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TECHNICAL APPENDIX

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Total Health Care Expenditures, Total Medical Expenses, and Alternative Payment Methods

TECHNICAL APPENDIX

Table of Contents

Total Health Care Expenditures (THCE).....	3
Health Care Cost Growth Benchmark.....	6
Health Care Expenditures by Service Category.....	6
Prescription Drug Rebates and Pharmacy Expenditures.....	10
Estimated Pharmacy Expenditures Net of Rebates.....	11
Total Medical Expenses (TME).....	14
Managing Physician Group TME.....	15
Alternative Payment Methods (APM).....	16

Total Health Care Expenditures (THCE)

THCE is calculated annually to fulfill two primary objectives: analysis of state-level expenditures and the annual growth rate, as well as analysis of potential drivers of cost growth. CHIA's THCE model uses data that was reported within the required timeframe by Massachusetts commercial payers, Centers for Medicare and Medicaid Services (CMS), MassHealth - the Massachusetts Medicaid program, and other government agencies.¹

Definitions:

THCE is a measure of total spending for health care in the Commonwealth. Chapter 224 of the Acts of 2012 (Chapter 224) defines THCE as the annual per capita sum of all health care expenditures in the Commonwealth from public and private sources, including: (i) all categories of medical expenses and all non-claims related payments to providers, as included in the health status adjusted total medical expenses (TME) reported by CHIA; (ii) all patient cost-sharing amounts, such as deductibles and copayments; and (iii) the net cost of private health insurance, or as otherwise defined in regulations promulgated by CHIA.²

Data Years:

Calendar years (CYs) 2020, 2021, 2022

Data Sources:

THCE CATEGORY	DATA SOURCE
<u>Commercially Insured Expenditures</u>	
Commercial Full-Claim	TME data reported by commercial payers to CHIA
Commercial Partial-Claim	TME data reported by commercial payers to CHIA with actuarial estimates
<u>Public Coverage Expenditures</u>	
MassHealth Managed Care Organizations (MCOs) and Accountable Care Organizations Model A (ACO-A)	TME data reported by commercial payers to CHIA
Commonwealth Care MCOs	TME data reported by commercial payers to CHIA
MassHealth (ACO-B, PCC, FFS, SCO, PACE, One Care, and Other)	Reported by MassHealth
Medicare Advantage	TME data reported by commercial payers to CHIA
Medicare Parts A and B	CMS data summary to CHIA
Standalone Medicare Part D	CMS data summary to CHIA

¹ Detailed information on THCE data sources and methodologies is available at: <http://www.chiamass.gov/assets/docs/r/pubs/15/THCE-Methodology-Paper.pdf> (Last accessed: September 11, 2017)

² Defined in M.G.L. c. 12C, Section 1.

Health Safety Net	Reported by HSN
Medical Security Program	Reported by commercial payers to CHIA
Veterans Health Administration	Veterans Health Administration (VA) summary data reported to CHIA for FYs 2020, 2021, and 2022
<u>Net Cost of Private Health Insurance</u>	Calculated from the Medical Loss Ratio Reports from the Massachusetts Division of Insurance (DOI), the Annual Statutory Financial Statement and Supplemental Health Care Exhibit from the National Association of Insurance Commissioners (NAIC), and the Medical Loss Ratio Reports from the Center for Consumer Information and Insurance Oversight (CCIIO)
<u>Massachusetts population</u>	U.S. Census Bureau

Methods:

CHIA is required to report on THCE annually to monitor the rate of growth and measure the Commonwealth's progress toward meeting its health care cost growth benchmark by each year.

This report provides assessments for the 2022 performance year, examining THCE growth between CYs 2020 to 2021 and CYs 2021 to 2022.

The assessment of 2021 and 2022 THCE is comprised of 2022 TME-sourced aggregate data from commercial payers with on average eight months of claims run-out, MassHealth data, CMS-sourced Medicare data, and supplemented by claims completion and settlement estimates obtained directly from the payers. In addition, the assessment includes data from other sources including the Veterans Health Administration, the Census Bureau, the National Association of Insurance Commissioners, and the Massachusetts Division of Insurance.

Commercially-Insured Expenditures

In accordance with the requirements of THCE, the model includes expenditures by commercial payers on behalf of Massachusetts residents, including both the fully-insured and self-insured populations. For this final assessment, the primary data source is TME-reported data, which is filed directly with CHIA by the ten largest commercial payers in the Massachusetts market and the commercial payers offering MassHealth and Commonwealth Care MCO plans as well as Medicare Advantage plans. The TME data includes claims and non-claims payments. Payers submit this data based on "allowed amounts," which include paid medical claims as well as patient cost-sharing, such as copayments, coinsurance, and deductibles. As such, the TME data captures the health care expenditures of commercial payers and their members.

