

2022
**HEALTH CARE
COST TRENDS REPORT
AND POLICY
RECOMMENDATIONS**
SEPTEMBER 2022



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CHAPTER 1:
INTRODUCTION

CHAPTER 1: INTRODUCTION

This year, Massachusetts marks a milestone anniversary in its ambitious journey of health care reform. In 2012, with a broad consensus to restrain rapidly increasing health care costs, the Commonwealth enacted a comprehensive new law (Chapter 224), the centerpiece of which is the innovative health care cost growth benchmark, a first-in-the-nation, statewide target for sustainable growth in total health care spending (originally 3.6 percent, lowered to 3.1 percent in 2018, and rising again to 3.6 percent in 2023). The law established the Massachusetts Health Policy Commission (HPC) to monitor and guide this ambitious effort (see **Sidebar: What is the Massachusetts Health Policy Commission?**).

After the passage of the law, health care spending growth in Massachusetts was below the comparable U.S. rate for most years, accounting for billions in avoided spending for Massachusetts residents. However, by the end of the decade, spending growth was accelerating and above the benchmark from 2017 to 2019. The public health and economic challenges created by the COVID-19 pandemic since 2020 have underscored the importance of the goals Chapter 224 sought to promote – an affordable, accessible, and equitable health care system for all residents of the Commonwealth.

In this annual report, the HPC presents new research to enhance the collective understanding of health care spending trends and cost drivers and evaluates progress in meeting the

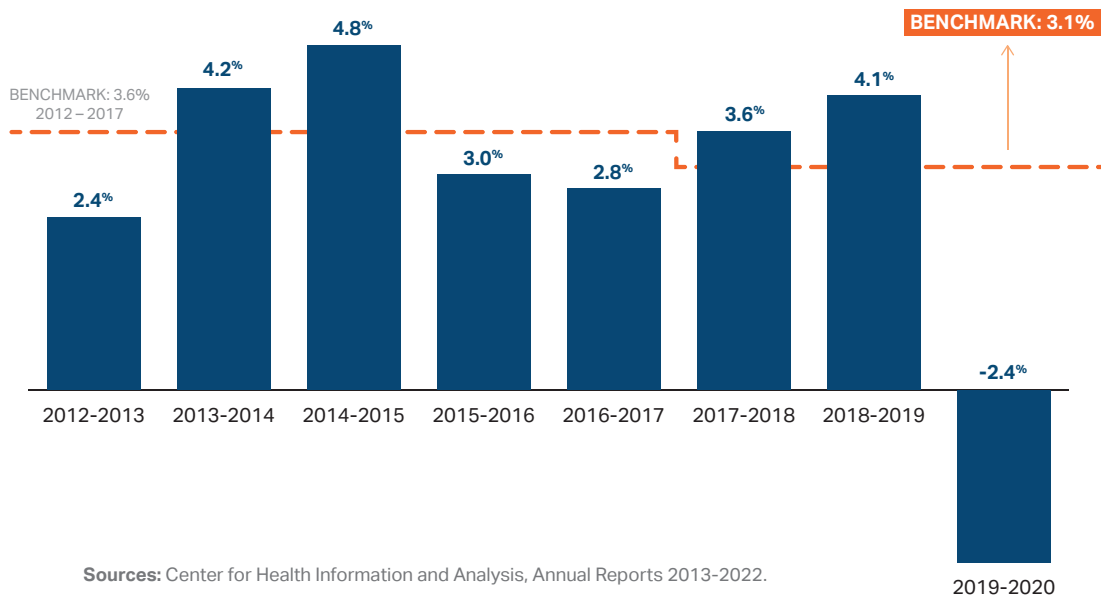
Commonwealth’s cost containment, care delivery, and payment system goals. 2020 is the first year that health care spending in the Commonwealth has been measured against the benchmark target during the COVID-19 pandemic. Largely as a result of the pandemic, the state’s health care spending per capita *decreased* 2.4 percent from 2019 to 2020, far below the benchmark of a 3.1 percent *increase* (**Exhibit 1.1**). Health care spending is widely expected to rise again for 2021 and beyond.

Using the most updated data available, the HPC was able to more fully examine the impact of the COVID-19 pandemic on patterns of care and access in the Commonwealth. Analysis of the disruptions in care resulting from the pandemic – including differential impacts by community income – are a major focus of the 2022 report.

As the Commonwealth navigates the third year of the pandemic – and even as providers are facing significant headwinds with workforce, supply chain, and inflation issues – these findings underscore the urgent need to create a more affordable, equitable, high-quality health care system for all residents.

This year presents an opportunity to reflect on ten years of Massachusetts experience, data, and evidence, to chart a bold path forward for the next decade. To this end, this report includes six policy recommendations that reflect a comprehensive approach to reducing health care cost growth, promote affordability, and advance equity. The HPC stands ready to support these efforts.

Exhibit 1.1: Annual growth in total health care expenditures per capita in Massachusetts



HOW THE REPORT IS ORGANIZED

The report includes material presented in a narrative report and a graphical chartpack. Select material is also available in an interactive Tableau format on the HPC’s website. This report is informed by sources including the data and research of the Center for Health Information and Analysis (CHIA), as well as by presentations and testimony submitted during the HPC’s 2021 Annual Health Care Cost Trends Hearing.

Chapter 2 of the report compares health care cost growth in 2020 to the state’s health care cost growth benchmark, discusses trends and levels of health care spending in Massachusetts and the nation overall, and examines trends in health care affordability. **Chapter 3** investigates changes in ambulatory care patterns in children and adults in 2020 with the onset of the COVID-19

pandemic, including preventive care, psychotherapy, and avoidable emergency department utilization. Each topic area includes a specific focus on differences by region or community income during 2020. **Chapter 4** presents the HPC’s policy recommendations for improving efficiency in health care spending and quality in care delivery in Massachusetts, as well as a dashboard summarizing performance on key measures of spending, quality, and health equity.

The chartpack presents updated results and trends previously reported on by the HPC. These include trends in price growth across a range of services, as well as areas for improvement in care delivery, such as decreasing avoidable hospital inpatient and emergency department visits and maximizing value in post-acute care. The chartpack also explores variation in practice patterns by provider organization, including use of low value care services.

SIDEBAR: WHAT IS THE ROLE OF THE MASSACHUSETTS HEALTH POLICY COMMISSION?

The Massachusetts Health Policy Commission (HPC), established in 2012, is an independent state agency charged with monitoring health care spending growth in Massachusetts and providing data-driven policy recommendations regarding health care delivery and payment system reform. The HPC’s mission is to advance a more transparent, accountable, and innovative health care system through independent policy leadership and innovative investment programs. The HPC’s goal is better health and better care – at a lower cost – for all people across the Commonwealth.

HPC staff and its Board of Commissioners work collaboratively to monitor and improve the performance of the health care system. Key activities include setting the health care cost growth benchmark; setting and monitoring provider and payer performance relative to the health care cost growth benchmark; creating standards for care delivery systems that are accountable to better meet patients’ medical, behavioral, and social needs; analyzing the impact of health care market transactions on cost, quality, and access; investing in community health care delivery and innovations; and safeguarding the rights of health insurance consumers and patients regarding coverage and care decisions by health plans and certain provider organizations.

CHAPTER 2:
**TRENDS IN SPENDING
AND CARE DELIVERY**

CHAPTER 2:

TRENDS IN SPENDING AND CARE DELIVERY

The Commonwealth's landmark health care cost containment law, Chapter 224 of the Acts of 2012,¹ establishes a benchmark for sustainable growth in health care spending, recognizing that containing spending growth is critical to easing the burden of health care spending on government, households, and businesses. Chapter 224 directs the Massachusetts Health Policy Commission (HPC) and the Center for Health Information and Analysis (CHIA) to monitor health care spending growth annually relative to the benchmark, which is indexed to the rate of the Commonwealth's long-term economic growth.

From 2013 to 2017, the benchmark for annual health care spending growth was set by law at 3.6 percent. From 2018 to 2022, the default benchmark was set at potential gross state product minus 0.5 percent, or 3.1 percent, but the HPC had limited authority to increase it to as high as 3.6 percent. On April 3rd, 2019, the HPC's board voted unanimously to maintain the benchmark at 3.1 percent for the 2020 calendar year – the period of focus for much of the data presented in this chapter (the board voted to raise the benchmark to 3.6 percent in 2023). This chapter describes broad trends in health care spending, value, and performance in the Commonwealth in 2020 (see **Sidebar: Factors underlying health care spending**), including the impact of the COVID-19 pandemic on the Massachusetts health care system and the residents of the Commonwealth.

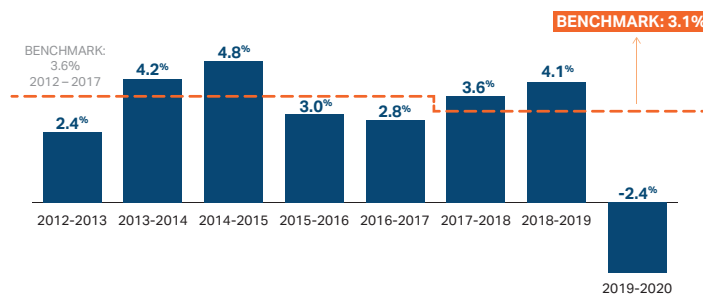
SPENDING GROWTH FROM 2019-2020

The Commonwealth examines health care spending growth against the benchmark by calculating the change in Total Health Care Expenditures (THCE) per state resident. CHIA calculates THCE using data from the state and federal government as well as data reported by health insurers. THCE includes health care spending by

individuals (e.g., co-payments, co-insurance, and insurance deductibles), health insurers (e.g. administrative expenses, incentive payments), the state (e.g., MassHealth), and the federal government (e.g., MassHealth and Medicare). CHIA reported that total spending in Massachusetts dropped from \$63.0 billion in 2019 to \$62.6 billion in 2020, the first year in which a reduction in health care spending was observed since the Commonwealth began reporting on health care spending relative to the benchmark.^{i,2} Per capita THCE in Massachusetts was \$8,912 in 2020, representing a decrease of 2.4 percent from 2019, far below the benchmark.ⁱⁱ

Over the eight years since the passage of Chapter 224 for which THCE growth has been evaluated (2012-2020), average annual spending growth has been 2.84 percent (**Exhibit 2.1**).ⁱⁱⁱ

Exhibit 2.1: Annual growth in total health care expenditures per capita in Massachusetts



Sources: Center for Health Information and Analysis, Annual Reports 2013-2022

- i The spending totals reported by CHIA do not include pandemic-related supplemental funding such as via the CARES Act or the Paycheck Protection Program.
- ii The reduction in THCE from 2019 to 2020 was reported as \$301 million, or 0.48%. The 2.4% reported decrease in THCE per capita represents the combination of this 0.48% decrease in spending and a 2.0% increase in Massachusetts' resident population from 2019 to 2020 as reported by the US Census Bureau. That historically large population increase is likely artificial at least in part – the 2019 Massachusetts population estimates used by CHIA are ultimately based on underlying data from the vintage 2010 Decennial Census while the 2020 figure was based on the 2020 Decennial Census, which can result in a disconnect in the time series. Further analysis by the U.S. Census bureau has found that the Massachusetts population estimate for 2020 may have been erroneously high, see <https://www.census.gov/library/stories/2022/05/2020-census-undercount-overcount-rates-by-state.html>.
- iii This figure incorporates a downward revision of per capita THCE growth from 4.3 percent to 4.1 percent for 2018-2019 since last year's report. In previous years, CHIA has reported an initial assessment of THCE to meet statutory timelines followed by a final assessment a year later, with more complete data from insurers. Beginning with 2019-2020 growth in THCE per capita, however, the estimates will be considered final due to a greater time allowed between the end of the calendar year and the compilation of the data by CHIA.

SIDEBAR: FACTORS UNDERLYING HEALTH CARE SPENDING

Total health care spending is a function of the price of health care services as well as the utilization of those services. Utilization, in turn, is affected by both the number of people receiving health care services and the frequency, type, care setting, and intensity of the services provided. The HPC's Cost Trends Report examines the latest available data regarding changes in both price and utilization in Massachusetts, as well as factors that may explain and contextualize these recent trends in health care spending. This report largely focuses on aspects of the health care system that can be influenced by policymakers, government agencies, and market participants in the state, instead of population health factors such as aging of the population and other underlying changes in health status.

Importantly, the decline in commercial spending in 2020 was the result of the reduction in use of care due to the COVID-19 pandemic, not a reduction in the amount paid for a given service (prices). Commercial prices not only grew in 2020 but increased at an aggregate rate of 2.7 percent, higher than previous years (**Exhibit 2.2**).

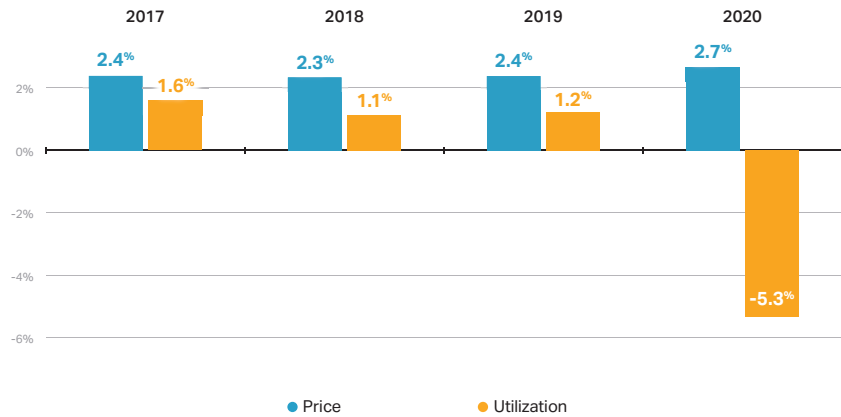
SPENDING GROWTH BY PAYER TYPE

While there were differences by payer type (see **Exhibit 2.3**), spending growth per member was negative for all major payer types in 2020. In the commercial sector, total spending per enrollee decreased by 1.6 percent, the smallest decline among the major payer types, while enrollment decreased by 2.1 percent. For MassHealth enrollees with full coverage through the Primary Care Clinician (PCC) program, managed care organizations (MCO),^{iv} or the Accountable Care Organization (ACO) program, total enrollment (member-months) increased by 5.9 percent^v while spending per enrollee declined 4.7 percent, resulting in a small net increase in total spending. In the Medicare program, spending per enrollee declined 3.4 percent for beneficiaries enrolled in Original (fee-for-service) Medicare and enrollment decreased by 0.8 percent. For enrollees in the privately administered Medicare Advantage program, spending per enrollee declined by 4.2 percent, while enrollment increased by 8.5 percent.

The enrollment shift from Medicare FFS to Medicare Advantage in Massachusetts reflects a multi-year trend and is consistent with the expansion of Medicare Advantage nationally,

- iv This excludes, for example, disabled enrollees or other enrollees receiving coverage on a fee-for-service basis and enrollees who are dually eligible for Medicare coverage and MassHealth benefits.
- v These increases were largely driven by the Families First Coronavirus Response Act (FFCRA), which required state Medicaid agencies to continue coverage for all members enrolled on or after March 18, 2020, irrespective of changes in their circumstances or regularly scheduled eligibility reassessments. CHIA reported that enrollment was lower after March, but far fewer members discontinued their MassHealth coverage, resulting in net increase in enrollment for the year.

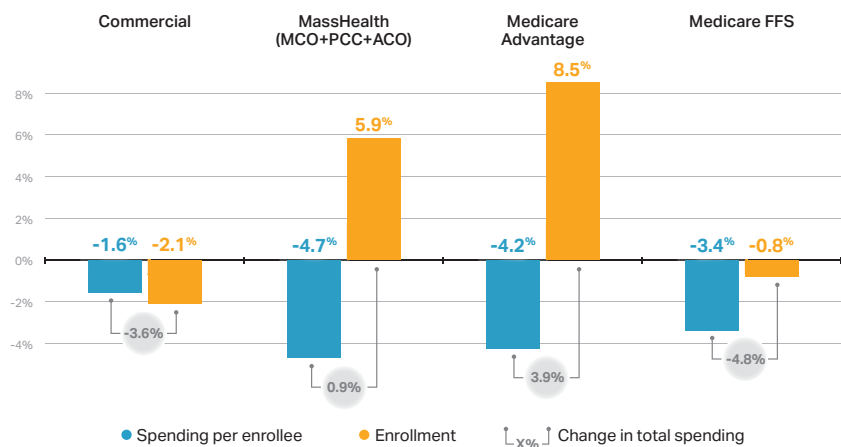
Exhibit 2.2: Percentage change in commercial unit costs (prices) and utilization for BCBSMA, THP, HPHC, and United from the previous calendar year to the year shown



Notes: In payer-reported decomposition analyses of the drivers of spending growth such as these, utilization is typically not measured directly, but rather assumed to account for the 'residual' or the remainder of spending growth after changes in prices and provider or service mix are accounted for.

Sources: Pre-Filed Testimony submitted by insurers to the HPC in advance of the 2021 Annual Cost Trends Hearing. Data represent the enrollment-weighted average of payer-reported decomposition of spending growth for the four largest commercial payers by private commercial enrollment. Provider and service mix components of spending growth not shown. Enrollment weights based on the Center for Health Information and Analysis Enrollment Trends reports for June 15 of each year shown.

Exhibit 2.3: Change in enrollment and per-enrollee spending by major payer type, 2019-2020



Notes: Commercial spending includes insurer administrative spending. Commercial pharmacy spending is net of rebates. Commercial spending and enrollment growth include enrollees with full and partial claims. MassHealth includes only full coverage enrollees in the Primary Care Clinician (PCC), Accountable Care Organization (ACO-A, ACO-B), and Managed Care Organization (MCO) programs. Figures are not adjusted for changes in health status.

