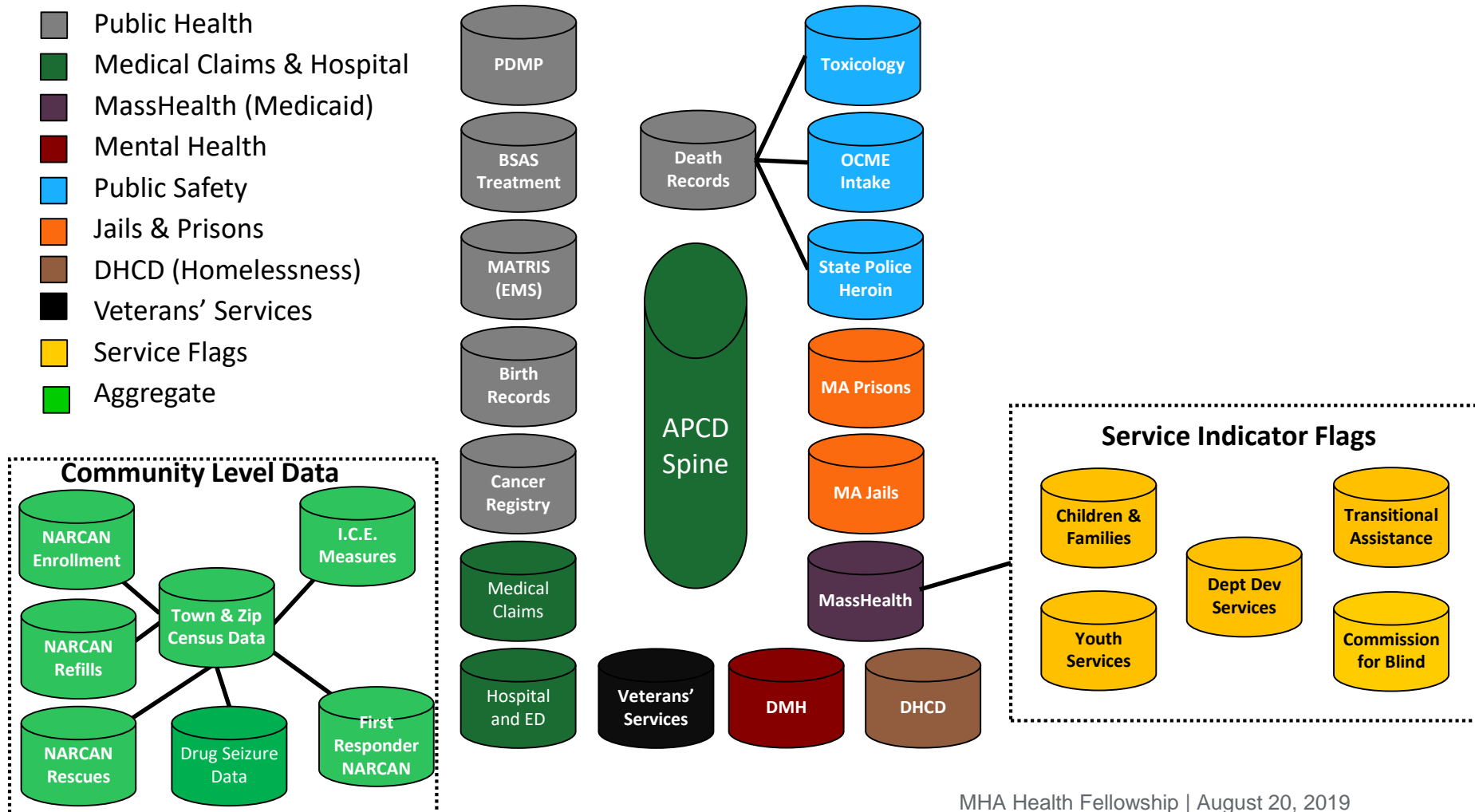
- CHIA has developed sophisticated ways of de-identifying and managing data from many different data submitters.
- The Massachusetts “Chapter 55” Opioid Study was an ambitious project to link more than 20 datasets across state government to create the most complete view of the opioid crisis and its causes.
- CHIA is working to apply this capability to state agency and program membership rosters to create an all-encompassing view of the interactions between individuals and state programs, at a point in time or over time, without ever sharing anyone’s identity or violating any privacy laws.

Chapter 55 Opioid Study – Massive Inter-Agency Data Sharing

Data Sources

- Public Health
- Medical Claims & Hospital
- MassHealth (Medicaid)
- Mental Health
- Public Safety
- Jails & Prisons
- DHCD (Homelessness)
- Veterans' Services
- Service Flags
- Aggregate

Chapter 55 Data Structure



CHIA's FileSecure – A Closer Look