In some circumstances, payers are only able to report claim payments for limited medical services due to benefit design, where some services such as behavioral health or pharmacy services may be "carved out", or provided separately from the other medical services. In these instances, payers are unable to obtain the payment information and do not hold the insurance risk for the carved-out services. Thus, payers reported this type of TME data

separately in the commercial partial-claim category.³ To estimate the full TME amount for the commercial partial-claim population, CHIA made actuarial adjustments based on the reported partial-claim TME data. CHIA updated the commercial partial methodology beginning with the 2023 Annual Report. The revised methodology uses more granular data on carved-out services and data points from the new Primary Care and Behavioral Health (PCBH) data collection to only gross up commercial partial spending for services that payers reported as carve-outs. First, CHIA identified payer carve-outs using *Table A.3: Commercial Partial Member Months by Carved-Out Benefits* in the TME-APM submission. Pharmacy and behavioral health were the only carve-outs reported for CY2020 through CY2022. Next, for payers that reported all commercial partial members with pharmacy carve-outs, the revised methodology grosses up partial pharmacy spending using that payer's commercial full claim pharmacy PMPM as a percent of commercial full total PMPM. For payers that report pharmacy carve-outs for less than 100 percent of their commercial partial member months, the reported commercial partial pharmacy spending for whom pharmacy is not carved out was used to account for those with reported carved out pharmacy services. For payers that reported commercial partial members with behavioral health carve-outs, CHIA used the Primary Care and Behavioral Health data collection to estimate service percentages, collecting the payer-level behavioral health spending as a percentage of total reported spending. CHIA adjusted hospital inpatient, hospital outpatient, physician, and professional other service categories to include estimated behavioral health spending. To gross up pharmacy and/or behavioral health carve-outs for payers with only commercial partial business, an all-payer market average was used to gross up carve-outs to the full claim amount. CHIA used the adjusted full-claim PMPM amount for the service categories.

Further detail on this revised methodology can be found in CHIA's methodology memo *Updated Methodology for Grossing Up Reported TME-APM Commercial Partial Expenditures*.⁴

Public Coverage Expenditures

In addition to expenditures by commercial payers and their members, THCE also includes expenditures from public coverage and programs, including MassHealth Managed Care Organizations (MCOs) and Accountable Care Organizations (ACO-As and ACO-Bs), MassHealth, Medicare, Medicare Advantage plans, Health Safety Net (HSN), Medical Security Program, and Veteran Affairs.

Data for MassHealth MCO, MassHealth ACO-A, and Medicare Advantage plans was obtained from TME data filed by commercial payers with CHIA.⁵ Massachusetts beneficiaries' expenditures from Medicare Parts A and B and standalone Medicare Part D were provided to CHIA by CMS. MassHealth and HSN data was obtained through collaboration with those agencies' financial departments. Veterans Health Administration (VA) data was provided to CHIA by the VA and covers expenditures for fiscal years 2020, 2021, and 2022. Previously this data was sourced

³ Please see CHIA's regulation 957 CMR 2.00 for the submission requirements of TME data.

⁴ Center for Health Information and Analysis (July 2021). *Updated Methodology for Grossing Up Reported TME-APM Commercial Partial Expenditures*. Available at: <https://www.chiamass.gov/assets/docs/p/tme-rp/2021-Commercial-Partial-Gross-Up-Revised-Methodology.pdf>

⁵ Because of the implementation of Patient Protection and Affordable Care Act in 2014, Commonwealth Care MCOs did not enroll new members in 2014 and was ended in 2015 while MassHealth MCOs started to enroll new members under the CarePlus plan in 2014. Thus, the TME data filed to CHIA by commercial payers who offer MassHealth MCOs includes traditional MCO members and the new CarePlus members.

from the VA's publicly available data.⁶ For the 2022 data collection this data was provided directly by the VA to CHIA to more accurately account for spending for Massachusetts veterans only.

Net Cost of Private Health Insurance (NCPHI)

CHIA calculated NCPHI for all Massachusetts residents, both those who are covered by private health insurance licensed by the Massachusetts Division of Insurance (DOI), and those obtaining coverage through out-of-state insurance plans. NCPHI also includes residents enrolling in private managed care plans of Medicare and MassHealth, but excludes out-of-state residents covered under Massachusetts-based insurance plans.

Because of substantial differences among segments of the Massachusetts health insurance market, NCPHI was calculated on a PMPM basis separately for the five different market segments: (1) merged market⁷; (2) large group fully-insured; (3) Medicare Advantage; (4) Medicaid MCOs and Commonwealth Care; and (5) self-insured. Each segment's PMPM amount was then multiplied by the estimated Massachusetts population in each segment to derive the total NCPHI.