Sources: Center for Health Information and Analysis Annual Report, March 2022

although Medicare Advantage enrollment in Massachusetts remains below the national average.³ In 2015, beneficiaries in Medicare Advantage plans constituted 18.6 percent of all Massachusetts Medicare enrollment; by 2020, the share had grown to 24.1 percent.^{vi}

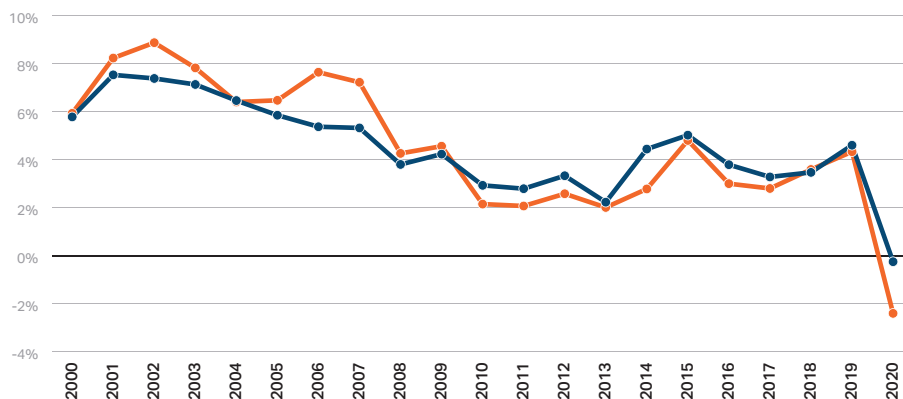
One reason that commercial spending per enrollee did not decline as much as for other payer types is that premiums are set prospectively, unlike in most MassHealth programs and Original Medicare. Thus, enrollees and employers paid 2020 premiums based on spending expectations established by insurers before the pandemic occurred. Premium spending that is retained by insurers and not paid out in medical claims is termed the net cost of private health insurance (NCPHI), which grew 20 percent in 2020 and is included in the figures above. Faster commercial price growth in 2020 may also explain some of the difference, as well as possible differences in care avoidance behavior between commercial, Medicare, and MassHealth patients.

COMPARISON TO NATIONAL TRENDS

Driven by health care utilization reductions during the COVID-19 pandemic, per capita health care spending also declined nationally in 2020, although the decline nationally was smaller (-0.3 percent) than in Massachusetts (-2.4 percent).^{vii} Spending growth in Massachusetts has generally been lower than the U.S. average since 2010, although the difference was particularly dramatic in 2020. Overall, Massachusetts has followed similar patterns of year-to-year variation as the U.S. overall (**Exhibit 2.4**).

In contrast to the overall average, in the commercial health insurance sector, per member spending declined less in Massachusetts (a decline of 2.1 in Massachusetts, compared to a national decline of 2.6 percent).

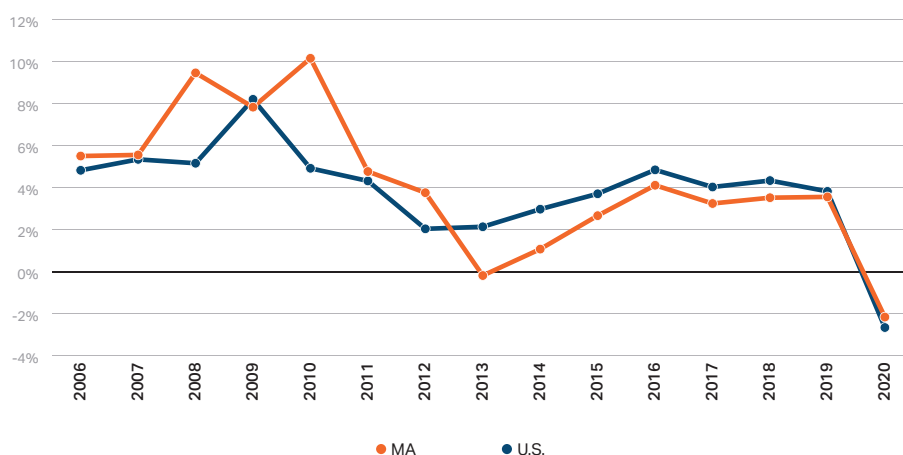
Exhibit 2.4: Annual growth in total health care spending per capita in Massachusetts and the U.S.



Notes: U.S. data includes Massachusetts. U.S. data exclude federal COVID-19 relief funding.

Sources: Centers for Medicare and Medicaid Services, National Healthcare Expenditure Accounts Personal Health Care Expenditures Data, 2014-2020 and State Healthcare Expenditure Accounts, 1999-2014; Center for Health Information and Analysis, Total Health Care Expenditures, 2014-2020

Exhibit 2.5: Annual growth in per capita commercial health care spending, Massachusetts and the U.S.



Notes: Massachusetts data include full-claims members only. Commercial spending is net of prescription drug rebates and excludes net cost of private health insurance.

Sources: Centers for Medicare and Medicaid Services, National Healthcare Expenditure Accounts Personal Health Care Expenditures, 2014-2020 and State Healthcare Expenditure Accounts 2005-2014; Center for Health Information and Analysis, Total Health Care Expenditures, 2014-2020

This finding contrasts with trends from 2013 to 2019, in which commercial spending in Massachusetts grew more slowly than the U.S. (**Exhibit 2.5**).^{viii}

^{vi} Medicare enrollment calculations were based on the Center for Health Information and Analysis Enrollment Trends reports for September 15 of each year.

^{vii} The 2020 national spending figure was calculated using CMS U.S. personal health expenditures minus federal COVID-19 spending, which included funding for the Paycheck Protection Program (PPP) loans, Provider Relief Fund, and additional COVID-related Health Resources and Services Administration (HRSA) programs. Accounting for these federal COVID-19 relief funding, national per capita health care spending grew by 5.4 percent from 2019 to 2020.

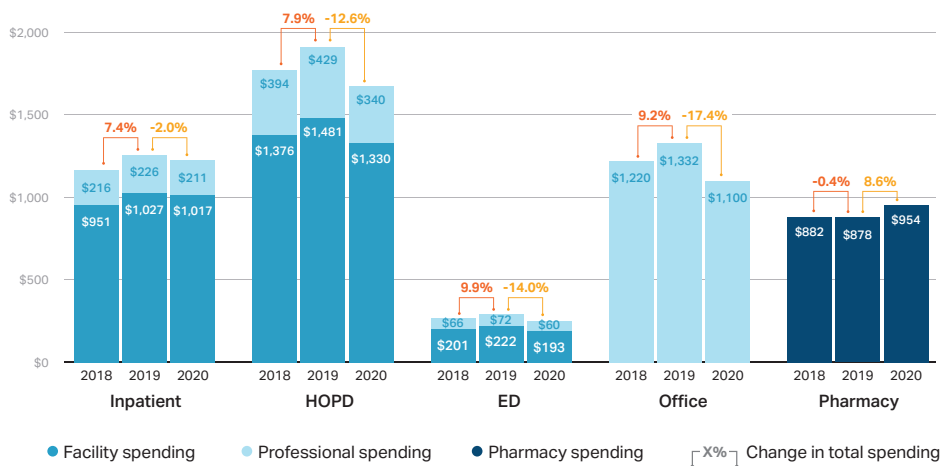
^{viii} The measure of commercial spending in Exhibit 2.5 includes only members for whom “full-claims” data are submitted to CHIA, thus excluding the roughly one-third of the commercial market with carve-outs (“partial-claim”). A “carve-out” means that an insurer has contracted with a third party to manage and accept risk for certain services, such as prescription drugs or behavioral health care.

SPENDING GROWTH BY CATEGORY OF SERVICE

For the Massachusetts commercial market, analysis of 2020 spending by site of care shows the greatest declines in spending on services in provider offices and emergency departments (ED), where per enrollee spending dropped 17.4 percent and 14.0 percent, respectively (see **Exhibit 2.6**). Hospital outpatient department (HOPD) spending per enrollee decreased by 12.6 percent overall, and the decline was greater for the professional component (20.9 percent decline) than the facility component (10.2 percent decline). A deeper investigation into changes that occurred in these settings of care, defined collectively as ambulatory care, is presented in **Chapter 3**. Hospital inpatient spending saw a relatively small decline of 2.0 percent per enrollee, while pharmacy spending grew by 8.6 percent, even accounting for rebates.

HOPD spending, the category accounting for the largest share of commercial spending, declined overall; however, the reduction varied by type of service. Evaluation and management services (E&M) and imaging saw the largest drop in spending, with declines of 26.5 percent and 18.8 percent respectively (see **Exhibit 2.7**). In contrast, spending for chemotherapy and radiation oncology remained stable while spending for non-oncologic injections and infusions grew slightly at 0.3 percent. These categories of spending represent a growing share of total HOPD spending, from 21.2 percent in 2018 to 24.4 percent in 2020 (see **Sidebar: Trends in Clinician-Administered Drug Spending**).

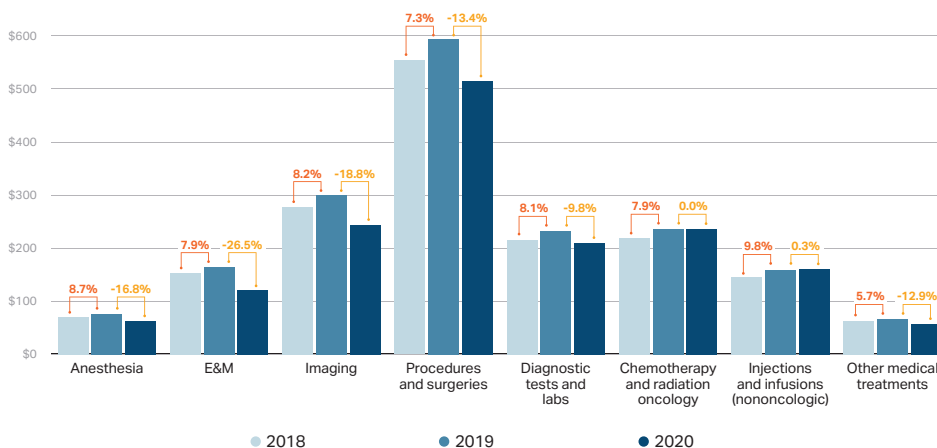
Exhibit 2.6: Commercial spending per member per year by category, 2018-2020



Notes: Medical spending reflects data from five payers: BCBS, HPHC, Tufts, AllWays, and Anthem. Pharmacy spending is net of rebates and reflects data from four payers: BCBS, HPHC, Tufts, and AllWays.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

Exhibit 2.7: Commercial HOPD spending per member per year by type of service, 2018-2020



Notes: Service categories adapted from Restructured BETOS Classification System, 2021.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

SIDEBAR: TRENDS IN CLINICIAN-ADMINISTERED DRUG SPENDING

Clinician-administered drugs are medications administered by physicians or other health care professionals through injections or infusions, in an office or other outpatient setting. They are typically covered under insurance plans' medical benefits rather than their pharmacy benefits. In most cases, health care providers purchase the drugs and then bill insurers after using the drugs in patient care. The Medicare Part B payment rate per drug is usually the manufacturer average sales price (ASP) plus 6 percent, which is intended to cover hospital costs for drug acquisition and administrative costs of storing and handling the drug. For patients with commercial insurance, providers often bill prices that are substantially higher than Medicare's prices. A recent study found that hospitals marked up prices above acquisition cost to commercial insurers for cancer drugs between 120% and 630%.⁴

Clinician-administered drugs represent a large and growing share of medical spending. In 2020, Massachusetts commercial spending on clinician-administered drugs (including the associated cost of drug administration) was \$421 per-member-per-year,^{ix} growing from an average \$333 in 2017, a 26 percent increase. The HPC estimates that total Massachusetts commercial spending on clinician-administered drugs exceeded \$1.6 billion in 2020, representing 15.8 percent of all office and HOPD spending (see **Exhibit 2.8**).

Multiple factors drive spending for clinician-administered drugs, including high launch prices and increased uptake for new drugs,

and price changes on existing drugs, which can come from changes in manufacturer pricing or from provider markup. In addition, approval of new indications can lead to more people becoming eligible for the drug (increasing utilization) or might require more frequent dosing or higher volumes of the drug for treating new conditions. To examine the drugs with the highest spending impact, the HPC analyzed 10 clinician-administered drugs with the highest total spending in the Massachusetts All-Payer Claims Database (APCD) in 2020 (**Exhibit 2.8**). These drugs accounted for nearly 40 percent of all clinician-administered drug spending. For five of the 10 drugs — Ocrevus,^x Keytruda, Entyvio, Perjeta, and Opdivo — spending per patient increased from 2017 to 2020, often substantially.

For the other five of the 10 drugs, spending per patient either trended downward or was similar over time. (Spending per patient trended downward for Remicade, Herceptin, and Avastin, while spending per patient for Rituxan and Neulasta was similar in 2017 and 2020 but fluctuated in 2018 and 2019). Each drug in this set of five drugs had been FDA-approved for over two decades and had one or more biosimilar competitor in the market.⁵ Emerging evidence suggests that entry of biosimilar competitors^{xi} can create downward pressure on prices for the originator drug, although the pressure may be limited.^{6,7,8} Accelerating the approval and adoption of biosimilar products is one strategy to temper the spending growth of this important but very costly category of spending.

ix Provider cost of drug administration accounted for approximately 16% of total spending. Costs for the drugs themselves represent the other 84% of total spending, of which less than 5% is for vaccines.

x Ocrevus was approved by the FDA in March 2017, and no claim was identified in the data sample for that year. Spending per patient increased for Ocrevus in each subsequent year (data not shown).

xi A biosimilar is a biologic drug that has no clinically meaningful differences from another biologic that is already FDA-approved (i.e. the originator drug).

Exhibit 2.8: Spending and utilization for the top 10 clinician-administered drugs in the Massachusetts commercial market

Drug (procedure code, therapeutic area)	2017			2020		
	Total spending	# of patients	Spending per patient	Total spending	# of patients	Spending per patient
Ocrevus (J2350, Immunology)	n/a			\$136,661,056	1,685	\$80,528
Keytruda (J9271, Oncology)	\$33,010,351	396	\$83,443	\$88,413,751	919	\$96,191
Remicade (J1745, Immunology)	\$136,972,142	4,062	\$33,717	\$84,429,227	3,414	\$24,731
Entyvio (J3380, Immunology)	\$35,308,918	945	\$37,383	\$74,222,651	1,470	\$50,508
Rituxan (J9312, Oncology and Immunology)	\$70,990,165	2,245	\$31,621	\$58,015,298	1,852	\$31,321
Herceptin (J9355, Oncology)	\$69,921,978	1,108	\$63,124	\$46,619,246	796	\$58,551
Neulasta (J2505, Oncology)	\$60,626,045	2,515	\$24,110	\$46,341,161	1,939	\$23,901
Perjeta (J9306, Oncology)	\$23,479,281	398	\$58,982	\$38,082,085	559	\$68,156
Opdivo (J9299, Oncology)	\$32,319,988	443	\$73,026	\$35,881,169	402	\$89,190
Avastin (J9035, Oncology)	\$52,686,819	2,683	\$19,639	\$32,954,191	2,534	\$13,005
Top 10 total	\$515,315,686			\$640,619,833		
Total spending on physician-administered drugs and associated professional spending	\$1,356,655,554			\$1,661,379,117		
Share of all office & HOPD spending	12.0%			15.8%		

SPENDING PER PATIENT INCREASED

SPENDING PER PATIENT DECREASED

SPENDING PER PATIENT REMAINED STABLE

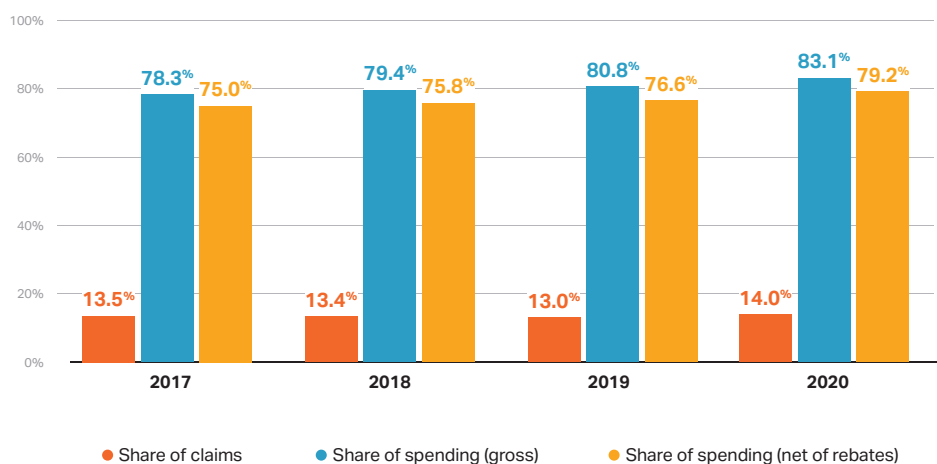
Notes: Avastin is also used by ophthalmologists for treatment of macular degeneration but is not FDA-approved for that indication. Procedure codes for clinician-administered drugs and associated professional spending were identified using the Restructured BETOS Classification System. Total spending includes the provider cost of drug administration (~16% of total spending). Spending for Rituxan was calculated using the procedure code J9310 in 2017. HOPD spending includes facility fees. A relatively small number of claims for these drugs covered under pharmacy benefits were excluded. Spending and patient counts were adjusted for different member months in APCD 2017 and 2020 and scaled to Massachusetts full commercial market using CHIA enrollment data. See technical appendix.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

Pharmacy spending represents one of the only areas of commercial spending that grew significantly in 2020. As in prior years, the increase in spending was driven by branded drugs, which comprise less than 15 percent of total commercial pharmacy volume yet the vast majority of spending. Even after accounting for rebates,^{xii} which have grown over time, the share of prescription drug spending represented by branded drugs has increased from 75.0 percent to 79.2 percent from 2017 to 2020 (**Exhibit 2.9**).

