CENTER FOR HEALTH INFORMATION AND ANALYSIS

PERFORMANCE OF THE MASSACHUSETTS HEALTH CARE SYSTEM

THCE • TME • APM

TECHNICAL APPENDIX 2018

CHIA.

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

TECHNICAL APPENDIX

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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) 2015, 2016, 2017

Data Sources:

THCE CATEGORY	DATA SOURCE
Commercially Insured Expenditures	
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
Public Coverage Expenditures	
MassHealth Managed Care Organizations (MCOs)	TME data reported by commercial payers to CHIA
Commonwealth Care MCOs	TME data reported by commercial payers to CHIA
MassHealth (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 MassHealth
Medical Security Program	Reported by commercial payers to CHIA
Veterans Health Administration	Veterans Health Administration (VA) summary data reported to CHIA for FYs 2014, 2015, and 2016
Net Cost of Private Health Insurance	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)
Massachusetts population	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 September 1st of each year. This statutorily-mandated timeline impacts the model design and approach, as claim payment amounts are often not finalized until several months after the close of the calendar year. As such, the THCE timeline does not provide enough time for full claims run-out, provider quality and cost performance evaluation, and financial settlements for the performance year. Thus, in order to report on THCE within the timeline required, estimates of claims run-out and provider settlements were incorporated into the initial assessment for a given performance year.

This report provides an initial assessment for the 2017 performance year, examining THCE growth between CYs 2016 and 2017, and a final assessment for the 2016 performance year, examining THCE growth between CYs 2015 and 2016. The initial assessment for the 2016 performance year was presented in CHIA's September 2017 *Annual Report*. The final assessment for the 2016 performance year updates the initial results with up to 16 months of claims run-out and settlements.

This initial assessment of THCE is comprised of TME-sourced aggregate data from commercial payers with up to four 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. The final assessment for THCE growth between 2016 and 2017 will be published in next year's *Annual Report*, with an expected publication date of September 2019.

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 initial 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. These adjustments were made by first calculating partial-claim TME per member per month (PMPM) and the PMPM amount for each service category using each payer's zip-code level TME data.[4] Next, CHIA calculated health-status adjusted (H.S.A.) TME and the PMPM amount by service category for the full-claim population, using the risk scores of the TME partial-claim population of the payer. For service categories where the PMPM amount of the partial-claim population exceeded that of the adjusted PMPM amount of the full-claim population, the reported amount was used. For the remaining service categories, the PMPM amount was adjusted to represent the same proportion of TME as the full-claim population, with excess non-claims redistributed to the other service categories. If the PMPM amount for each service category of the partial-claim population was less than that of the full-claim population, adjusted to partial-claim risk scores, CHIA used the adjusted full-claim PMPM amount for the service categories.

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), Commonwealth Care MCOs, MassHealth, Medicare, Medicare Advantage plans, Health Safety Net (HSN), Medical Security Program, and Veteran Affairs.

Data for MassHealth MCO, Commonwealth Care MCO 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. Data on the Medical Security Program was sourced from the commercial payers as part of the annual TME data filing. Veterans Health Administration (VA) data was provided to CHIA by the VA and covers expenditures for fiscal years 2015, 2016, and 2017.

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

[4] As defined in 957 CMR 2.00, service categories of TME data include: hospital inpatient, hospital outpatient, professional physician, professional other, pharmacy, other, and non-claim payments.

[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.

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 market[6]; (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.

Further detail on these data sources and the THCE methodology can be found in CHIA's methodology paper on *Massachusetts Total Health Care Expenditure Methodology*.[7]

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 2018.

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), the Veterans Health Administration, and the Health Safety Net.

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[6] 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.