Health Care Cost Growth Benchmark

The Health Care Cost Growth Benchmark is the projected annual percentage change in THCE in the Commonwealth, as established by the Health Policy Commission (HPC). The health care cost growth benchmark is tied to growth in the state's economy, the potential Gross State Product (GSP). Chapter 224 has set the potential GSP for 2015 at 3.6%. The HPC established the health care cost growth benchmark for 2017 at 3.6%. From 2018 to 2022, the HPC must set the benchmark equal to Potential Growth State Product (PGSP) minus 0.5%, which is set to 3.1% for 2022.

Annualized Trends, 2019 to 2021

CHIA used the annualized trend to examine per capita spending growth for 2019 to 2021, when the COVID-19 pandemic caused anomalous spending trends. Annualized trend from 2019 to 2021 was calculated as $(\text{2021 Value} / \text{2019 Value})^{(1/2)} - 1$.

⁶ National Center for Veterans Analysis and Statistics. <https://www.va.gov/vetdata/expenditures.asp>

⁷ Individuals and the Small Group form the "Merged Market" in Massachusetts, in which small group insurance laws apply to all small business and individual plans issued by an insurance carrier.

Health Care Expenditures by Service Category

This report includes a measure of statewide health care expenditures by service category. The purpose of this measure is to better understand the scale of changes in individual service categories and the share of THCE spending changes that are attributable to each category. CHIA's measure uses data that was reported by Massachusetts commercial payers, the Centers for Medicare and Medicaid Services (CMS), and MassHealth. Please note that this measure excludes the net cost of private health insurance (NCPHI) and the Health Safety Net.

Definition:

For the purposes of this report, health care expenditures by service category represent the annual sum of all THCE reported spending in each service category. Health care expenditures by service category include health care expenditures from public and private sources, and consists of: (i) all categories of medical payments to providers, and (ii) all patient cost-sharing amounts, such as deductibles, coinsurance, and copayments.

Data Years:

CYs 2020, 2021, 2022

Data Sources:

Data Category	Data Source
<u>Commercially-Insured Pharmacy Expenditures</u>	
Commercial Full-Claim	TME data reported by commercial payers to CHIA
Commercial Partial-Claim	TME data reported by commercial payers to CHIA with actuarial estimates
<u>Public Coverage Pharmacy Expenditures</u>	
MassHealth MCOs and ACO-As	TME data reported by commercial payers to CHIA
MassHealth (FFS, PCC, Temporary, ACO-B, MCO wrap, ACO-A wrap, and supplemental payments)	Reported by MassHealth
Programs Primarily for Dual-Eligibles (SCO, PACE, and One Care)	Reported by MassHealth
Medicare Advantage	TME data reported by commercial payers to CHIA
Medicare Parts A and B	CMS data summary to CHIA
Standalone Medicare Part D	CMS data summary to CHIA
Health Safety Net	Reported by the HSN
Veterans Health Administration	Sourced from publicly available VA data

Methods:

CHIA's measure of health care expenditures by service category includes all medical expenditures in THCE. As a result, health care expenditures by service category is calculated using both data elements included in THCE for which total expenditures are reported at the service category level and some data elements included in THCE for which total expenditures are not reported at the service category level.

Those insurance categories for which THCE data is provided at the service category level include the following: Commercial full-claim, Commercial partial-claim⁸, MassHealth MCO, wrap payments for MassHealth MCO and ACO-A members, MassHealth FFS, MassHealth PCC, MassHealth Temporary, MassHealth ACO-B, Medicare Advantage, and Medicare FFS (which includes Medicare Parts A and B and standalone Part D costs), Medicare standalone prescription drug plan (PDP) members. MassHealth wrap payments are included in this calculation for both MassHealth MCOs and ACO-As. Additional information on how spending data is collected and calculated in each of these categories can be found in the THCE section above.

Among the insurance categories for which expenditure data is reported by service category, there is a distinction between expenditures reported by private payers and expenditures reported by public payers. Private payers each submit expenditure data to CHIA in the same format and using the same methods, as defined in CHIA's TME data specifications. Public payers (i.e., MassHealth and CMS) each report expenditure data to CHIA in a manner that is consistent with their own program details. As a result, the service categories used by each of these payers differs somewhat from those used in TME data reporting. CHIA utilized the following crosswalks to align data reported by the public payers with data reported by private payers:

MassHealth (includes FFS, PCC, ACO-B, Temporary, and wrap payments for Medicaid MCOs and ACO-As)⁹

Service Category, as reported	Crosswalk to TME Service Categories
Hospital Inpatient	Hospital Inpatient
Hospital Outpatient	Hospital Outpatient
Physicians	Physician
Professionals	Other Professionals
Home Health and Community Health	Other
Long Term Care	Other
Pharmacy	Pharmacy
Dental	Other
Capitation	Non-Claims

⁸ Actuarial adjustments are made to commercial partial-claim expenditures to account for spending on "carved-out" services. For additional information on the methodology for making such adjustments, see the section above on THCE.