This growth in the share of prescription drug spending accounted for by branded drugs is driven both by price increases on existing drugs and high launch prices of new drugs. These factors have also led to substantial growth in the average spending per branded prescription of 30.6 percent from 2017 to 2020, from \$684 to \$893 (see **Exhibit 2.10**).

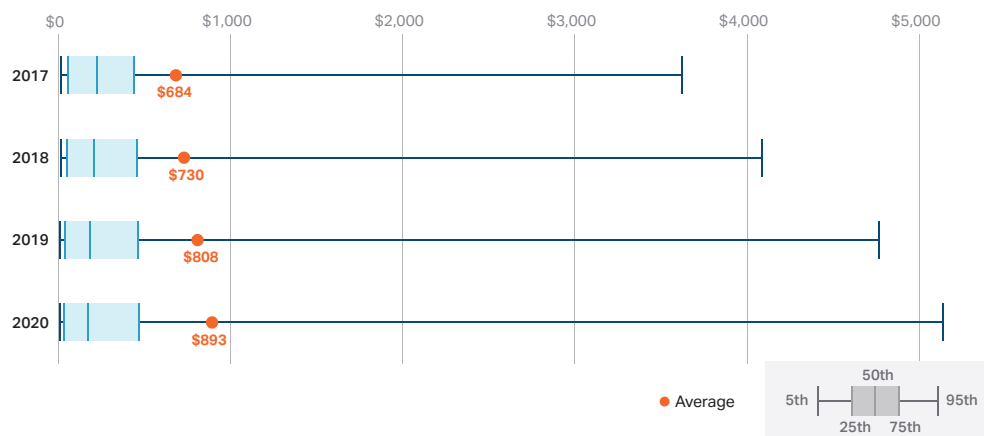
Exhibit 2.9: Branded drug share of claims vs. share of net and gross spending, 2017-2020



Notes: Pharmacy claims include data from four payers: BCBSMA, Tufts, HPHC, AllWays. Rebate shares (applied to gross spending figures) were obtained from Center for Health Information and Analysis Annual Reports.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2017-2020, V 10.0.

Exhibit 2.10: Gross spending distribution per branded prescription, 2017-2020

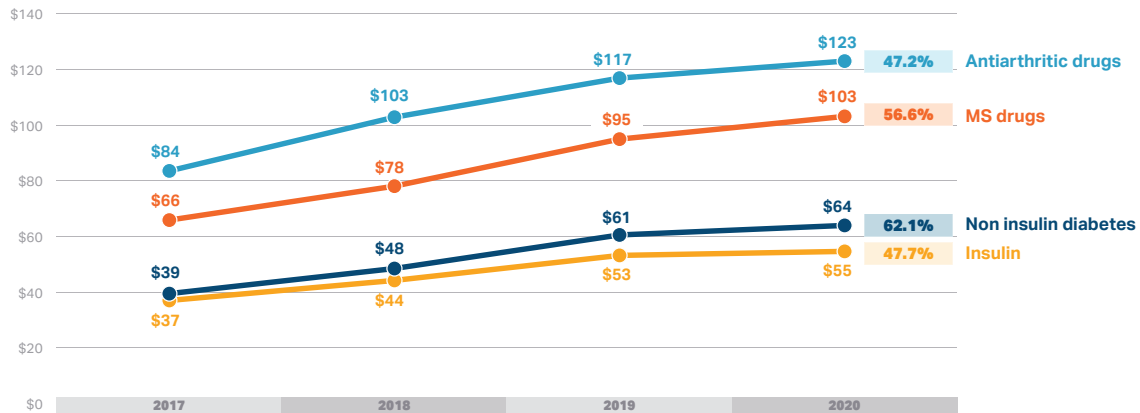


Notes: Pharmacy claims include data from four payers: BCBSMA, Tufts, HPHC, AllWays.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2017-2020, V 10.0

xii Health plans often negotiate discounts on prescription drugs either directly with manufacturers, or indirectly via pharmacy benefit managers. These discounts, or 'rebates' are paid to the health plan after a drug has been dispensed at a pharmacy and thus effectively reduce the price of the drug paid by the payer. However, patient cost sharing related to deductibles or coinsurance is frequently based on the list price of the drug, rather than the net price of a drug after rebates. Some charts in this section report 'net' spending, which include an estimate of rebate amounts while some do not; rebate information is often unavailable to the public.

Exhibit 2.11: Average cost sharing per prescription (30-day supply) in selected classes of drugs, 2017-2020



Notes: Drugs were identified based on lists or clinical guidelines published by the Arthritis Foundation, American College of Rheumatology, American Diabetes Association, and National MS society. Clinician-administered drugs, which are typically covered under a plan's medical benefits, are excluded. Pharmacy claims include data from four payers: BCBSMA, Tufts, HPHC, AllWays.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims database, 2017-2020, V 10.0

Patients with chronic health conditions who rely on branded drugs are particularly affected by higher drug prices. The HPC selected three chronic conditions that rely primarily on branded drugs for treatment and found that the average cost sharing per prescription (30-day supply) for each condition grew by approximately 50 percent or more from 2017 to 2020 (see **Exhibit 2.11**).

IMPLICATIONS FOR AFFORDABILITY AND EQUITY

Despite the decline in health care spending in 2020 in Massachusetts, residents with commercial health insurance coverage did not experience proportional cost relief. While average monthly cost-sharing per person declined for commercially enrolled members from \$59 per month to \$49 per month as a result of a reduction in medical encounters in 2020,² family health insurance premiums grew approximately \$500 in 2020 to nearly \$22,000 per year including employer and employee premium contributions.⁹ At the same time, many residents experienced numerous pandemic-related hardships including COVID-19-related illness, hospitalization and death, loss of employment and income, exacerbation of mental health problems including anxiety and depression, and overall decline in well-being.¹⁰ These hardships were particularly pronounced among residents with low to medium levels of income (\$50,000-\$99,000), half of whom reported difficulty paying household expenses (52.2 percent) and symptoms of depression (49.9 percent) and anxiety (52.8 percent) in August

of 2020 – all representing far higher rates than for residents with higher incomes.^{xiii,10}

It is not surprising that residents in this income range would have difficulty paying basic household expenses. For example, Massachusetts families with household income between three and five times the federal poverty level (e.g. between \$83,000 and \$139,000 annually for a family of four) are typically not eligible for MassHealth or large subsidies through the Massachusetts Health Connector. Approximately 90 percent of such residents under age 65 have commercial health insurance coverage, and they represent approximately one in four of all families covered by employer-sponsored insurance.¹¹ Massachusetts residents in this income range are also more likely than residents with higher income to be employed by medium-sized companies, which can have particular challenges with affordability of health insurance (see **Sidebar: Challenges for Massachusetts residents who receive health insurance from medium-sized employers**).^{xiv}

xiii Although Massachusetts residents with income below \$50,000 annually reported, in the aggregate, even more difficulty with household expenses and mental health, this section focuses in particular on low to middle income households who are typically ineligible for MassHealth and therefore face the added financial burden of high private insurance premiums and out of pocket health care spending.

xiv According to data from the Current Population Survey, 24 percent of Massachusetts families with income between 300 and 500 percent of the FPL have a worker employed by a company with between 100 and 999 employees versus 16 percent of families with income greater than 500 percent of the FPL.

SIDEBAR: CHALLENGES FOR MASSACHUSETTS RESIDENTS WHO RECEIVE HEALTH INSURANCE FROM MEDIUM-SIZED EMPLOYERS

Prior HPC research has focused on employees who obtain health insurance from small employers (that is, employers with fewer than 50 employees).¹² These employers are the least able to offer multiple plan choices to their employees, have the fewest resources with which to manage health insurance benefits, and rely the most on high-deductible plans to keep premiums as low as possible. At the same time, these employers do have the option of obtaining coverage through the Massachusetts Health Connector, and by being part of the merged market, the premiums charged to their employees for coverage are not dependent on employee health conditions or prior health care spending.

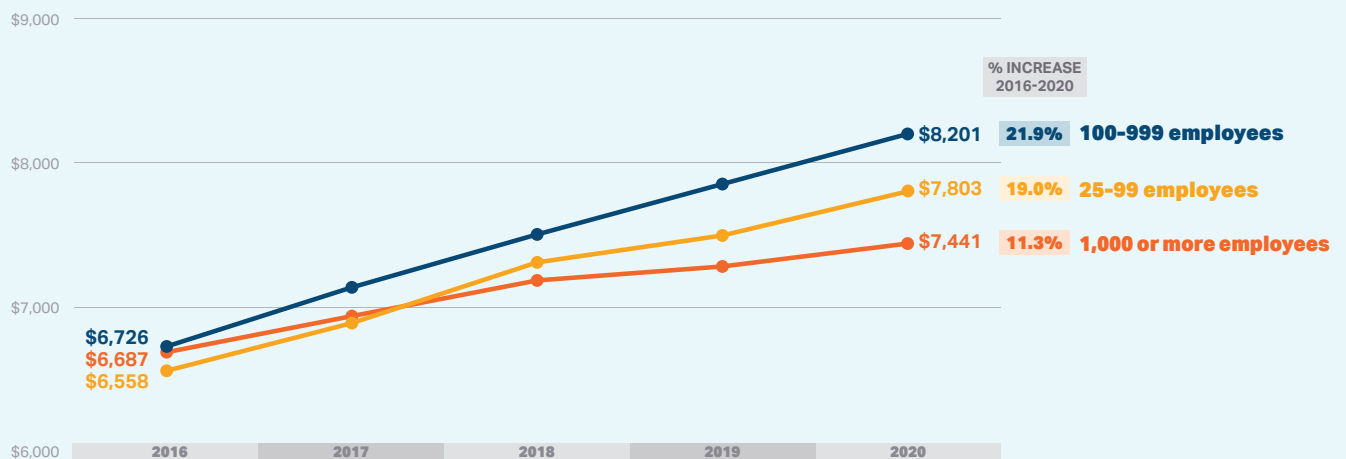
The largest of employers in Massachusetts have advantages of scale and greater resources to better shop for health insurance options and are generally able to “self-insure” meaning their employee pools are large enough that their health care spending is relatively stable from year to year and less affected by individual employees who may have very high health care spending.

Medium-sized employers employ a relatively high proportion of Massachusetts families with income between three and five

times that federal poverty level (23.6 percent vs 18.3 percent of higher-income families).^{xv} These employers enjoy less of the benefits of scale afforded to larger firms, but, at the same time, can also be subject to “experience-rating”, unlike employers with fewer than 50 employees. Under experience rating, insurers may charge such employers higher premiums based on prior health care spending of the employer’s covered employees. It is not unusual for an employer of this size to have employees with very high health care spending. The HPC found that 1.4% of employees and dependents who obtain coverage through employers of this size incurred between \$50,000 and \$100,000 in total health care spending in a given year, and 0.7% incurred more than \$100,000.^{xvi} Spending averaged \$192,000 annually for these latter individuals, and a majority (59%) of them also had spending greater than \$50,000 in the prior year.

Although there are many factors underlying health insurance premiums, employers of this size also have the highest average health insurance premiums (see **Exhibit 2.12**) in Massachusetts despite also having higher co-payments and a greater reliance on high-deductible plans than larger employers.^{xvii}

Exhibit 2.12: Average annual premium for employer-sponsored single coverage by firm size, 2016-2020



Notes: Data represent three-year smoothed averages. Thus, premiums represented in 2019, for example, are an average of reported premiums in 2018, 2019, and 2020.

Sources: HPC analysis of Agency for Healthcare Research and Quality Medical Expenditure Panel Survey 2015-2020

xv Calculation based on data for Massachusetts families from the Current Population Survey, Annual Social and Economic Supplement.

xvi Findings based analysis of claims from 5 large payers submitting data to the Massachusetts All Payer Claims database, 2020.

xvii HPC calculations based the Center for Health Insurance Analysis Massachusetts Employer Survey, 2020.

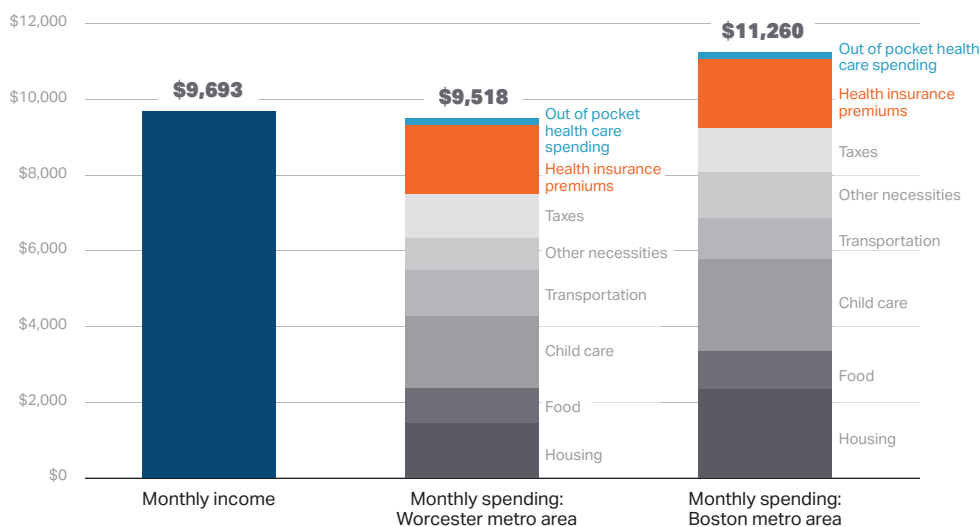
Although such families may have some ability to cut back on some household expenses to help make ends meet, there is limited opportunity to do so regarding health care spending.^{xviii} The HPC has found that for families in Massachusetts in this income range, employer and employee payments for health insurance and out of pocket health care spending represented 22 percent of their total compensation – the fifth highest share in the U.S. (see **Dashboard**).

When combined with local costs for housing, child care and other expenses, a typical Massachusetts family of four with income in this range living in the Worcester metro area would have their

entire income absorbed by housing, child care, food, transportation, health care and other necessities with no money left over for emergencies, one-time expenses or other discretionary expenses such as vacations. Such a family in the Boston area would be more than \$1,500 in the red each month (see **Exhibit 2.13**).

For a typical family in the Worcester area, health care spending (\$1,821) far exceeds even expected spending on housing (\$1,450). With Massachusetts family health insurance premiums now averaging \$22,163 in 2021 — more than triple the cost of premiums in 2000 — the need to reduce unnecessary health care spending is imperative.

Exhibit 2.13: Spending and income for a Massachusetts family of four with income between three and five times the federal poverty level in the Worcester and Boston metro areas, 2020



Notes: Out of pocket spending is based on individual survey responses; premium estimates are based on a state-level employer survey; other spending figures are based on EPI estimates of typical spending for these services for a family of four in the local area. Health care spending for over-the counter medicines or for providers not covered by health insurance is not included. Employer contributions to health insurance premiums are included in both health care spending and income. See technical appendix.

Sources: Economic Policy Institute, 2020; Medical Expenditure Panel Survey – Insurance Component, 2016-2021; Current Population Survey, Annual Social and Economic Supplement, 2016-2021

^{xviii} For example, while increasing a plan’s deductible can lower the plan’s premium, this typically increases out of pocket spending and can lead plan members to avoid necessary care, resulting in higher subsequent spending (see the Massachusetts Health Policy Commission 2021 Annual Cost Trends Report). Also, the Massachusetts Attorney General’s Office found that despite the fact that individuals living in lower-income areas tend to spend less on health care, because their spending tends to be pooled with members across a wide range of geographies, they do not therefore typically benefit from this lower spending in the form of lower premiums. <https://www.mass.gov/doc/2016-examination-of-market-health-care-cost-trends-and-cost-drivers/download>.

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CHAPTER 3:
**CHANGES IN
AMBULATORY CARE
DURING THE COVID-19
PANDEMIC**

CHAPTER 3:

CHANGES IN AMBULATORY CARE DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic has greatly disrupted provision of and access to health care services in the Commonwealth. In the early stages of the pandemic (March through May 2020), care was severely restricted by a system-wide shut-down of elective procedures and in-person visits. This period was followed by a gradual reopening of the health care system in May through August of 2020.ⁱ With the aid of emergency orders from both the state and federal government,ⁱ health care providers in Massachusetts were able to quickly pivot to providing many ambulatory health care services via telehealth. As knowledge accumulated about COVID-19, including about ways to detect and prevent transmission, officials eased public health orders limiting in-person access to health care and eventually lifted them altogether in July 2020.

Reflecting this disruption, past work by the HPC found large reductions in hospital inpatient and emergency department (ED) visits in the initial periods of the pandemic, but inpatient and ED visit levels gradually approached 2019 levels by the end of 2021.² However, analyses of inpatient and emergency visits alone – which tend to capture higher acuity patients and higher intensity services – do not provide a comprehensive picture of health care use patterns. For this report, the HPC studied key patterns of ambulatory care use in 2020 to better understand the potential longer-term implications of pandemic-related care disruptions.

In this chapter, the HPC investigates changes over time (primarily 2018 through 2020) in pediatric and adult ambulatory care, including changes in preventive care and shifts between settings, and changes in pediatric and adult psychotherapy utilization and explores how disparities by community income or region changed during 2020.

Where possible, the HPC highlights use of telehealth services in these results not only to capture instances when telehealth enabled continuous provision of services during the pandemic, but also where the benefits of telehealth may not have been experienced equally among different patient populations. These analyses focus on Massachusetts residents with commercial insurance. Approximately 64 percent of Massachusetts residents are covered through employer sponsored insurance, including 71 percent of children.³

- i At the beginning of the COVID-19 pandemic, the Baker-Polito administration issued several emergency regulations that restricted in-person care, required payment parity for telehealth, and ensured continuing health care coverage during the initial COVID-19 pandemic.
- ii For purposes of the analyses in this chapter, ambulatory care refers to care received in offices, hospital outpatient departments, ambulatory surgical centers, community health centers, and via telehealth.
- iii Due to federal confidentiality restrictions under 42 CFR Part 2, substance use treatment information is not available in the MA All-Payer Claims Database. Therefore, this analysis is limited to psychotherapy visits with a primary diagnosis for a mental health disorder.

The first two sections (**3A and 3B**) focus on pediatric and adult ambulatory careⁱⁱ for the commercially insured population with the aim of understanding changes in utilization, including a focus on high value preventive care, particularly for populations with chronic conditions and those living in low-income communities.

Section 3C examines the use of psychotherapy visits, continuity of psychotherapy during the pandemic, and the role of telehealth in enabling care continuity for those seeking mental health services.ⁱⁱⁱ National rates of mental distress, anxiety, and depression have increased during the pandemic for both children and adults.⁴

SECTION 3A: CHANGES IN AMBULATORY CARE USE AMONG COMMERCIALLY INSURED PEDIATRIC RESIDENTS

KEY FINDINGS

- ▶ Most children continued to receive recommended preventive care visits even after the onset of the pandemic in 2020. However, pediatric preventive visit rates declined slightly overall, and the disparities in visit rates that existed before the pandemic between children living in low- versus high-income communities widened.
- ▶ The percentage of pediatric preventive care visits taking place via telehealth varied four-fold by region. Variation in use of telehealth for these visits did not appear to be related to regional trends in preventive visit reduction.
- ▶ While overall problem-based visits declined in 2020, there is evidence that pediatric care shifted to urgent care centers and telehealth.
- ▶ A smaller share of children with chronic conditions had problem-based visits during the pandemic period in 2020 (March 15, 2020 through December 31, 2020) than during the same time period in 2019.

Nationally, pediatric health care utilization dropped sharply with the onset of the pandemic. In 2020, 28.8 percent of U.S. parents reported delaying or avoiding at least some health care for their children – most frequently dental care, pediatric office visits, and immunizations.⁵ Rates of pediatric ambulatory care use remained below 2019 levels through the end of 2020.⁶ While many families reported missing care for their children, parents with lower incomes were most likely to have skipped care, especially preventive visits and immunizations.⁵ Additionally, research from other states indicates that care reductions in 2020 varied by children’s age: one study found that older children had a steep decline in both preventive and problem-based primary care visits,⁷ while another found that problem-based visits fell sharply among infants.⁸ This section investigates trends and disparities in ambulatory care among children in the Commonwealth during 2020 by region and community income level.

COMMERCIALLY INSURED PEDIATRIC RESIDENTS WITH NO MEDICAL SPENDING

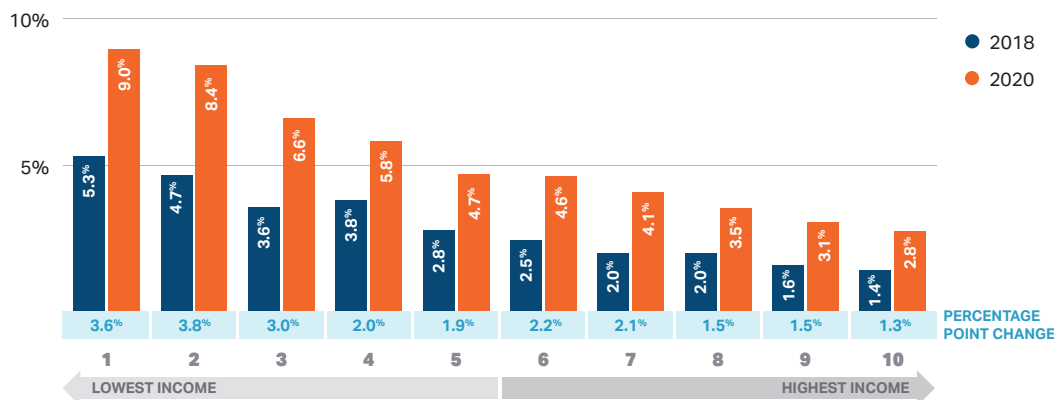
The American Academy of Pediatrics (AAP) and the National Committee for Quality Assurance (NCQA) recommend that all children under the age of 18 see a medical provider at least once a year.^{9,10} One way to examine the possibility of diminished care in Massachusetts is to assess the percentage of children with zero medical claims in a full calendar year. While the rate remains low overall, the percentage of commercially insured children in Massachusetts with no medical spending during the year nearly doubled from 2018 to 2020, rising from 2.5 percent to 4.4 percent. There was also considerable variation by community income decile in this measure in

both 2018 and 2020 (**Exhibit 3.1**). The percentage of commercially insured children with no medical care during the year grew from 1.4 percent to 2.8 percent among those living in the highest-income communities in the state, but from 5.3 to 9.0 percent among children living in the lowest-income communities, suggesting a widening of a disparity in receiving any medical care.

PEDIATRIC PREVENTIVE VISITS

To further explore possible differences in recommended care among children, we focus on preventive visits (also known as “checkups” or “well visits”) among children. Experts recommend certain regular visits, the frequency of which depend on the child’s age, to monitor growth and development and to ensure that children receive essential immunizations and screenings. Unlike preventive care for adults, which emphasizes services such as cancer screenings or blood pressure checks to identify nascent health problems, preventive visits for children involve screenings that support healthy development (such as screening for lead poisoning or vision issues) and immunizations against severe diseases (such as pertussis and measles). Timely preventive visits are especially important for children entering daycare or school, both of which require up-to-date immunizations.^{11,12} Likewise, blood lead level screening is essential for young children because lead poisoning is a leading cause of preventable developmental delay.¹³ Based on recommendations from AAP⁸ and NCQA,⁹ the HPC considered a child as having received the recommended number of preventive visits based on their age at the end of the calendar year: at least four visits during the year if they were under one year old, at least three visits if they were one year old, and at least one visit if they were between age two and seventeen.^{iv}

Exhibit 3.1: Commercially insured pediatric residents without medical spending by community income decile, 2018-2020



Notes: Includes individuals aged 0-17 with 12 months of enrollment and no medical spending, including for COVID-19-related care. Income deciles were assigned based on average income of zip code. Values in boxes represent percentage point change from 2018 to 2020.
Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

iv To ensure as complete a picture of children’s health care use as possible, the following analysis includes only children with a full year of health insurance enrollment each year – meaning that many children born during a given calendar year are not included. However, the subset of children under one year old with a full 12 months of enrollment – i.e., children born in January who have a full year of insurance coverage before their first birthday – is sufficiently large for analysis.

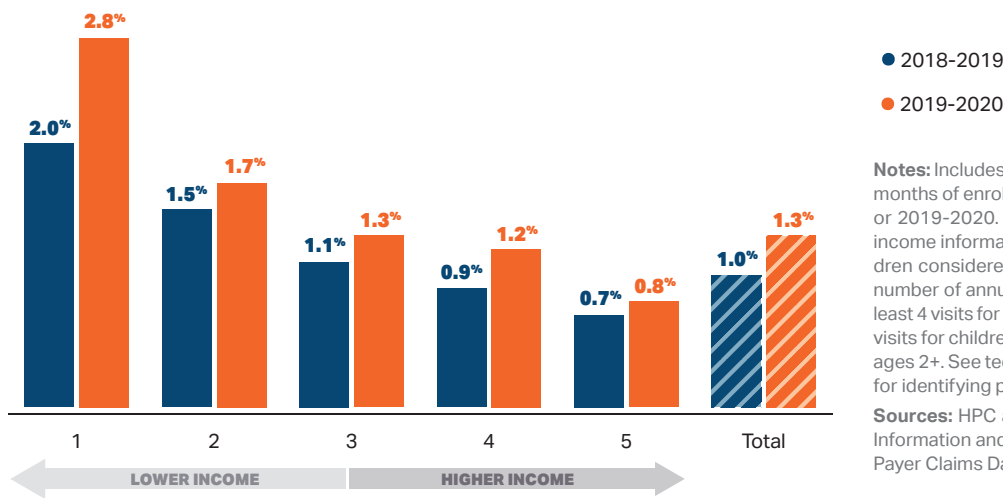
Overall, commercially insured children in Massachusetts tend to have high rates of recommended preventive visits, a trend that continued into 2020. Rates of recommended preventive visits among commercially insured children in Massachusetts declined by only 2.5 percentage points, from 92 percent in 2019 to 89 percent in 2020. Young children were most likely to receive the recommended number of preventive visits in 2020: 91 percent of children under two and 92 percent of two- to seven-year-olds received recommended preventive visits, compared to 88 percent of eight- to twelve-year-olds and 87 percent of thirteen- to seventeen-year-olds.

However, the pandemic appears to have exacerbated income-based disparities in pediatric preventive visit use. Children living in low-income communities were more likely to lack regular preventive care before the pandemic and faced growing disparities in 2020: they had the lowest rates of recommended preventive visits in both 2019 and 2020, and the largest decline from 2019 to 2020. The percentage of children living in low-income communities who had recommended preventive visit use declined from 88 percent in 2019 to 83 percent in 2020. By comparison, the percentage of children in high-income communities who had recommended

preventive visit use saw a smaller decline, from 93 percent in 2019 to 91 percent in 2020.^v

The HPC also examined the percentage of children with fewer than the recommended number of preventive visits for two consecutive years.^{vi} Overall, these rates were low: 1.0 percent of commercially insured children lacked recommended preventive visits in both 2018 and 2019, and 1.3 percent lacked recommended preventive visits in both 2019 and 2020. However, children in low-income communities had both the highest rate of not having recommended preventive visits in multiple years and the largest increases over time. Less than one percent of children in the highest-income communities went without recommended preventive visits in both 2018 to 2019 and 2019 to 2020, but 2.0 percent of children in the lowest-income communities lacked recommended well visits from 2018 to 2019, a share that rose to 2.8 percent for 2019 to 2020 (**Exhibit 3.2**). These findings indicate that children in lower-income communities were more likely to lack recommended preventive care even before the pandemic, and that these children faced an even greater likelihood of missing recommended preventive care during the pandemic.

Exhibit 3.2: Share of children per income quintile without recommended preventive visits for two consecutive years, 2018-2019 and 2019-2020



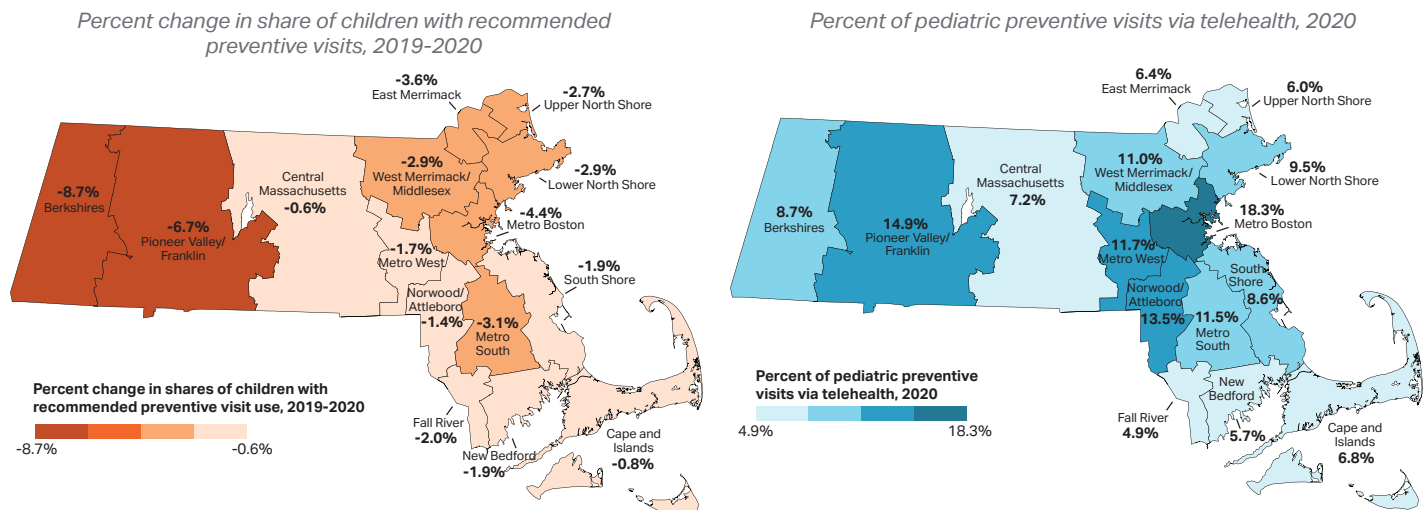
Notes: Includes individuals ages 0-17 with 24 months of enrollment from either 2018-2019 or 2019-2020. Individuals with inconsistent income information over time excluded. Children considered to have the recommended number of annual preventive visits by age: at least 4 visits for children under age 1, at least 3 visits for children age 1, and at least 1 visit for ages 2+. See technical appendix for methods for identifying preventive visits.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

v To further explore disparities in the maintenance of preventive visits in 2020, the HPC examined 2020 preventive visit use among children with and without the recommended number of preventive visits in 2019. Ninety percent of children with the recommended number of preventive visits in 2019 also had them in 2020, compared to 82 percent of children without recommended preventive visits in 2019 – indicating that children with a history of recommended preventive care were more able to maintain their use of preventive care during the onset of the pandemic.

vi For this sub-analysis, the HPC retained 190,514 children with 24 continuous months of commercial health insurance enrollment and consistent median income data from 2018-2019, and 178,045 children with 24 continuous months of commercial health insurance enrollment and consistent community income data from 2019-2020.

Exhibit 3.3: Percent change in the share of children ages 5 and older with recommended preventive visit utilization from 2019-2020 and share of 2020 pediatric preventive visits via telehealth, by region



Notes: Includes individuals ages 5-17 with 12 months of enrollment and with any health care utilization. Children considered to have the recommended number of annual preventive visits by age: at least 4 visits for children under age 1, at least 3 visits for children age 1, and at least 1 visit for ages 2+. See technical appendix for methods for identifying preventive visits and telehealth claims.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

The HPC also explored possible regional differences in pediatric preventive visit utilization during the pandemic. This analysis was limited to children ages five and older, who would not necessarily have vaccinations at their preventive visits, and who therefore could reliably have preventive visits via telehealth. Children in Western Massachusetts had the largest decline in recommended preventive visit use from 2019 to 2020, but there appears to be no relationship between maintenance of preventive visits and use of telehealth for preventive visits (Exhibit 3.3). For example, while there was a high rate of telehealth use for preventive visits and a small drop in visit utilization in the Metro West region, children in the Pioneer Valley had both the second-largest drop in recommended preventive visit utilization and the second-highest rate of telehealth use. Both the Berkshires and the Cape and Islands had low to moderate rates of telehealth use, but the Cape and Islands had the smallest decline in recommended preventive visit utilization, while the Berkshires had the largest. Therefore, telehealth use alone does not appear to explain regional differences in pediatric preventive visit use in 2020.

PEDIATRIC IMMUNIZATIONS AND SCREENINGS

The HPC further explored two key pediatric preventive services: immunizations and blood lead level screenings. Many U.S. pediatricians and family physicians reported pausing vaccinations in the spring of 2020 but resuming vaccination services by the end

of the year.¹⁴ However, the Centers for Disease Control and Prevention (CDC) estimated that increased vaccine administration in the summer and fall was not sufficient to fully catch up on missed immunizations.¹⁵ The CDC also reported that pediatric blood lead level screening rates decreased nationally in 2020.¹⁶

In Massachusetts, changes in pediatric vaccine administration in 2020 appear to have varied by vaccine. Two essential childhood vaccinations are combined diphtheria, tetanus, and acellular pertussis (DTaP) and combined measles, mumps, and rubella (MMR). Children should receive five doses of DTaP between two months and six years of age, and they should receive two doses of MMR between 12 months and six years of age.¹⁷ As reported by the Department of Public Health Massachusetts Immunization Information System (MIIS),¹⁸ the number of DTaP vaccines administered to all Massachusetts children declined slightly from 2019 to 2020 (2 percent among children ages two and younger, and 7 percent among two- to seven-year-olds). The number of MMR vaccines administered fell more steeply from 2019 to 2020 (11 percent among children ages two and younger, and 14 percent among two- to seven-year-olds). Both DTaP and MMR vaccinations rose slightly in 2021 but did not recover to 2019 levels.

In contrast, pediatric influenza vaccination rates increased in Massachusetts in 2020. The CDC reported that Massachusetts children had the highest rate of influenza vaccination in the nation

for the 2020 to 2021 flu season, with 83.6 percent of children in the Commonwealth receiving a flu shot,¹⁹ compared to 76.4 percent for the 2019 to 2020 flu season.²⁰ According to the MIIS, more pediatric influenza vaccines were administered in Massachusetts in 2020 than 2019 across all age groups, with a 3 percent increase in vaccines administered to children ages two and younger, a 23 percent increase among children ages two to seven, a 40 percent increase among ages eight to 12, and a 54 percent increase among ages 13 to 17. This may have been related to a state education mandate requiring influenza vaccines for the 2020 to 2021 school year.²¹ No such requirement was in effect for 2021,²² and pediatric flu shots in 2021 fell to near or below 2019 counts for all age groups.