⁹ MassHealth also reports supplemental payments made to certain Massachusetts hospitals. These supplemental payments were categorized as non-claims expenditures.

Medicare FFS

Service Category, as reported	Crosswalk to TME Service Categories
Hospital Inpatient	Hospital Inpatient
Hospital Outpatient	Hospital Outpatient
Non-Hospital Outpatient	Other
Physician	Physician
Other Professionals	Other Professionals
Home Health Agency	Other
Hospice	Other
Skilled Nursing Facility	Other
Pharmacy	Pharmacy
Durable Medical Equipment	Other
Other Suppliers	Other

In addition, several insurance categories included in THCE do not rely on data reported at the service category level. These categories include SCO, PACE, and One Care. For each of these categories, CHIA estimated service category-level spending based on TME reported data. For SCO, PACE, and One Care, CHIA obtains a single aggregated expenditure amount from MassHealth. The amount was then apportioned into service categories based on the share of spending reported in each service category for all payers that submitted TME data for SCO, PACE, and One Care.¹⁰

Beginning in the 2023 Annual Report cycle (data year CY 2021), CHIA additionally collected telehealth spending in the Hospital Outpatient, Other Medical, Physician, and Other Professional service categories. Commercial and privately administered MassHealth and Medicare payers were asked to submit data for each of these four categories assigned to either In-Person or Telehealth using their own methodology. For example, payers were asked to report spending for physician telehealth visits under the Physician: Telehealth service sub-category. Unless otherwise indicated, aggregate spending for a given service category is the sum of in-person and telehealth spending for that service category.

MassHealth fee-for-service, PCC, and ACO-B program types submitted telehealth spending using a telehealth indicator. For example, Hospital Outpatient spending with a telehealth indicator of 1 was considered to be telehealth Hospital Outpatient spending.

¹⁰ CHIA collects SCO, PACE, and One Care data from TME data filers but uses MassHealth reported data for these insurance categories in THCE due to the fact that some payers that offer insurance in these markets do not report TME data to CHIA.

Telehealth spending data was not available for Medicare fee-for-service (Original Medicare) plans.

Data Limitations

CHIA utilized the service categories defined in the TME data specifications¹¹ when building the health care expenditures by service category measure. As highlighted above, both public and private payers utilize their own set of internal definitions for a given insurance category and these internal definitions may differ for a variety of reasons. As a result, measuring aggregate spending by service category is best used to identify broad trends in spending patterns over time.

In addition, it is important to note that CHIA does not receive TME data for all payers in the SCO, PACE, and One Care markets. In addition, CHIA established the share of spending by service category for the SCO market based on data from data from BMCHP, Commonwealth Care Alliance (CCA), Fallon Community Health Plan (Fallon), Tufts Medicare Advantage, and United SCO. For the One Care market, the share of spending by service category was determined using data from THPP and CCA. For the PACE market, the share of spending by service category was determined using data from Fallon.

Prescription Drug Rebates and Pharmacy Expenditures

To estimate how payer costs for pharmacy expenditures may be impacted by rebates received by health plans, CHIA developed a new data specification and began collecting data from health plans in June 2017. The submitted data included member months, aggregate prescription drug spending, and aggregate rebates received by the health plan from pharmacy benefit managers and manufacturers for calendar years 2019, 2020, and 2021. This data allows for a better understanding of the share of pharmacy spending that is attributable to prescription drug rebates and how that share has changed over time.

Definitions:

Prescription Drug Rebate Share of Pharmacy Expenditures: Aggregate prescription drug rebates divided by aggregate pharmacy expenditures.

Aggregate Prescription Drug Rebates: the sum of all rebates and other price concessions (including concessions from price protection and hold harmless contract clauses) provided by pharmaceutical manufacturers for prescription drugs with specified dates of fill, excluding manufacturer-provided fair market value bona fide service fees.

Aggregate Pharmacy Expenditures: the sum of all incurred claim allowed payment amounts to pharmacies for prescription drugs, biological products, or vaccines as defined by the payer's prescription drug benefit in a given calendar year, including member cost-sharing and excluding prescription drug rebates.

¹¹ See TME data specifications here: <http://www.chiamass.gov/assets/docs/p/tme-rp/data-spec-manual-tme.pdf>.

Additional information on CHIA's definitions of prescription drug rebates and pharmacy expenditures can be found in the data specification manual for prescription drug rebate data submitters here:

<http://www.chiamass.gov/prescription-drug-rebate-data-submission>.