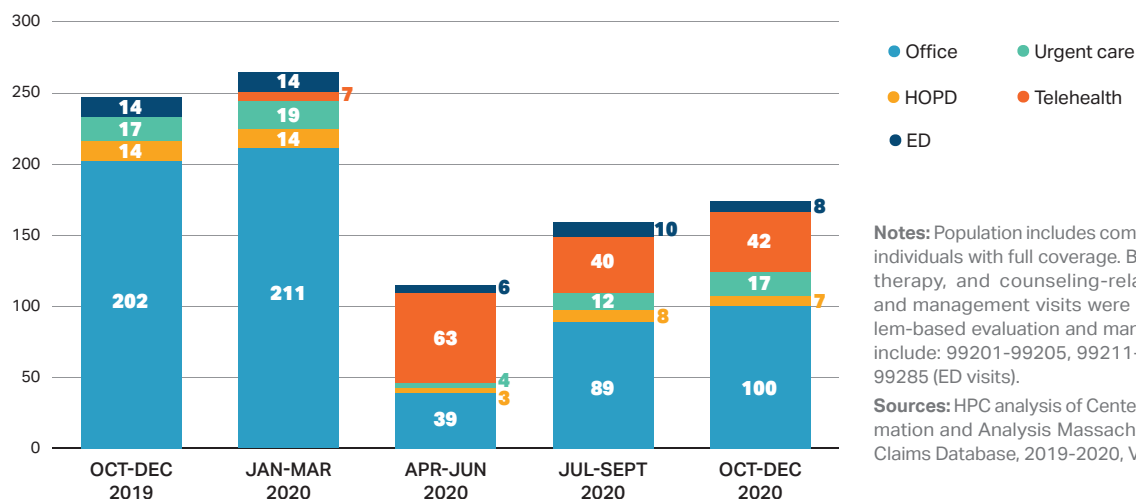
Massachusetts requires blood lead level screenings for all children ages three and younger. DPH reported a 10 percentage-point decrease in the statewide lead screening rate from 2019 to 2020, falling from 72 percent to 62 percent.²³ Likewise, the HPC measured a 7.4 percentage point decrease in the rate of lead screenings among commercially insured children ages one to three in 2020, with screening rates falling most quickly for children ages two to three. The pandemic did not change disparities in blood lead level screenings by income: while children in higher-income communities were more likely to receive screenings, screening rates declined similarly among all income groups from 2019 to 2020.

PEDIATRIC PROBLEM-BASED VISITS

While changes in preventive visit rates were relatively moderate, there was a steep decline in pediatric problem-based visits (also known as “problem-oriented visits” or “sick visits”) after the onset of the pandemic. While pediatric problem-based visits generally occur on an as-needed basis for conditions such as sore throats or ear infections, they can also involve routine care for chronic conditions such as diabetes. Total problem-based visits among commercially insured children dropped by 29 percent from 2019 to 2020. The drop in problem-based visits in 2020 was driven by a larger share of children with no such visits (26 percent in 2020 versus 20 percent in 2019) and a smaller share of children with 6 or more visits (12 percent in 2020 versus 19 percent in 2019). Younger children had the highest volume of problem-based visits in 2019 and the steepest drop in 2020.

In addition to an overall decline in problem-based visits, there was a shift in how pediatric patients accessed problem-based care during the pandemic compared to pre-pandemic. In addition to the rise in availability of telehealth, the rapid expansion of urgent care centers in recent years has created additional points of access to health care for Massachusetts residents.²⁴ In the period of October to December 2020, total problem-based visits among commercially insured children aged 0-17 were 30 percent below the corresponding period in 2019 (see **Exhibit 3.4**). The number of visits occurring in office-based settings, EDs and HOPDs was approximately half (44 percent) that of the frequency one year

Exhibit 3.4: Number of problem-based visits among children aged 0-17 per 1,000 member months by site type for commercially insured patients, October 2019 to December 2020



prior while the number occurring in urgent care centers was about the same (and thus represented a higher share of total visits); telehealth comprised about 24 percent of visits.

These changes in care patterns indicate a possible shift toward lower-intensity sites of care. Although it is unclear if these changes will last as the pandemic moves into its second and third years, it is possible that patient familiarity with new sites and modes of care will result in durable changes in utilization.

The overall declines in problem-based visits are not necessarily concerning, particularly if they are related to reductions in infectious disease exposure^{vii,25} due to school and daycare closures. However, reductions in problem-based visits among children with known chronic conditions may indicate a lack of important routine care. To better understand this possibility, the HPC examined problem-based visits among roughly 8,000 children observed in both 2019 and 2020 who had diagnoses of cancer, cardiovascular disease, diabetes, or epilepsy in 2019.^{viii} The HPC then followed their health care utilization from March 15 through December 31, 2020. Seventy-seven percent of the children in this cohort had at least one problem-based visit during this period of 2020. In contrast, among a parallel ‘control’ cohort of children observed in 2018 and 2019, 88 percent had one or more problem-based visits from March 15 through December 31, 2019. These findings suggest that more children may have missed routine chronic care interactions with the health care system due to the pandemic in 2020. Additionally, the HPC found that children living in low-income communities had slightly lower rates of problem-based visit utilization than children in high-income communities in both 2019 and 2020, but problem-based visit use declined at similar rates for both groups (see **Technical Appendix** for details).

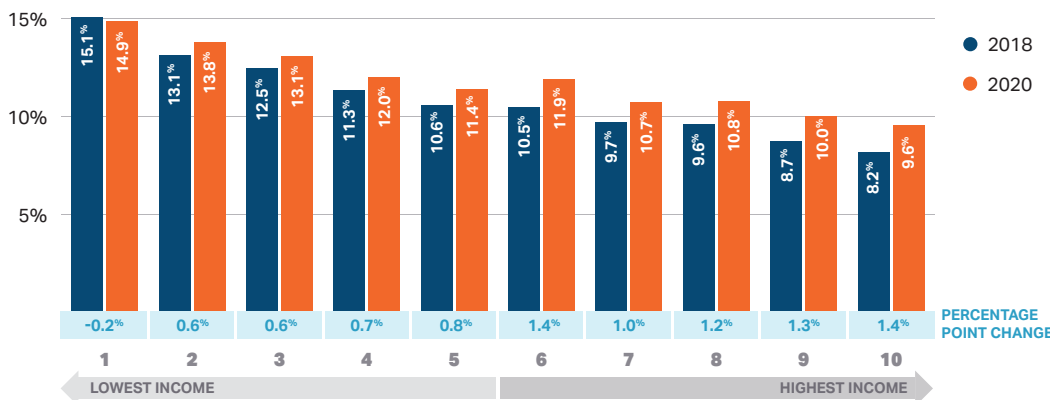
SECTION 3B: CHANGES IN AMBULATORY CARE USE AMONG COMMERCIALLY INSURED ADULT RESIDENTS

KEY FINDINGS:

- ▶ The number of preventive visits among adults declined by 23 percent in 2020, while the number of problem-based visits declined only 3.5 percent, with roughly 1 in 3 such visits delivered via telehealth in 2020.
- ▶ Colon and breast cancer screenings and diabetes HbA1c testing all declined in 2020, primarily during the spring, coinciding with public health orders limiting certain services. While cancer screenings resumed at near pre-pandemic rates by the end of 2020, diabetes testing still lagged pre-pandemic rates.
- ▶ Among adults with chronic conditions, both preventive and problem-based visits in 2020 were substantially lower than in 2019, with persistent gaps by community level income and slightly lower rates of telehealth use among individuals in lower-income communities.

In this section, the HPC analyzes changes in preventive care use and ambulatory care use overall among adults,^{viii} including an examination of adults with chronic conditions. Prior HPC research found that commercially insured residents living in lower-income zip codes were more likely to go without medical care.²⁶ This pattern remained true in 2020, but the gap grew slightly smaller as the percentage of individuals living in higher-income areas who went without medical care increased slightly from 2018 to 2020, while the percentage remained fairly consistent for those in lower-income areas (**Exhibit 3.5**).

Exhibit 3.5: Commercially insured adult residents without medical spending by community income decile, 2018-2020



Notes: Adults aged 18 to 64 with full year insurance coverage. Income deciles were assigned based on average income of zip code. Values in boxes represent percentage point change from 2018 to 2020.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

vii The HPC selected chronic conditions that were unlikely to be majorly impacted by COVID-19, either directly or indirectly (e.g. related to reduced exposures to other children during shut-down periods).

viii For this study, adults were any commercially insured member in the APCD with 12 months of enrollment and between 18 and 64 years of age as of the end of the benefit year. For more details, see **Technical Appendix**.

ADULT PREVENTIVE VISITS AND OTHER PREVENTIVE SERVICES

The HPC then examined several high value services including cancer screenings and hemoglobin A1c (HbA1c) testing for individuals with diabetes, as well as general preventive visits. Adult preventive visits dropped considerably (23 percent) in 2020, from 628 visits per 1,000 members in 2019 to 482 visits per 1000 members in 2020. This drop in general preventive visits was similar in magnitude for adults living in lower-income and higher-income areas, and although not all such visits are likely necessary,²⁷ some of the decline could represent important missed opportunities for identification of health problems in need of attention.

Rates of colonoscopy, mammography, and hemoglobin A1c testing dropped in 2020 by 32 percent, 20 percent, and 22 percent, respectively. While most of the reduction occurred during the shut-down periods in spring of 2020 (**Exhibit 3.6**), diabetes HbA1c testing and colon cancer screenings still had not reached 2019 levels by the end of 2020. The HPC further examined mammography screening rates by the member’s community income level and found that the disparity in screening rates for members living in the highest-income communities compared to the lowest-income communities increased slightly from 13 percentage points in 2019 to 15 percentage points in 2020 (data not shown). The HPC found no evidence of initial or widening inequality based on income quintiles for HbA1c testing.^{ix}

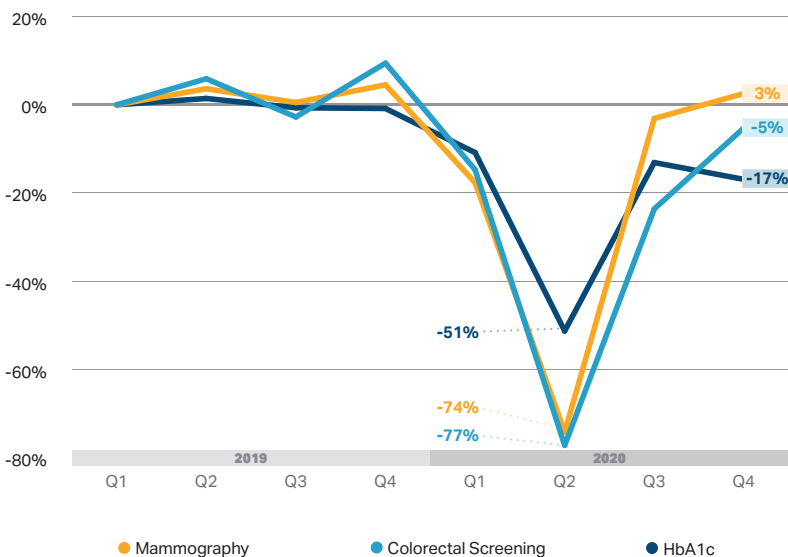
ADULT PROBLEM-BASED VISITS

While adult preventive care visits declined sharply, adult problem-based visits decreased by only 3.5 percent during 2020. One factor that may have contributed to this smaller decrease is the use of telehealth for problem-based visits. Overall, 31.7 percent of problem-based visits were performed via telehealth in 2020 in contrast to 6.7 percent of preventive visits. Members living in the lowest-income and highest-income communities experienced a similar decline in problem-based visits and had a similar rate of telehealth use for these visits (**Exhibit 3.7**).

Among problem-based visits for established patients, there was a small increase in very short visits (from 2.1 to 4.9 percent of all visits), indicating brief COVID-19-related visits, likely including testing for COVID-19.

ix The HPC did not evaluate colonoscopy rates by income due to insufficient sample size and multi-year evaluation period.

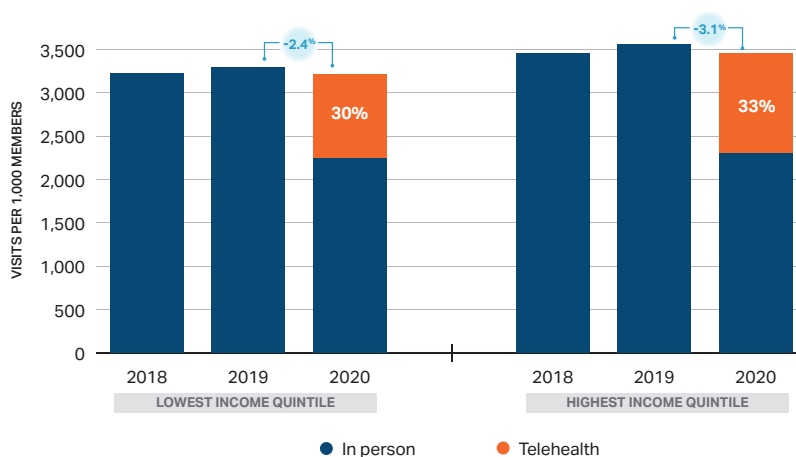
Exhibit 3.6: Percent change in eligible members each quarter with any select preventive service encounter, 2019-2020



Notes: Mammogram screening is restricted to women between the ages of 45 and 64, using explicit screening procedure codes and an algorithm developed to separate diagnostic services from ambiguous imaging codes based on Wernli et al., 2020’s method. The diabetes A1c test flag was recorded for individuals with a diabetes diagnosis who received a diabetes HbA1c test. Colon cancer screening is a combined index of explicit screening colonoscopies and fecal occult blood tests. Patients 45 years and older were chosen for analysis based on American Cancer Society guidelines. Patients with diabetes were identified using The Johns Hopkins ACG® System © 1990, 2017, Johns Hopkins University. All Rights Reserved.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2019-2020, V 10.0

Exhibit 3.7: Problem-based visits per 1,000 adults and percentage performed via telehealth, 2018-2020



Notes: Adults aged 18 – 64 with full year insurance coverage. Problem-based visits included Current Procedural Terminology (CPT) codes 99201–99205; CPT 99211–99215. Telehealth claims identified using professional claims site of service 02 and CPT code modifiers GT, 95, GQ, and G0

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

This was primarily driven by an increase in very short visits at retail clinics and urgent care centers in 2020. The most common diagnosis for these visits was “Contact with and (suspected) exposure to other viral communicable diseases” (ICD-10 Z20.828), which is likely related to COVID-19 infection and testing.

Similar to what was seen in the pediatric population, there were far fewer problem-based visits in 2020 compared to 2018 in office (a decline of 33 percent), HOPD (a decline of 37 percent), and ED settings (a decline of 19 percent), but more in urgent care centers (31 percent more). Sixty-six visits per 1000 member months occurred via telehealth (accounting for about a quarter of all visits), see **Exhibit 3.8**.

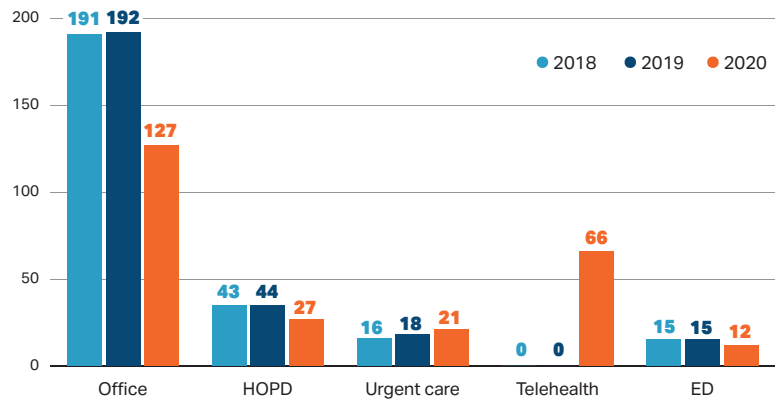
ADULTS WITH CHRONIC CONDITIONS

Although the implications of fewer office visits are unclear for the overall population of Massachusetts adults, subpopulations with chronic conditions are more in need of regular interactions with the health care system. As in the pediatric analyses, the HPC identified members with certain chronic conditions and analyzed their rate of preventive and problem-based visits during the pandemic period (March 15 to Dec 31, 2020) compared to the same period one year prior to measure possible disruptions in routine care.^x For the cardiometabolic cohort in the pandemic period, 38.5 percent of the cohort had a preventive visit and 84.0 percent had a problem-based visit. These percentages are lower than in the corresponding period one year prior (March 15, 2019 to Dec 31, 2019) where 56.1 percent and 92.6 percent had preventive visits and problem-based visits respectively. There were drops of similar magnitude for adults with asthma suggesting that there may have been important missed care among adults for whom routine, periodic interactions with the health care system are likely to be beneficial.

These findings are further subdivided by community income in **Exhibit 3.9**. For example, as noted above, 38.5 percent of members of the cardiometabolic cohort had a preventive visit after the onset of the pandemic in 2020. That percentage was somewhat lower (35.7 percent) among members living in lower income communities than those in higher-income communities (40.7 percent). In the asthma cohort, the corresponding figures were 40.0 percent and 43.0 percent, respectively. Problem-based visits did not vary substantially by community income, but members living

^x As with the pediatric analysis, members with chronic conditions were identified one year prior to the measurement period (March 15 to Dec 31) to establish a consistent baseline.

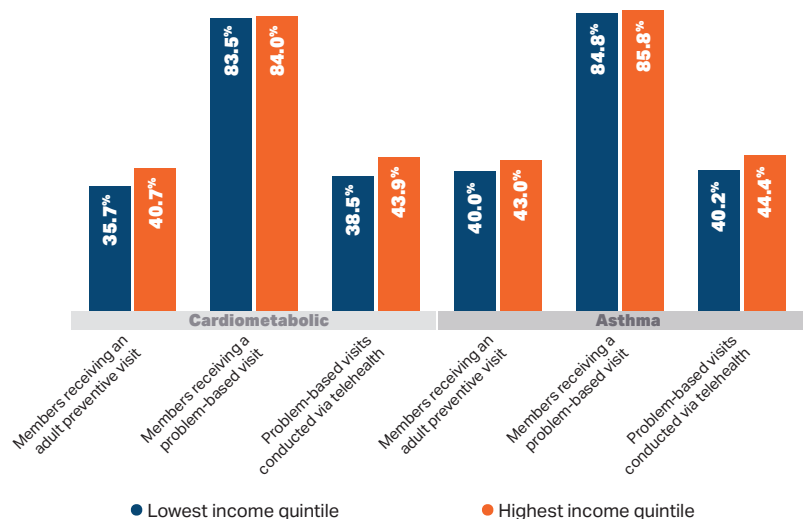
Exhibit 3.8: Number of problem-based visits per 1,000 member months by site type and year for commercially insured patients aged 18-64, 2018 to 2020



Notes: Population includes commercially insured individuals aged 18-64 with continuous coverage in every month of the years shown. Behavioral health, therapy, and counseling-related evaluation and management visits were excluded. Problem-based evaluation and management codes include: 99201-99205, 99211-99215, 99281-99285 (ED visits).

Sources: HPC analysis of Center for Health Information and Analysis All-Payer Claims Database, 2018-2020, V 10.0

Exhibit 3.9: Percentage of individuals in cardiometabolic and asthma cohorts with visits, by visit type, from March 15 to Dec 31, 2020, by community income quintile



Notes: Adults aged 18 – 64 with full year insurance coverage. COVID utilization is included. Income quintiles were assigned based on average income of zip code. **Notes:** Chronic conditions were identified using The Johns Hopkins ACG[®] System © 1990, 2017, Johns Hopkins University. All Rights Reserved.

Source: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2020, V 10.0

in lower income communities were less likely to use telehealth for these visits (38.5 percent of members living in lower income communities compared to 43.9 percent in higher income communities for the cardiometabolic cohort; 40.2 percent compared to 44.4 percent in the asthma cohort).^{xi}

^{xi} These differences by community income were also present in 2019 (cohort members identified in 2018).

SECTION 3C: PSYCHOTHERAPY USE AMONG COMMERCIALLY INSURED RESIDENTS

KEY FINDINGS:

- ▶ In contrast to nearly all other categories of care, psychotherapy utilization jumped among Massachusetts residents with the onset of the pandemic; use remained high throughout 2020.
- ▶ More than 80% of psychotherapy visits were delivered via telehealth among all age groups from April through December 2020.
- ▶ Increases were driven by younger adults and reflect an increase in both the number of individuals with any psychotherapy use as well as an increase in visits per person.
- ▶ Despite these overall increases, a significant proportion of adults and children who had been regular therapy users in early 2020 did not maintain therapy visits after the pandemic's onset – with discontinuation rates higher than in prior years.

Since the onset of the COVID-19 pandemic, there have been nationwide increases in anxiety and stress in response to the public health crisis.²⁸ In a June 2020 CDC survey, 41 percent of U.S. adults reported at least one adverse mental or behavioral health condition.²⁹ The crisis was especially prevalent among young adults, with 75 percent of 18–24-year-olds reporting at least one adverse mental health condition and 26 percent reporting having recently considered suicide. Furthermore, the HPC has previously found increased rates of mental and behavioral health-related ED boarding in 2020, especially among pediatric patients.³⁰ While there was increased need for mental and behavioral health services, policymakers at both the state and federal level enabled continued access to mental health services during the pandemic by increasing access to telehealth through changes to payment policy. In March 2020, the Baker-Polito Administration required coverage and payment for telehealth services at the same level as for in-person services. Later that year,

xii Since this study examined claims-based data, any therapy paid for outside of health insurance claims, such as paid for out-of-pocket, would not be represented in this data.

xiii For this study, the HPC defines psychotherapy based on the following CPT codes: 90832, 90833, 90834, 90836, 90837, and 90838.

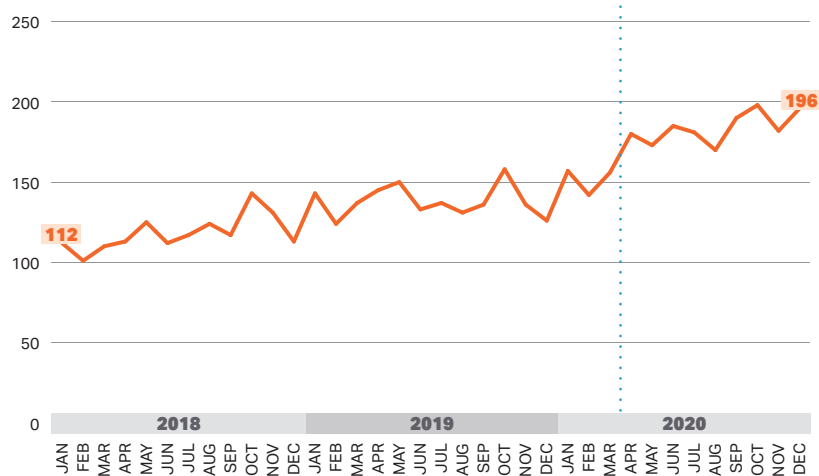
Chapter 260 of the Acts of 2020 established permanent payment parity for tele-behavioral health services in Massachusetts.

This work examines trends and investigates disparities in psychotherapy use among adults and children in the Commonwealth. Using commercial claims data from the APCD, the HPC sought to understand ambulatory mental health care utilization and the role telehealth played in accessing psychotherapy during 2020.^{xiii}

ADULT MENTAL HEALTH-RELATED THERAPY VISIT UTILIZATION

The share of commercially insured adults accessing psychotherapy^{xiii} and the intensity of their service use has increased over time. Since 2018, Massachusetts has experienced a steady rise in the percentage of individuals ages 18–64 with at least one therapy visit each year, rising from 11.9 percent in 2018 to 13.1 percent in 2019, to 13.7 percent in 2020. Over the same period, the average annual number of therapy visits among people with any psychotherapy visits increased from 11.9 visits in 2018 to 12.6 in 2019 to 15.4 visits in 2020. These increases in both the percentage of residents using psychotherapy and the number of visits per member combine in the striking upward trend in visits as shown in **Exhibit 3.10**. The increase in visits in 2020 coinciding with the onset of pandemic-related shutdowns in March is particularly noteworthy in that virtually all other categories of health care use declined (data not shown).

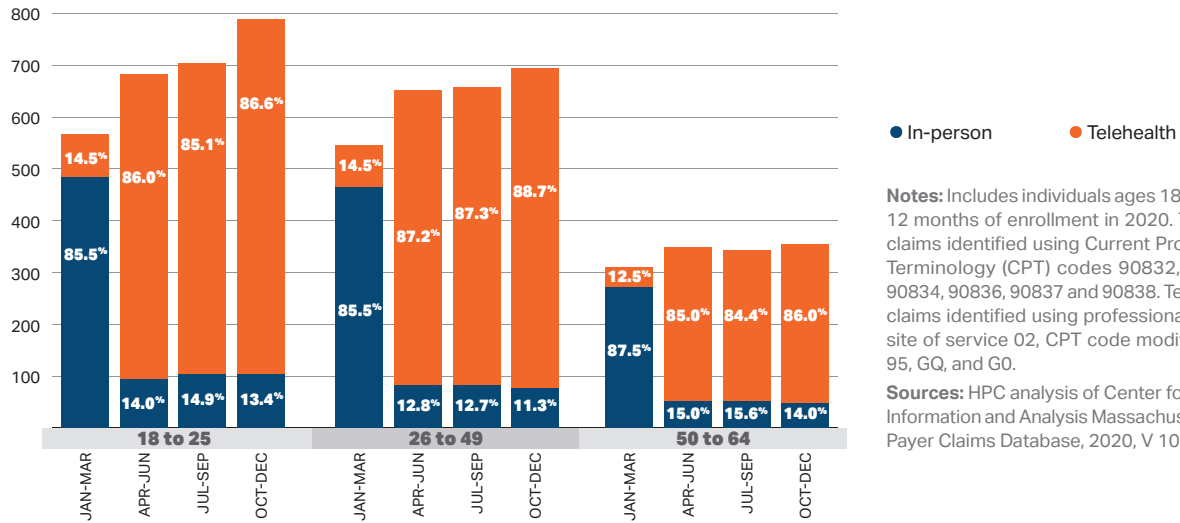
Exhibit 3.10: Monthly volume of psychotherapy visits per 1,000 members, 2018–2020



Notes: Includes psychotherapy visits for individuals ages 18–64 with 12 months of enrollment in the year (2018, 2019, or 2020). Volume of therapy visits in the month adjusted for enrolled adult members. Therapy claims identified using Current Procedural Terminology codes 90832, 90833, 90834, 90836, 90837 and 90838.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018–2020, V 10.0

Exhibit 3.11: Total adult psychotherapy visits in person and via telehealth by quarter and age group, per 1000 members, 2020



Notes: Includes individuals ages 18-64 with 12 months of enrollment in 2020. Therapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, CPT code modifiers GT, 95, GQ, and G0.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2020, V 10.0

The increase in psychotherapy utilization was particularly driven by young adults (**Exhibit 3.11**) who have the highest numbers of visits and had the largest increase over the course of 2020.^{xiv} Additionally, there was broad adoption of telehealth for psychotherapy services with the onset of the pandemic: during all of 2019, fewer than 1 percent of psychotherapy visits took place via telehealth versus 86.7 percent of such visits taking place via telehealth from April to December of 2020, suggesting that that telehealth allowed patients to maintain and possibly increase their access to mental health care. Additionally, some research has shown that telehealth for psychotherapy decreases the incidence of no-shows and cancelled appointments.³¹

There were considerable differences in psychotherapy use by the income of the patient’s community in 2019 and 2020, with a larger share of adults accessing these services in higher income communities. Yet these differences were largely present before the pandemic as well. The percentage of residents in low-income communities with any psychotherapy visits grew from 10.7 percent in 2019 to 11.7 percent in 2020. Similarly, the use of any psychotherapy visits grew from 14.4 percent in 2019 to 15.1 percent in

2020 among residents in high income areas. Visits per person (for adults with at least one visit) also grew: from 13.4 to 16.1 visits for adults in higher-income communities and from 11.8 to 14.9 visits for adults in lower-income communities.

CONTINUATION OF TREATMENT DURING THE PANDEMIC

In addition to measuring overall trends in therapy use, the HPC investigated how the pandemic affected the subset of Massachusetts residents who were receiving regular psychotherapy prior to the onset of the pandemic, and whether their use was potentially interrupted by difficulties accessing care. To that end, the HPC explored psychotherapy utilization between March 15 and December 31, 2020 among individuals who were diagnosed with a behavioral health condition and had psychotherapy visits in January and February of the same year, and then repeated the same analysis for 2018 and 2019 to serve as a baseline from which to understand changes caused by the pandemic. An individual with a mental health diagnosis who had at least two visits in January and February, and then no visits from March 15 through the calendar year was considered to have discontinued psychotherapy.

^{xiv} The increase in psychotherapy utilization in 2020 was also driven by use among women. The percentage of men with any psychotherapy visit rose from 9.8 percent to 9.9 percent from 2019 to 2020 while use among women grew from 15.9 percent to 17.0 percent during this same period.

Trends in 2020 differed from previous years: roughly 6 percent of adults discontinued therapy in 2018 and 2019, a share which grew to nearly 11 percent in 2020 (**Exhibit 3.12**). Most patients who continued receiving psychotherapy services in 2020 did so via telehealth – either receiving all services via telehealth or receiving a combination of telehealth and in-person services (“mixed”).

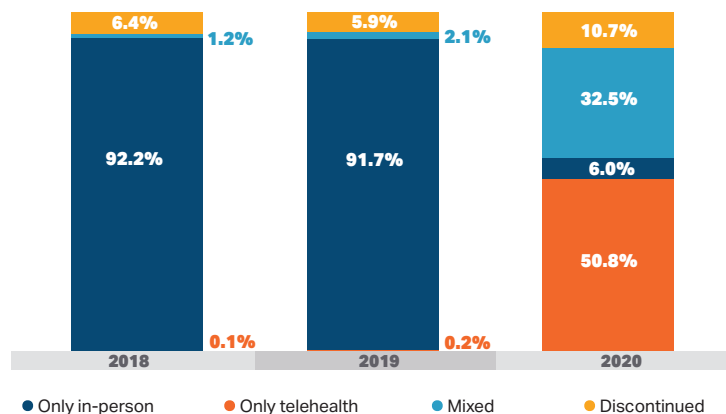
While adults of all ages and living in communities of all income levels had similar patterns of maintenance and discontinuation of psychotherapy, the HPC found differences in continuation of psychotherapy by gender. Men were more likely than women to discontinue psychotherapy in 2020, with discontinuation rates rising from 6.8 percent in 2019 to 13.7 percent in 2020 (**Exhibit 3.13**).

PEDIATRIC MENTAL HEALTH THERAPY UTILIZATION

As with adults, the share of commercially insured children ages 0-17 accessing any psychotherapy services each year grew from 2018 to 2020 (from 8.8 percent in 2018 to 9.7 percent in 2019 and to 9.9 percent in 2020). Like adults, children’s intensity of service use also increased: the average number of annual psychotherapy visits among children with at least one visit rose from 10.2 in 2018 to 12.9 in 2020.

The HPC also found differences by community income level in children’s psychotherapy use, but this difference did not change with the onset of the pandemic. In both 2019 and 2020, children residing in higher income communities had higher rates of psychotherapy use than children living in lower income communities. In lower income communities, 8.7 percent of children accessed therapy in 2020, compared to 10.2 percent of children living in the highest income communities. These percentages were similar in 2019.

Exhibit 3.12: Continuation of care by mode for March 15–December 31 each year for patients who had in-person psychotherapy utilization in January-February of the same year, 2018-2020

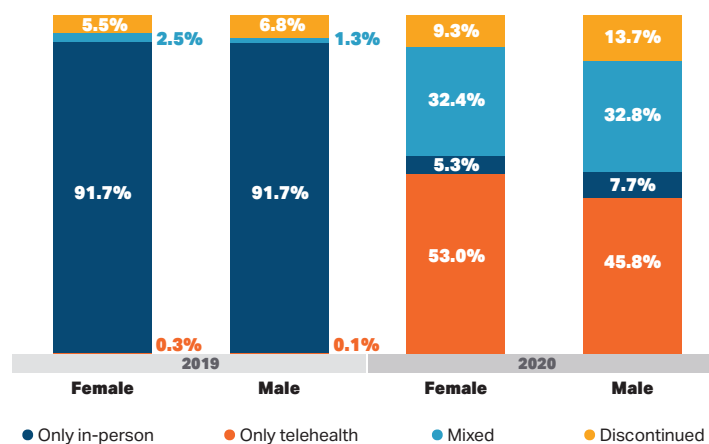


Notes: Includes individuals ages 18-64 with 12 months of enrollment in 2018, 2019, and 2020. Therapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, CPT code modifiers GT, 95, GQ, and G0. Behavioral Diagnosis codes F38, F54, F55, F61, F83, F92 were excluded. The cohort of patients with in-person therapy utilization in January-February of each year was identified by having at least 2 visits between January-February and at least one visit in February of that year.

Telehealth use omitted in 2018 and 2019: telehealth represented <1% of therapy visits.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

Exhibit 3.13: Continuation of care by mode for March 15–December 31 each year for patients who had in-person psychotherapy utilization in January-February of the same year, by sex, 2019-2020



Notes: Includes individuals ages 18-64 with 12 months of enrollment in 2018, 2019, and 2020. Psychotherapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, CPT code modifiers GT, 95, GQ, and G0. Behavioral Diagnosis codes F38, F54, F55, F61, F83, F92 were excluded. The cohort of patients with in-person therapy utilization in January-February of each year was identified by having at least 2 visits between January-February and at least one visit in February of that year.

Telehealth use omitted in 2018 and 2019: telehealth represented <1% of therapy visits.

Sources: HPC analysis of Center for Health Information Massachusetts All-Payer Claims Database, 2019-2020, V 10.0

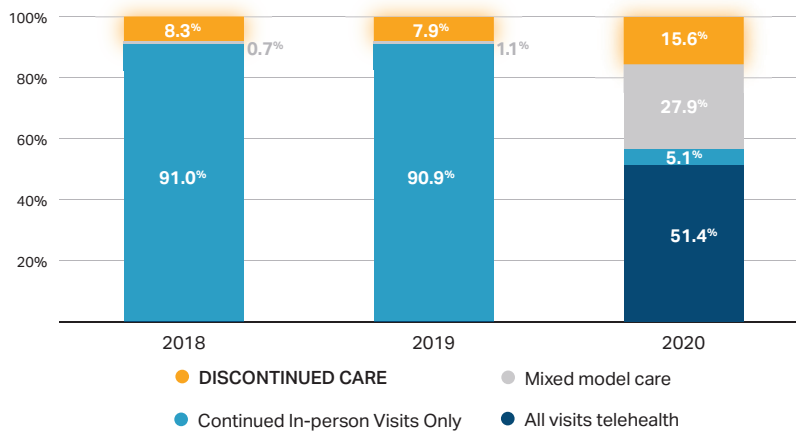
CONTINUATION OF TREATMENT DURING THE PANDEMIC

The HPC also performed the same discontinuation analyses for children as for adults in the section above. As shown in **Exhibit 3.14**, approximately 8 percent of children receiving psychotherapy services at the beginning of each year discontinued care in 2018 and 2019, a rate which nearly doubled to 15.6 percent in 2020.

When broken down by gender and age, the HPC found that boys and younger children were more likely to discontinue

psychotherapy in 2020 than girls and teenagers (**Exhibit 3.15**). Boys also had lower rates of this utilization than girls – they were less likely to receive care, and those who did were more likely to discontinue it. Younger children were also more likely discontinue therapy than teenagers in 2020. Teens have experienced a steady rise in psychotherapy visits from 2018 and were most likely to continue receiving care after the onset of the pandemic.