Data Sources:

Prescription drug rebate data is reported for the following insurance categories:

- Commercial: Data submitted by commercial payers
- Medicare Advantage: Data submitted by commercial payers
- Medicare FFS/Medicare Prescription Drug Plans: Data submitted by commercial payers
- MassHealth FFS, ACO-B, and PCC: Data submitted by MassHealth
- MassHealth MCO and ACO-A: Data submitted by both MassHealth and commercial payers
- SCO, PACE, and OneCare: Data submitted by commercial payers

Data Years:

CYs 2020, 2021, 2022

Methods:

To estimate the prescription drug rebate share of total pharmacy expenditure for Massachusetts residents in a given insurance category, CHIA summed all reported pharmacy expenditures in the insurance category and divided that amount by the sum of all reported prescription drug rebates in that category.

For the MassHealth MCO/ACO-A insurance category, CHIA received rebate data from both MassHealth and commercial payers. The commercial payer rebate amounts represent supplemental rebates obtained by the commercial payers separately from the rebates obtained by MassHealth. When calculating the rebate share of spending for MCOs, CHIA combined the rebates amounts from both MassHealth and the commercial payers and divided that amount by total pharmacy expenditures reported by MassHealth.

Note that the Health Safety Net does not receive prescription drug rebates and the Veterans Health Administration did not submit prescription drug rebate to CHIA.

Estimated Pharmacy Expenditures Net of Rebates

Effective July 1, 2016, the Massachusetts Legislature amended M.G.L. c. 12C such that, when detailing cost growth trends in its annual report, CHIA is required to: "consider the effect of drug rebates and other price concessions in the

aggregate without disclosure of any product or manufacturer-specific rebate or price concession information, and without limiting or otherwise affecting the confidential or proprietary nature of any rebate or price.”¹²

To comply with this requirement, CHIA developed and implemented a new prescription drug rebate reporting requirement as described above. The data specifications for the new reporting requirement can be found here: <http://www.chiamass.gov/prescription-drug-rebate-data-submission>. Using the data reported as part of this collection, CHIA is able to estimate pharmacy expenditures net of prescription drug rebates and the impact of changes in rebates received by health plans on the pharmacy expenditure growth rate.

Definitions:

Pharmacy Expenditures Net of Rebates: Aggregate pharmacy expenditures minus aggregate prescription drug rebates.

Aggregate Prescription Drug Rebates: the sum of all rebates, and other price concessions (including concessions from price protection and hold harmless contract clauses) provided by pharmaceutical manufacturers for prescription drugs with specified dates of fill, excluding manufacturer-provided fair market value bona fide service fees.

Aggregate Pharmacy Expenditures: the sum of all incurred claim allowed payment amounts to pharmacies for prescription drugs, biological products, or vaccines as defined by the payer’s prescription drug benefit in a given calendar year, including member cost-sharing and excluding prescription drug rebates.

Additional information on CHIA’s definitions of prescription drug rebates and pharmacy expenditures can be found in the data specification manual for prescription drug rebate data submitters here:

<http://www.chiamass.gov/prescription-drug-rebate-data-submission>.

Data Sources:

Data Category	Data Source
<u>Rebate, Pharmacy Expenditure, and Member Month Data for Commercially-Insured Members</u>	
Commercial ¹³	Data reported by commercial payers to CHIA
<u>Rebate, Pharmacy Expenditure, and Member Month Data for Publicly-Insured Members</u>	
MassHealth MCO/ACO-As	Data reported by commercial payers and MassHealth to CHIA
MassHealth (FFS, PCC, ACO-B, and wrap payments)	Data reported by MassHealth to CHIA
Medicare Advantage (Part D)	Data reported by commercial payers to CHIA
Medicare FFS/Medicare Prescription Drug Plans:	Data reported by commercial payers to CHIA
Senior Care Options (SCO)	Data reported by commercial payers to CHIA
One Care	Data reported by commercial payers to CHIA

¹² M.G.L. c. 12C, § 16(a). <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter12C/Section16>.

¹³ Note: CHIA does not collection prescription drug rebate data for commercial members for whom the payer only has partial pharmacy claim data.

Data Category	Data Source
Programs of All-Inclusive Care for the Elderly (PACE)	Data reported by commercial payers to CHIA

Data Years:

CYs 2020, 2021, 2022

Methods:

To estimate pharmacy expenditures net of prescription drug rebates for all Massachusetts residents, CHIA utilized data reported in both the TME and prescription drug rebate data submissions received from payers. TME reported pharmacy expenditures were used to establish aggregate pharmacy expenditures for Massachusetts residents. Aggregate prescription drug rebates were estimated using the payer-specific rebate share, calculated as described above. To estimate aggregate prescription drug rebates, the reported prescription drug rebate share was multiplied by the TME reported pharmacy expenditures for a given insurance category, calendar year, and payer. The estimated aggregate prescription drug rebates were then subtracted from the aggregate pharmacy expenditures to arrive at estimated pharmacy expenditures net of prescription drug rebates. Data was calculated at the payer level for commercial rebates and at the insurance category level for the other rebate categories; with some exceptions noted below, the data was then summed to determine pharmacy expenditure net of rebates for all Mass. residents.