Exhibit 3.14: Continuation of care by mode for March 15–December 31 each year for patients under age 18 who had in-person psychotherapy utilization in January-February of the same year, 2018-2020

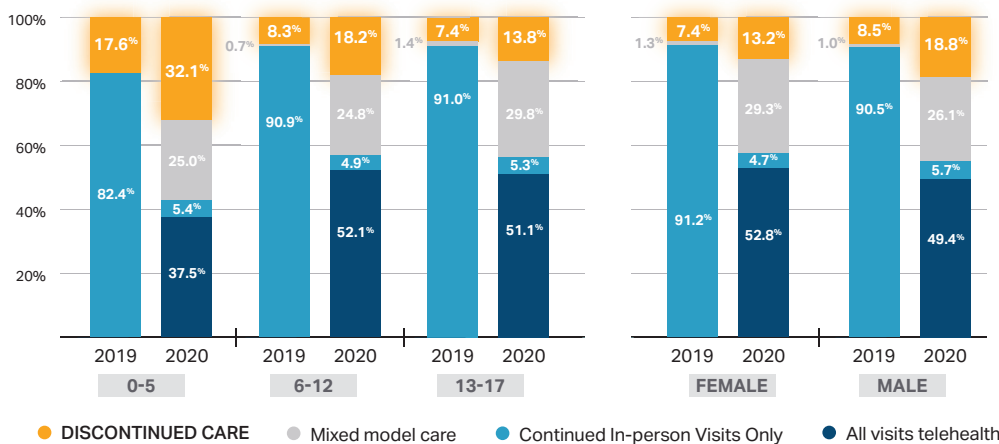


Notes: Includes individuals ages 0-17 with 12 months of enrollment in 2019 and 2020. Therapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, CPT code modifiers GT, 95, GQ, and G0. Behavioral Diagnosis codes F38, F54, F55, F61, F83, F92 were excluded. The cohort of patients with in-person therapy utilization in January-February of each year was identified by having at least 2 visits between January-February and at least one visit in February of that year.

Telehealth use omitted in 2018 and 2019: telehealth represented <1% of therapy visits.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2018-2020, V 10.0

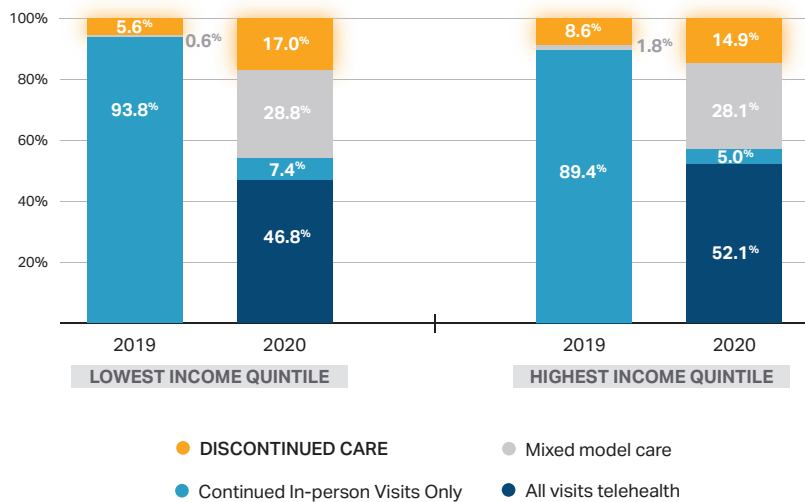
Exhibit 3.15: Continuation of care by mode for March 15–December 31 each year for patients who had in-person psychotherapy utilization in January-February of the same year, by age and sex, 2019-2020



Notes: Includes individuals ages 0-17 with 12 months of enrollment in 2019 and 2020. Children under 5 comprised a very small portion of such visits (<1% in both 2019 and 2020). Therapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, CPT code modifiers GT, 95, GQ, and G0. Behavioral Diagnosis codes F38, F54, F55, F61, F83, F92 were excluded. The cohort of patients with in-person therapy utilization in January-February of each year was identified by having at least 2 visits between January-February and at least one visit in February of that year. Telehealth use omitted in 2018 and 2019: telehealth represented <1% of therapy visits.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2019-2020, V 10.0

Exhibit 3.16: Continuation of care by mode for March 15–December 31 each year for patients who had in-person psychotherapy utilization in January–February of the same year, by income, 2019–2020



Notes: Includes individuals ages 0–17 with 12 months of enrollment in 2019 and 2020. Therapy claims identified using Current Procedural Terminology (CPT) codes 90832, 90833, 90834, 90836, 90837 and 90838. Telehealth claims identified using professional claims site of service 02, and CPT code modifiers GT, 95, GQ, and G0. Behavioral Diagnosis codes F38, F54, F55, F61, F83, F92 were excluded. The cohort of patients with in-person therapy utilization in January–February of each year was identified by having at least 2 visits between January–February and at least one visit in February of that year. Telehealth use omitted in 2018 and 2019: telehealth represented <1% of therapy visits. Income quintiles were assigned based on average income of zip code.

Sources: HPC analysis of Center for Health Information and Analysis Massachusetts All-Payer Claims Database, 2019–2020, V 10.0

There was slight variation between the lowest and highest income groups in rates of discontinuing psychotherapy (**Exhibit 3.16**). Children living in lower-income areas were more likely to drop out of therapy, and those who did continue were more likely to receive care in person, suggesting that children living in lower income areas may have been slightly less able to access telehealth to continue psychotherapy services.

IMPLICATIONS

Pandemic-related disruptions led to significant reductions in many categories of important, high value care. These reductions include fewer cancer and diabetes HbA1c screenings, fewer well-child visits and fewer regular office visits among residents with chronic health conditions. These trends should continue to be monitored through 2021 and beyond to understand whether these levels ultimately return to pre-pandemic levels and whether health outcomes among populations worsen. In many of these cases, pre-pandemic differences in utilization by community income levels widened slightly, though use of telehealth appeared similar

across income groups and likely prevented a further worsening of income-related gaps. The HPC will continue to analyze the use of telehealth and urgent care centers to understand if these additional options for care improve access to care and can prevent unnecessary costs or avoidable emergency department visits.

Psychotherapy use increased in 2020, including during the most intense periods of shutdowns in the spring of 2020, unlike most categories of care use which dropped precipitously. This increase could reflect the added stress, worry, and deterioration of underlying mental health during the pandemic. At the same time, the availability of telehealth, which was the mode of delivery for more than 80 percent of psychotherapy visits in 2020, likely expanded access to some individuals who may not have been able to access therapy without it.

The HPC will continue to monitor these trends and to recommend actions that could mitigate the worst effects of the pandemic on care delivery and, ideally, bolster more positive trends in increased access to affordable, high quality care among all residents.

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CHAPTER 4:
**CONCLUSION AND
2022 POLICY
RECOMMENDATIONS**

CHAPTER 4:

CONCLUSION AND 2022 POLICY RECOMMENDATIONS

This year marks a milestone anniversary in the Commonwealth's ambitious journey of health care reform. Ten years ago, through the advocacy of a broad coalition of stakeholders, Massachusetts adopted an innovative approach to slowing the rate of health care cost growth by establishing an annual cost growth benchmark and providing oversight authority to the newly established HPC.

In the first several years of benchmark oversight, the Commonwealth made notable progress in driving down health care spending growth. In recent years, however, spending growth has exceeded the benchmark (with the exception of 2020) and appears likely to continue that upward trajectory.

This trend is driven largely by persistent challenges and market failures that have not been adequately addressed in the past ten years. These challenges, which have been consistently identified by the HPC and others, include:

- Excessive provider price growth and extensive variation in provider prices that is unrelated to value,
- Increased market consolidation and shift in volume to high-cost sites of care,
- High, rising, and non-transparent pharmaceutical prices, which may not reflect value,
- Steadily increasing health insurance premiums, deductibles, and cost-sharing, resulting in increased costs to businesses and consumers,
- Stalled uptake of value-based payment models and innovative plan offerings, and
- Systemic and persistent disparities in health care access, affordability, and outcomes.

The ongoing impact of the COVID-19 pandemic has only exacerbated many of these dynamics, contributing to greater health disparities, while adding to inflationary headwinds in the form of increasing labor and supply costs.

These challenges are not unique to Massachusetts, and many other states are evolving their cost containment strategies accordingly to respond to them. In order for Massachusetts to continue to be the national leader on health care cost containment, it must similarly adapt. Unless the Commonwealth's health care cost containment approach is strengthened and expanded by policymakers, the result will be a health care system that is increasingly unaffordable for Massachusetts residents and businesses with growing health inequities.

This year presents an opportunity to reflect on ten years of Massachusetts experience, data, and evidence, to chart a bold path forward for the next decade. The six policy recommendations below reflect a comprehensive approach to reduce health care cost growth, promote affordability, and advance equity. The HPC further recommends that legislative action in 2023 **prioritizes improving state oversight and accountability** in the following areas:

1. TARGET ABOVE BENCHMARK SPENDING GROWTH.

The Commonwealth should take action to strengthen the Performance Improvement Plan (PIP) process, the HPC's primary mechanism for holding providers, payers, and other health care actors responsible for health care spending growth. Specifically, the HPC recommends that the metrics used by CHIA to identify and refer organizations to the HPC should be expanded to include measures that account for the underlying variation in provider pricing and baseline spending, and by establishing escalating financial penalties to deter excessive spending.

2. CONSTRAIN EXCESSIVE PROVIDER AND PHARMACEUTICAL PRICES.

The Commonwealth should take action to constrain excessive price levels, variation, and growth for health care services and pharmaceuticals, by imposing hospital price growth caps, enhancing scrutiny of provider mergers and expansions, limiting hospital facility fees, and expanding state oversight and transparency of the entire pharmaceutical sector, including how prices are set in relation to value.

3. LIMIT INCREASES IN HEALTH INSURANCE PREMIUMS AND COST-SHARING.

The Commonwealth should take action to hold health insurance plans accountable for affordability and ensure that any savings that accrue to health plans are passed along to businesses and consumers, including by setting affordability targets and standards as part of the annual premium rate review process.

2022 POLICY RECOMMENDATIONS**1. STRENGTHEN ACCOUNTABILITY FOR THE HEALTH CARE COST GROWTH BENCHMARK.**

As recommended in past years, the Commonwealth should strengthen the mechanisms for holding providers, payers, and other health care actors responsible for health care spending performance to support the Commonwealth's efforts to meet the health care cost growth benchmark. The HPC can take a range of factors into account

in determining whether to require a Performance Improvement Plan (PIP) from a payer or provider referred to it by the Center for Health Information and Analysis (CHIA). However, the PIP statute requires that CHIA base its referrals on growth in health status adjusted total medical expenses (HSA TME), a metric that is limited to spending for providers' primary care patients, that is heavily influenced by medical coding efforts, and that overlooks the significant variation in baseline spending levels among entities.

A. Improve Metrics and Referral Standards for Monitoring Health Care Entity Spending. The Legislature should take action to increase accountability through the annual PIP process by allowing CHIA to use metrics in addition to growth in HSA TME to identify and refer entities to the HPC for review and consideration for a PIP. These metrics should take baseline spending levels into account in addition to growth, hold providers accountable for spending for all of their patients (not only their primary care patients), include providers in addition to primary care groups (e.g., hospitals), and address the impact of medical coding efforts which can both increase spending and mask spending increases in health status adjusted measures. The measures and referral standards should also be expanded to allow the PIPs process to account for persistent variation in negotiated provider prices for the same types of services, which primarily reflects differences in size and bargaining leverage between different providers, rather than differences in quality of other indicia of value. Additionally, accountability should be extended to other market participants that contribute to health care spending growth (e.g., pharmaceutical benefit managers and manufacturers).

B. Strengthen Enforcement Tools in PIPs Process. The PIP process should also be strengthened, including by allowing HPC to set savings expectations, to identify the types of strategies that should be included in a PIP, and giving the HPC greater oversight tools to ensure that any PIP results in meaningful improvement. The Legislature should also take action to deter excessive spending by allowing the HPC to apply tougher, escalating financial penalties for above-benchmark spending or non-compliance, similar to efforts in other states with health care growth targets.

These collective fixes to the benchmark and its accountability mechanisms are critically necessary to establish a more effective process to constrain excessive spending and reduce unwarranted variation in provider prices.

2. CONSTRAIN EXCESSIVE PROVIDER PRICES. Prices continue to be a primary driver of health care spending growth in Massachusetts, and the significant variation in prices for

Massachusetts providers (without commensurate differences in quality) continues to divert resources away from smaller and/or unaffiliated community providers, many of which serve vulnerable patient populations, and toward generally larger and more well-resourced systems. For example, shifts in volume to higher-priced hospitals, combined with commercial price levels which can be three times as high as Medicare prices, were a key reason Massachusetts failed to meet the benchmark in 2018 and 2019. Many market initiatives have attempted to address high, variable, and non-transparent provider prices (e.g., tiered and narrow network products, price transparency efforts, risk contracting), but these efforts have failed to meaningfully restrain provider price growth or reduce unwarranted variation in provider prices. Accordingly, the HPC recommends the following actions:

A. Establish Price Caps for the Highest-Priced Providers in Massachusetts. The Legislature should take action to cap prices for the highest-priced providers (i.e., limiting the highest, service-specific commercial prices with the greatest impact on spending) and limit price growth (e.g., limiting annual service-, insurer-, and provider-specific price growth). Such price caps—targeted specifically at the highest-priced providers in Massachusetts and those services and provider types for which competitive forces are not likely to meaningfully constrain prices—would be an important complement to the health care cost growth benchmark. Such caps would reduce unwarranted price variation and promote equity by ensuring that future price increases can accrue appropriately to lower-priced providers, including many community hospitals and other providers that care for populations facing the greatest health inequities, ensuring the viability of these critical resources.

B. Limit Facility Fees. In many cases, the same services can be provided in both hospital outpatient departments and non-hospital settings such as physician offices. Nevertheless, Massachusetts residents disproportionately use hospital outpatient settings, utilizing hospital outpatient services on average, 40 percent more than residents of other states. Prices and patient cost-sharing are generally substantially higher at hospital outpatient sites due to the addition of hospital “facility fees.” In many cases, patients may not realize that pricing can be substantially higher at some sites (those licensed as hospital outpatient departments), and face higher costs as a result. In order to improve market functioning and consumer protections, policymakers should take action to require site-neutral payments for certain common ambulatory services (e.g., basic office visits) and limit the cases in which both newly-licensed and existing sites can bill as hospital outpatient departments. Additionally, outpatient sites that charge facility fees should

be required to conspicuously and clearly disclose this fact to patients prior to delivering care, and payers and providers should include the location where the visit occurred on claims submitted to payers and reported to the Commonwealth's all-payer claims database.

C. Enhance Scrutiny and Monitoring of Provider Expansions.

Recognizing that the cost of care can vary substantially among different providers with significant implications for health equity and affordability, the Commonwealth should strengthen its examinations of plans for major expansions of services or new facilities, particularly for higher-priced providers and at hospitals and other higher-priced sites of care. Such examinations, which could be conducted by the HPC and incorporated into the state's existing determination of need process in lieu of the current independent cost analysis, should assess the impact of proposed expansions and new facilities on health care costs, quality, access, and market competition, and ensure that any such proposals are well informed by health equity considerations and aligned with community need. In addition, given the extent to which many such expansions focus on ambulatory care and the particular importance of hospital outpatient care in driving spending and utilization trends, the Commonwealth should improve data collection on outpatient and ambulatory care across different sites and settings, including hospital main campus and off-campus sites such as ambulatory surgery centers, and non-hospital-licensed ambulatory sites, such as urgent care centers. More accurate data, identifying the location at which services were rendered, will better enable the HPC and others to analyze the impact of outpatient and ambulatory care proposals on health care costs, quality, and access, particularly for underserved populations.

D. Adopt Default Out-of-Network Payment Rate. As a constraint on the spending and market impact of excessive prices charged by out-of-network providers, the Legislature should enact the default out-of-network payment rate for "surprise billing" situations recommended by the Executive Office of Health and Human Services in its Report to the Massachusetts Legislature: Out-of-Network Rate Recommendations. Broader application of out-of-network default rates should also be explored as an approach to reduce unwarranted price variation across providers and settings.

3. ENHANCE OVERSIGHT OF PHARMACEUTICAL SPENDING.

As drug spending continues to grow in Massachusetts, patients are acutely feeling rising out-of-pocket costs and other barriers to access in their insurance plan design. Accordingly, the HPC recommends the following actions:

A. Enhance Transparency and Data Collection. The Commonwealth should take action to increase both transparency of drug price growth and spending and oversight of the key stakeholders responsible for setting drug prices and establishing the policies and financial incentives that influence how patients access critical medications. The Commonwealth should authorize CHIA to collect data on pharmaceuticals from payers and pharmacy benefit managers (PBMs), including the average cost of pharmaceuticals after all discounts and rebates, markups, price increases, and launch prices of new drugs, as well as the cost of drugs administered in in provider offices and hospital outpatient departments.

B. PBM Oversight. The state should also require licensure of PBMs in order to monitor their business practices with pharmacies and health plans, and their impact on patients.

C. Expand Drug Pricing Reviews. Commonwealth should build on MassHealth's successful process by expanding the HPC's drug pricing review authority in order to strengthen commercial price negotiations by transparently reporting on drugs that are contributing most to commercial spending growth in Massachusetts.

D. Limit Out-of-Pocket Costs on High-Value Drugs. Finally, the Commonwealth should cap monthly out-of-pocket costs for high value prescription drugs that are widely recognized to improve health outcomes for patients with no or minimal impact on health care spending.

4. MAKE HEALTH PLANS ACCOUNTABLE FOR AFFORDABILITY.

As both health insurance premiums and the use of higher deductibles increase, further squeezing families in Massachusetts, the Commonwealth should require greater accountability of health plans for delivering value to consumers and ensuring that any savings that accrue to health plans (e.g., from provider price caps as described above or reduced use of high-cost care) are passed along to consumers.