Several exceptions applied to the methods described above. First, in some instances payers notified CHIA that their TME data included rebates. In these cases, it was not possible to apply a rebate share to TME-reported pharmacy expenditures to estimate aggregate rebates.

For Medicaid MCO/ACO-As, CHIA received rebate data from both MassHealth and commercial payers. The commercial payer rebate amounts represent supplemental rebates obtained by the commercial payers separately from the rebates obtained by MassHealth. When calculating the rebate share of spending for each MCO, CHIA combined the rebate share reported by MassHealth for all MCOs and the rebate share reported by a given MCO representing the supplemental rebates the MCO negotiated separately from MassHealth.

For the Commercial Partial-Claim insurance category, CHIA utilized several approaches to determine the rebate share. For those payers that report both full-claim and partial-claim data, CHIA applied the rebate share reported for full-claim members to the pharmacy spending estimated for partial claim members.¹⁴ For those payers that only report partial-claim data, CHIA applied the rebate share for all commercial full-claim members except in instances where either (a) the payer was able to report rebate data for some of its partial claim members, or (b) the payer indicated that its TME data included prescription drug rebates. In the former case, CHIA applied the payer-reported rebate share. In the latter case, CHIA determined the ratio of estimated net pharmacy expenditures, calculated as described above, to the TME reported pharmacy expenditures for the commercial full-claim population. Commercial partial-claim pharmacy expenditures were then adjusted by this ratio.

¹⁴ Actuarial adjustments are made to commercial partial-claim expenditures to account for spending on "carved-out" services. For additional information on the methodology for making such adjustments, see the section above on THCE.

Similarly, for the SCO, PACE, and One Care categories, CHIA applied the rebate share reported for all members by private payers in the rebate data submissions to the estimated pharmacy expenditures which are calculated as described in the “Health Care Expenditures by Service Category” section above.

Lastly, for MassHealth programs that are administered by MassHealth (FFS, PCC, ACO-B), CHIA applied the rebates reported by MassHealth to all pharmacy expenditures reported for those programs as included in the THCE by Service Category.

Note that the Health Safety Net does not receive prescription drug rebates and the Veterans Health Administration reports pharmacy expenditures net of rebates to CHIA.

Total Medical Expenses (TME)

Data Source:

Collected annually by CHIA pursuant to M.G.L. c. 12 C, section 8, from both commercial and public payers. Please see Table TA-1 for a list of payers and reported data.

Data Year:

CYs 2020, 2021, 2022

Definitions: TME is defined as the total medical spending for a member population based on allowed claims (i.e. payer paid amount plus patient cost sharing) for all categories of medical expenses and all non-claims related payments to providers. TME is expressed on a PMPM basis.

- Member zip code TME measures the total health care spending of each Massachusetts zip code, based on member residence, rather than where members received services. Zip codes are self-reported by members, which may lead to certain inaccuracies, particularly in areas with high student or other transient populations.

TME can be measured on an unadjusted basis, which reflects actual spending but does not consider differences among member populations. TME may also be adjusted to reflect differences in member demographics and health status such as age, gender, and clinical profile. This report presents both unadjusted and health-status adjusted (H.S.A.) TME data.

- Unadjusted TME is the actual payments from a commercial payer and its members to health care providers. Unadjusted TME is presented for aggregated analyses across payers, such as statewide and regional analyses. Unadjusted TME is used for such purposes since payers in these analyses utilized different methods in adjusting for health status, and H.S.A. TME results calculated from different health status adjustment methods cannot be directly compared.
- Health-Status Adjusted TME is the total health care spending for the member population of a payer's membership based on allowed claims for all categories of medical expenses and all non-claims related

payments to health care providers, adjusted by health status, and expressed on a PMPM basis. H.S.A. TME is analyzed in order to examine the payer-specific TME growth rate for their member populations. This ensures that each payer's TME accounts for the health status and resource utilization of their member populations when comparing a payer's TME growth rate to the health care cost growth benchmark.

- Health-Status Adjustment score is a value that measures a member's illness burden and predicted resource use based on differences in member characteristics or other risk factors.
- Commercial full-claims data includes both self- and fully-insured commercial business for which claims for all medical services were available to the reporting payer. The data captures complete medical spending and is used to calculate commercial TME.
- Commercial partial-claims data includes self- and fully-insured commercial business where the employer separately contracts for one or more specialized services, such as pharmacy or behavioral health service management. In these cases, the reporting payer does not have access to the claims for the separately contracted services. As the full range of medical expenses is not included in the data reported by the payers, these partial-claims are not included in the TME analyses contained in this report.