A. Set New Affordability Targets and Affordability Standards.

To both complement and bolster the health care cost growth benchmark, the Commonwealth should set measurable goals that target affordability of care for Massachusetts residents. This measurement strategy should identify and track improvement on indicators of affordability, including measures that capture the differential impact of both health plan premiums and consumer out-of-pocket spending by income, geography, market segment, and other factors. Such targets should inform the development of new health plan affordability standards which prioritize the public's interest in equitable access to quality care.

B. Improve Health Plan Rate Approval Process. The Legislature should require that the health plan affordability standards discussed above be a key factor in the Division of Insurance's (DOI) review and approval of health plan rate filings. In addition, there should be greater transparency and public participation in the rate approval process by including, at a minimum, a public comment period, and written justifications for approvals of rate increases, as in DOI's proposed regulation.

C. Reduce Administrative Complexity. Administrative complexity that does not add value permeates the Massachusetts health care system, from the wide array of plan options that are not easily comparable by consumers and employers, to non-standard contract terms and differing rules for claims submission, provider credentialing, and prior authorization which consume significant provider time and resources. This lack of standardization across health plans creates unnecessary costs for all health care actors and for the Massachusetts residents and businesses and their employees who pay for this complexity in the form of higher premiums, cost-sharing, and confusion in navigating the health care system. Evidence suggests that this complexity poses particular challenges for patients with fewer resources. The Legislature should require greater cross-payer standardization of policies, programs, and processes to reduce administrative complexity, enhance affordability, and improve equity.

D. Improve Benefit Design and Cost-Sharing. As the number of Massachusetts consumers with high-deductible health plans (HDHPs) has sharply increased, the HPC has documented increasing challenges to affordability, equitable access, and experience of care, particularly for employees with lower incomes. Even in non-HDHPs, cost-sharing can disproportionately impact individuals with lower income. Health plans should work with employers to develop alternatives to high-deductible health plans and other benefit designs that can hold total spending in check without impeding access and perpetuating inequities. To put equity at the forefront, health plans and employers should revise plan designs that impose equivalent cost sharing for medical services regardless of value (such as by waiving co-payments or deductibles for high-value medical care) and adjust premium contributions to reflect different employee wage levels.

E. Alternative Payment Methods (APMs). Health plans should continue to promote the increased adoption and effectiveness of APMs (e.g., increased use of primary care capitation, APMs for preferred provider organization (PPO) populations, episode bundles, and two-sided risk models), especially in the commercial market where expansion has stalled). They

should also ensure that APM payment formulas reward efficient, patient-centered care rather than coding efforts.

5. ADVANCE HEALTH EQUITY FOR ALL. Achieving health equity for all will require focused, coordinated efforts among policymakers, state agencies, and the health care system to ensure that the Commonwealth addresses inequities in both the social determinants of health (SDOH) and in health care delivery and the impact of those inequities on residents. As such, all stakeholders should have both a role in and accountability for efforts to achieve health equity for all.

A. Set and Report on Health Equity Targets. The Commonwealth should undertake a coordinated effort across state agencies and sectors to identify a list of high-priority areas of documented disparities in health outcomes that are rooted in inequities, set measurable goals for improvement, and report annually on progress. Such goals should be developed through a collaborative approach that is guided by the perspectives of individuals and communities most affected by these disparities.

B. Address Social Determinants of Health. Recognizing that success in achieving health equity targets will be difficult to achieve without addressing inequities in the social determinants of health, policymakers must continue to prioritize investments in affordable housing, improved food and transportation systems, and other community resources. Health care providers, as anchor institutions, can play a critical role in supporting community-led efforts to improve these and other social determinants.

C. Use Payer-Provider Contracts to Advance Health Equity. Payers and providers should accelerate efforts to reduce health inequities among their members/patient populations by introducing health equity accountability into their provider contracts, including alternative payment model (APM) contracts. Provider contracts offer the opportunity to embed equity principles and enforce accountability (e.g., by requiring stratification of performance data by race/ethnicity). At the same time, APMs can align incentives to motivate investments in services and infrastructure (e.g., care coordination, integrated technology, and performance reporting) aimed at addressing inequities within patient populations.

D. Improve Data Collection. To implement these health equity goals, policymakers, providers, and payers should commit to collection of reliable, standardized patient data on race, ethnicity, language, disability status, sexual orientation, gender identity, and sex to inform the integration of equity considerations into quality improvement, cost-control, and affordability

initiatives. These efforts would be accelerated by the adoption of the data standards recommended by the Health Equity Data Standards Technical Advisory Group of the EOHHS [Quality Measurement Alignment Taskforce](#).

6. IMPLEMENT TARGETED STRATEGIES AND POLICIES.

To further advance cost containment, affordability, and health equity, the Commonwealth should adopt the following additional strategies and policies.

A. Improve Primary and Behavioral Health Care. There is considerable evidence that health care delivery systems oriented toward primary care tend to have lower costs, higher quality, and a more equitable distribution of health care resources. Better management of behavioral health conditions has also been found to lower overall health care spending and improve quality of life. The coronavirus pandemic (COVID-19) has underscored the importance of equitable access to both types of care. Specific areas of focus should include:

i. Focus Investment in Primary Care and Behavioral Health Care. Payers and providers should increase spending devoted to primary care and behavioral health while adhering to the Commonwealth's total health care cost growth benchmark. These spending increases should prioritize non-claims-based spending such as capitation, infrastructure, and workforce investments. CHIA and the HPC should continue to track and report on primary care and behavioral health care spending trends annually and hold entities accountable for meeting improvement targets if they fall short of established targets.

ii. Improve Access to Behavioral Health Services. In response to the recent increased need for behavioral health services— in particular among children, young adults, and people of color — payers and providers should take steps to increase access to behavioral health services appropriate for and accessible to these populations. This must include a redoubling of the Commonwealth's efforts to provide resources and support to individuals and families suffering from the effects of the opioid epidemic, notably Black men, a population that has experienced a significant increase in overdoses since 2020. The Commonwealth can advance these goals by implementing the Executive Office of Health and Human Services' Roadmap for Behavioral Health Reform: Ensuring the right treatment when and where people need it, including increasing inpatient beds for behavioral health patients (including pediatric patients), investing in community-based alternatives to the emergency department, and increasing the behavioral health workforce, particularly

providers who can support their communities' needs with linguistically and culturally relevant care.

B. Examine Increases in Medical Coding Intensity and Improve Patient Risk Adjustment. The HPC and other researchers have documented that recent increases in patient risk scores and acuity are better explained by changes in payer and provider documentation and coding behavior than by changes in actual patient health status. This conclusion was bolstered by the finding that risk scores fell in 2020 — during a global pandemic that reduced overall life expectancy in the US — not because patients were less sick but because a reduced number of patient encounters with the medical system created fewer opportunities to document patient diagnoses. While there may be some benefits to more complete and accurate coding, efforts aimed toward increasing revenue through increased coding intensity impair performance measurement, absorb clinical and administrative personnel (for those providers able to devote such resources), and have resulted in millions in additional spending for Massachusetts payers, employers, and residents. The Commonwealth should take action to mitigate the impact of changes in clinical documentation practices on spending and performance measurement. Specific areas of action should include: adoption of risk adjustment methods for accountability and payment purposes that are not based primarily on patient diagnoses or severity, which reduces the return on investment from coding efforts; more frequent updates to clinical classification software to better align payments with actual resource use; and continued development of alternative risk adjustment methods and performance metrics that are less sensitive to coding-based acuity and that reward providers for caring for vulnerable populations facing barriers to care.

C. Support Efforts to Reduce Low-Value Care. HPC research shows that Massachusetts residents receive a significant amount of care that does not provide value, and that the provision of such care by provider organizations varies widely. While the incidence of low-value care decreased during the pandemic, the Commonwealth should act to sustain the reduction. Toward this end, payers, providers, and purchasers should convene to develop strategies, incentives, and action steps to eliminate low value care. Government regulations and internal provider policies should be reviewed and updated in order to reflect evolving clinical standards and to ensure that, at a minimum, they do not require or encourage low value care. Employers can also play a role in assisting employees and their families in accessing information useful towards making high-value treatment decisions.

The HPC stands ready to support these efforts with data insights and independent policy leadership.

THE IMPACT OF COVID-19

This report is issued in the context of the evolving response to the COVID-19 pandemic, which has indelibly changed the lives of Massachusetts residents and the health care system that serves them. Vaccine administration and other public health measures continue, and recovery for residents, the health care system, and health care workers will be a long-term process. To help guide this recovery, policymakers, health care leaders, and community partners should look to lessons from the pandemic to inform opportunities for rebuilding sustainable, resilient, and equitable systems of care.

In this context, the Legislature has charged the HPC with studying the impact of COVID-19 on the health care delivery system. An Interim Impact Report was released in April 2021, with additional reports to be released in 2023. While many of the topics will be more fully examined in these upcoming publications, the HPC recommends that the Commonwealth take immediate steps to sustain the successful innovations made during the pandemic including the following as primary examples.

A. Maintain Access to Telehealth. Telehealth expanded greatly during the COVID-19 pandemic, aided by emergency regulatory action and quick adoption by providers and payers. Telehealth expansion aided in maintaining access to behavioral health psychotherapy services and may also have helped prevent avoidable ED visits. While the HPC will make further recommendations in an upcoming legislatively mandated report on telehealth, the HPC recommends that payers, providers, and employers continue to make telehealth services available to their members regardless of geography, income, or language. State policy should continue to enable access to telehealth services, including across state lines when this would benefit patients, and to encourage payment policies that support cost-effective use of telehealth that ultimately increases patient access to care while reducing both financial and non-financial costs to patients.

B. Move Care into High Value, Low-cost Settings. Early HPC findings indicate that decreases in potentially avoidable emergency department visits are partially explained by patients seeking care through telehealth and urgent care centers. The HPC will continue to monitor trends in use across a range of high value, low-cost care settings (including, for example, birth centers) to understand the impact of these alternatives on equity in access and health care spending (this was also noted in Recommendation 2C: Enhance Scrutiny and Monitoring of Provider Expansions).

C. Support and Strengthen the Health Care Workforce. After more than two years of COVID-19-era care, which exhausted and strained the health care workforce, providers and workers continue to experience significant challenges in their ability to care for patients. High rates of turnover and shortage have led to critical disruptions and backlogs across the health care system. The HPC will be releasing a legislatively mandated report on the Commonwealth's health care workforce in the coming months that examines policy priorities to boost retention and workforce resilience, including improving the transition from training to employment, such as expanding health care apprenticeship and other programs that remove financial barriers to training and allow trainees to move smoothly into employment and funding practices such as mentorship and shadowing for new entrants.

CHAPTER 5:
**DASHBOARD OF
HPC PERFORMANCE
METRICS**

Exhibit 5.1: Dashboard of HPC performance metrics

- ▲ Better performance
- Similar performance
- Worse performance

			MASSACHUSETTS TIME TREND			U. S. COMPARISON		
			Previous	Most Recent	Performance	Most Recent	Comparison	
HEALTH EQUITY AND AFFORDABILITY	1	Individuals under age 65 with high out-of-pocket spending relative to income	DISPARITY	6.1% (2017-2018)	5.0% (2019-2020)	▲	7.3% (2019-2020)	▲
	2	Share of total compensation devoted to health care for middle class families		22.2% (2016-2018)	22.0% (2019-2021)	●	19.8% (2019-2021)	■
	3	Adults who went without care because of cost in the past year	DISPARITY	9% (2018)	8% (2020)	▲	11% (2020)	▲
	4	Rate of uninsurance among non-elderly adults with income less than 200% FPL		5.9% (2018)	6.5% (2019)	■	18.1% (2019)	▲
	5	Adults without all age- and gender-appropriate cancer screenings	DISPARITY	24% (2018)	25% (2020)	■	31% (2020)	▲
	6	Infant mortality (per 1,000 live births)	DISPARITY	3.7 (2017)	3.7 (2019)	●	5.6 (2019)	▲
	7	Premature deaths from treatable causes (deaths per 100,000 population)	DISPARITY	57.4 (2016-2017)	60.1 (2019-2020)	■	86.3 (2019-2020)	▲
	8	Adults ages 18–64 who report fair or poor health	DISPARITY	13% (2018)	10% (2020)	▲	12% (2020)	▲
	9	Share of population living in a food insecure household		6.7% (2020)	5.8% (2021)	▲	9.4% (2021)	▲
	10	Share of population living in a Health Professional Shortage Area		7.7% (2020)	7.5% (2021)	●	25.5% (2021)	▲

DISPARITIES BY INCOME

MEASURE	HIGH INCOME	LOW INCOME	DISPARITY (PPT)	STATE RANK ON DISPARITY
Individuals under age 65 with high out-of-pocket spending relative to income	2%	15%	13	9
Adults who went without care because of cost in the past year	5%	15%	10	3
Adults without all age- and gender-appropriate cancer screenings	21%	30%	9	16
Adults ages 18–64 who report fair or poor health	5%	23%	18	20

DISPARITIES BY RACE / ETHNICITY

MEASURE	MOST RECENT	DISPARITY
Infant mortality (per 1,000 live births)	4	
<i>AANHPI (Group with best outcome)</i>	3	–
<i>White (Group with best outcome)</i>	3	–
<i>Hispanic</i>	5	2
<i>Black</i>	7	4
Premature deaths from treatable causes (deaths per 100,000 population)	60	
<i>AANHPI (Group with best outcome)</i>	35	–
<i>White</i>	56	21
<i>Hispanic</i>	58	23
<i>Black</i>	93	58

Exhibit 5.1: Dashboard of HPC performance metrics cont.

- ▲ Better performance
- Similar performance
- Worse performance

		MASSACHUSETTS TIME TREND			U. S. COMPARISON		
		Previous	Most Recent	Performance	Most Recent	Comparison	
BENCHMARK AND SPENDING	11	Growth of THCE per capita (performance assessed relative to 3.1% benchmark)	4.3% (2019)	-2.4% (2020)	▲	-0.3% (2020)	▲
	12	Growth in commercial health care spending per capita (performance assessed relative to 3.1% benchmark)	3.5% (2019)	-2.1% (2020)	▲	-2.6% (2020)	■
	13	Employer-based health insurance premiums, single coverage (performance assessed relative to 3.1% benchmark)	\$7,540 (2019)	\$7,452 (2020)	▲	\$7,149 (2020)	■
	14	Benchmark premium for second-lowest-cost exchange plan, single coverage (performance assessed relative to 3.1% benchmark)	\$3,984 (2019)	\$4,116 (2020)	■	\$5,544 (2020)	▲
EFFICIENT, HIGH-QUALITY CARE DELIVERY	15	Readmission rate (Medicare)	18.4% (2019)	18.5% (2020)	●	16.9% (2020)	■
	16	Readmission rate (All payer)	15.6% (2019)	15.9% (2020)	●	N/A	N/A
	17	ED utilization (per 1,000 persons)	342 (2019)	257 (2020)	▲	MA = 414 US = 372 (2020)	■
	18	BH-related ED utilization (per 1,000 persons)	24 (2019)	20 (2020)	▲	N/A	N/A
	19	Avoidable ED Utilization (per 1,000 persons)	138 (2019)	99 (2020)	▲	N/A	N/A
	20	Hospital admissions among Medicare beneficiaries age 65 and older for ambulatory care (sensitive conditions per 1,000 beneficiaries)	50.2 (2018)	48.5 (2019)	▲	38.3 (2019)	■
VALUE-BASED MARKETS	21	Percentage of inpatient discharges to institutional PAC	14.5% (2020)	14.8% (2021)	●	MA = 18.1% US = 15.5% (2019)	■
	22	Percentage of discharges in top 5 networks	61% (2019)	61% (2020)	●	N/A	N/A
	23	Share of newborn deliveries in community hospitals	49.3% (2019)	50.1% (2021)	▲	N/A	N/A
	24	Share of discharges from hospitals with relative price above 1.2	27.1% (2018)	27.6% (2019)	■	N/A	N/A
APM	25	Total share of APMs for all insurance types	45.1% (2019)	46.5% (2020)	▲	N/A	N/A

Notes: APM = alternative payment method; BH = behavioral health; ED = emergency department; HMO = health maintenance organization; MCO = managed care organization; PAC = post-acute care; THCE = total health care expenditures. For additional notes and sources, see **Technical Appendix**.

ED utilization - MA trend uses CHIA ED Database, MA/US comparison use KFF State Health Facts. Percentage of inpatient discharges to institutional PAC - MA trend uses Case-Mix data, MA/US comparison uses HCUP data

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LIST OF TECHNICAL APPENDICES

- **1** Acute Care Hospitals in Massachusetts by Type of Hospital
- **2** Trends in Spending and Care Delivery
- **3** Changes in Ambulatory Care During the COVID-19 Pandemic
- **4** Commercial Price Trends
- **5** Hospital Utilization
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Under the leadership of Dr. David Auerbach, the HPC's Research and Cost Trends staff conducted the analyses and prepared the annual cost trends report and chartpacks. They are as follows: Dr. Sasha Albert, Charlotte Burlingame, Alicia Duran, Yue Huang, Hannah James, Justin Kiel, Dhruv Mandalia, Lyden Marcellot, Dr. Laura Nasuti, Sara Sadownik, and Diana Sanchez. Ashley Johnston designed the report.

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The Massachusetts Health Policy Commission (HPC), established in 2012, is an independent state agency charged with monitoring health care spending growth in Massachusetts and providing data-driven policy recommendations regarding health care delivery and payment system reform. The HPC's mission is to advance a more transparent, accountable, and innovative health care system through independent policy leadership and innovative investment programs. The HPC's goal is better health and better care – at a lower cost – for all people across the Commonwealth.

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