The 2021 TME data is considered final, with up to 19 months of claims run-out. The 2022 TME data is considered final, with up to, on average, eight months of claims run-out.

Managing Physician Group TME

Data Source: Collected annually by CHIA pursuant to M.G.L. c. 12 C, section 8, from both commercial and public payers. Please see Table TA-1 for a list of payers and reported data.

Data Year:

CYs 2020, 2021, 2022

Definition:

Managing physician group TME measures the total health care spending of members whose plans require the selection of a primary care physician associated with a physician group, adjusted for health status. Thus, managing physician group TME reported by each payer contains exclusively managed care member information. The data reported for each physician group include TME for these members, even when care was provided outside of the physician group. Data related to pediatric physician groups were excluded from the physician group TME analyses.¹⁵

¹⁵ As defined in 957 CMR 2.00, pediatric physician practice is a physician group practice in which at least 75% of its patients are children up to the age of 18.

Parent Physician Groupings:

To identify and assess the top ten physician groups displayed on the pages, “Trends in Managing Physician Group Commercial Unadjusted TME, 2021-2022” and “Trends in Managing Physician Group Commercial HSA TME, 2021-2022”, in the 2024 Annual Report, CHIA grouped the following parent provider groups:

Grouped Name	Parent Physician Groups
BILH Entities	Beth Israel Lahey Health (BILH); Beth Israel Deaconess Care Organization (BIDCO); Beth Israel Deaconess Physician Organization – Boston; Lahey Clinic; Lahey Clinical Performance Network
Steward	Steward Medical Group; Steward Network Services
UMass	UMass Memorial Healthcare; UMass Memorial Medical Group

Alternative Payment Methods (APM)

Definition:

APMs are payment methods used by a payer to reimburse health care providers that are not solely based on the fee-for-service (FFS) basis. In some APM contracts, financial risk associated with both the occurrence of medical conditions as well as the management of those conditions is shifted from payers to providers to incentivize efficiency and quality of health care delivery.

Data Year:

CYs 2020, 2021, 2022

Data Source:

CHIA collects data on APM from the ten largest commercial payers in the Massachusetts commercial health insurance market, and commercial payers that offered Medicare Advantage plans and MassHealth MCO/ACO-A plans for CYs 2020, 2021, and 2022. Please see Table TA-1 for a full list of payers and reported data. The APM data was collected at the member zip code level and the managing physician group level, similar to the TME data. The reported payment information, especially the non-claims payments, could differ from the final payment amounts since quality and financial performance is normally part of the features of alternative payment methods. These final settlements for quality and financial performance have not been completed at the time of APM data submission deadline, which was September 2022.

The APM data is collected by insurance category, product type, and payment method according to member zip code and managing physician group. The APM data is only collected for Massachusetts residents, as determined by the member’s residence on the last day of the reporting year, and for managing physician groups based in

Massachusetts. For payment method assignment, payers classified physician groups and members based on the following payment method hierarchy: (1) global payment; (2) limited budget; (3) bundled payment; (4) other, non-FFS based; and (5) FFS.

The Quality Measure Catalog data presented in this chapter is sourced from an annual payer survey issued by CHIA, in collaboration with the Health Policy Commission (HPC). Please review the [2023 Quality Measure Catalog Executive Summary](#) available on CHIA's website for details about the survey, participating payers, the Aligned Measure Set, and Fidelity rate calculation methodology.

Definitions:

Global Payment: Global payments are a type of payment arrangement between payers and providers that establishes a spending target for a comprehensive set of health care services to be delivered to a specified population during a defined time period. Global payment arrangements may shift some financial risk from payers to providers. In these cases, if costs exceed the budgeted amounts, providers must absorb those costs, subject to negotiated risk sharing agreements. On the other hand, providers may share in, or retain, the savings if costs are lower than the budgeted amounts and health care quality performance targets are met.

It is important to note that within the framework of a global payment arrangement with a managing physician group, payments to service providers are generally made on a FFS basis. Also, global payments as defined here do not consider the extent of risk, if any, borne by the managing physician group. It is difficult to capture levels of risk, as there is currently no standardized approach to risk classification or reporting.

Limited Budget: Limited budgets, like global payments, represent a move away from FFS-based payments. Limited budgets are payment arrangements whereby payers and providers, either prospectively or retrospectively, agree to pay for a specific set of services to be delivered by a single provider. This could include, for instance, capitated primary care or oncology services. Limited budgets also shift some financial risk from payers to providers.

Bundled Payment: Bundled payments are a method of reimbursing providers, or a group of providers, for providing multiple health care services associated with defined “episodes of care” (e.g. knee surgery, pregnancy and delivery, and etc.) for a patient or set of patients. These payments may include services developed based upon clinical guidelines, severity adjustments to account for the general health status of a patient and comorbidities (other related ailments), and even designated “profit” margins and allowances for potential complications.

Other, non-FFS-based: This category includes all other payment arrangements that are not based on a FFS model, but that also do not easily fit into any of the other categories. This category includes supplemental payments for the Patient Center Medical Home Initiative (PCHMI), for instance.

Fee-for-service (FFS): Under this model, health care providers are reimbursed by payers at negotiated rates for individual services delivered to patients. A variety of FFS payment arrangements exist, including, but not limited to, Diagnosis Related Groups (DRGs), per-diem payments, claim-based payments adjusted by performance measures, and discounted charge-based payments. This category also includes pay-for-performance incentives that accompany FFS payments.

Table TA-1: List of Payers Reporting 2020- 2022 TME and APM Data

Payer	Data Type
Aetna Health Insurance Company (Aetna)	Commercial full and partial-claims; Medicare Advantage
Blue Cross Blue Shield of Massachusetts (BCBSMA)*	Commercial full and partial-claims; Medicare Advantage
Commonwealth Care Alliance (CCA)	Medicare Advantage; OneCare; SCO
CIGNA Health and Life Insurance Company (Cigna)	Commercial full and partial-claims
Fallon Health (Fallon)	Commercial full and partial-claims; Medicaid (e.g. ACO, MCO); Medicare Advantage; PACE; SCO
Harvard Pilgrim Health Care (HPHC)	Commercial full and partial-claims; Medicare Advantage
Health New England (HNE)	Commercial full and partial-claims; Medicaid (e.g. ACO, MCO); Medicare Advantage
Health Plans, Inc. (HPI)	Commercial full -claims
Mass General Brigham Health Plan (MGBHP) (formerly AllWays)	Commercial full and partial-claims; Medicaid (e.g. ACO, MCO)
Tufts Public Plans – (THPP)	Commercial full-claims; Medicaid (e.g. ACO, MCO); OneCare
Tufts Health Plan (THP)	Commercial full and partial-claims
Tufts Medicare Advantage	Medicare Advantage; SCO
UniCare Health Insurance Company (UniCare)[§]	Commercial partial-claims
United Healthcare Insurance Company (United)	Commercial full and partial-claims
United Medicare Advantage	Medicare Advantage
United Senior Care Options (SCO)	OneCare; SCO
WellSense Health Plan (formerly BMC HealthNet)	Commercial full-claims; Medicaid (e.g. ACO, MCO); SCO

Telehealth Claims

Data Source:

Medical claims were sourced from the Massachusetts All-Payer Claims Database (MA APCD) with claims run-out through June 2023.

Data Year:

CYs 2020, 2021, 2022

Definitions:

A claim line was classified as a telehealth service if *any* of the following codes was present:

Code Set	Values
Place of Service	002, 010
Procedure	98966, 98967, 98968, 98969, 98970, 98971, 98972, 99421, 99422, 99423, 99441, 99442, 99443, G0071, G0406, G0407, G0408, G0425, G0426, G0427, G0459, G0508, G0509, G2010, G2012, G2025, G2061, G2062, G2063, Q3014, T1014
Procedure Modifier	GT, 95, G0, GQ
Revenue	780-789

Methods:

CHIA analyzed medical claims for Massachusetts residents with primary, medical coverage enrolled in commercial product types. Analysis was limited to professional claims, which comprise the majority of telehealth services, for which the data submitter was the primary payer.

Reported “telehealth spending” includes claims-based payments to providers by both payers and members (e.g., copays, coinsurance, and deductibles). For claim lines covered under capitation arrangements, the payer-reported fee-for-service equivalent amount was used.

Servicing providers were identified by the National Provider Identifiers (NPIs) submitted on the claims. A reference file from the National Plan and Provider Enumeration System (NPPES), the NPI Registry, which is administered by the Centers for Medicaid and Medicare Services (CMS), was used to obtain provider taxonomy (i.e. specialty and provider type) codes. These taxonomy codes were grouped into broader “Provider Type” categories for reporting.

Top conditions were defined by the principal diagnosis code submitted for each claim line. Diagnosis codes were rolled up to the first three characters of the ICD-10 code (e.g., F41) for reporting. ICD-10 category “U07” (“Emergency use of U07”) was renamed “COVID-19” to reflect the fact that >99% of claim lines in this diagnosis category had a principal diagnosis code of “U071” (COVID-19).

Data Limitations:

Analysis was restricted to commercial insurance and did not include members with primary MassHealth or Medicare coverage. Most commercial members in the MA APCD are enrolled in fully-insured or Group Insurance Commission (GIC) coverage. Data for MGBHP was excluded due to missing fee-for-service equivalent amounts for claims paid under capitation arrangements.