[7] Center for Health Information and Analysis (August 2015). *Methodology Paper: Massachusetts Total Health Care Expenditures.* Available at: http://www.chiamass.gov/assets/docs/r/pubs/15/THCE-Methodology-Paper.pdf. (Last accessed: September 11, 2017)

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 2015, 2016, 2017

Data Sources:

Data Category	Data Source
Commercially-Insured Pharmacy Expenditures	
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
Public Coverage Pharmacy Expenditures	
MassHealth MCOs	TME data reported by commercial payers to CHIA
Commonwealth Care MCOs	TME data reported by commercial payers to CHIA
MassHealth (FFS, PCC, Temporary, CommCare wrap, MCO wrap, CarePlus 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 MassHealth
Medical Security Program	Reported by commercial payers to CHIA

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-claim[8], MassHealth MCO, wrap payments for MassHealth MCO and CarePlus members, MassHealth FFS, MassHealth PCC, MassHealth Temporary, Commonwealth Care MCO, wrap payments for MassHealth Commonwealth Care members, 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 Commonwealth Care MCOs. 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, Temporary, and wrap payments for Medicaid MCOs, CarePlus MCOs, and Commonwealth Care MCOs)[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

Medicare FFS

Service Category, as reported	Crosswalk to TME Service Categories

[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.

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]

Data Limitations

CHIA utilized the service categories defined in the TME data specifications[11] 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 One Care market based on data from Tufts Public Plans and Fallon Community Health Plan. For the PACE market, the share of spending by service category was determined using data from Fallon Community Health Plan.

[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.

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

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 manufacturers for calendar years 2015, 2016, and 2017. 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, discounts, 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:

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: Data submitted by commercial payers
-MassHealth FFS and PCC: Data submitted by MassHealth
-MassHealth MCO and CarePlus: Data submitted by both MassHealth and commercial payers
-SCO, PACE, and OneCare: Data submitted by commercial payers

Data Years:

CYs 2015, 2016, 2017

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 insurance category, CHIA received rebate data from both MassHealth and commercial payers. The commercial payer rebate amounts represent supplemental rebates obtained by the comemercial 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, discounts, 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.

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

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
Rebate, Pharmacy Expenditure, and Member Month Data for Commercially-Insured Members	
Commercial[13]	Data reported by commercial payers to CHIA
Rebate, Pharmacy Expenditure, and Member Month Data for Publicly-Insured Members	
MassHealth MCOs	Data reported by commercial payers and MassHealth to CHIA
Commonwealth Care MCOs	Data reported by commercial payers to CHIA
MassHealth (FFS, PCC, Temporary, and wrap payments)	Data reported by MassHealth to CHIA
Medicare Advantage (Part D)	Data reported by commercial payers to CHIA
Standalone Medicare Part D	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
Programs of All-Inclusive Care for the Elderly (PACE)	Data reported by commercial payers to CHIA
Medical Security Program	Reported by commercial payers to CHIA

Data Years:

CYs 2015, 2016, 2017

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

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

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 insurance category level and 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. In these instances, CHIA calculated a per member per month (PMPM) pharmacy expenditure net of rebates amount using the prescription drug rebate filing. This net pharmacy PMPM amount was then multiplied by the member months reported in TME for a given payer, insurance category, and calendar year to estimate pharmacy expenditures net of prescription drug rebates for Massachusetts residents.

Second, in some instances payers notified CHIA that they utilize a capitated payment arrangement for certain providers that is inclusive of pharmacy costs. In TME, these capitated payments are recorded as non-claims, rather than split out by service category. In these instances, CHIA was able to work with the payers to review differences in their TME and rebate reporting to estimate the amount of pharmacy expenditures reported as non-claims in TME. CHIA then performed the same calculation described above to account for rebates incurred on pharmacy expenditures reported as non-claims payments in TME.

Third, for Medicaid MCOs, 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.

For Commercial non-TME filers, CHIA applied the rebate share for all commercial full-claim members to the estimated pharmacy expenditures which are calculated as described in the "Health Care Expenditures by Service Category" section above.

[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, CHIA applied the combined rebate share reported for FFS and PCC members to all pharmacy expenditures that qualify as program payments for FFS, PCC, and Temporary members to all MCO, CarePlus, and Commonwealth Care MCO wrap pharmacy payments that qualify as program payments.

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 2015, 2016, 2017

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 2015 and 2016 TME data is considered final, with up to 16 months of claims run-out. The 2017 TME data is considered preliminary and includes paid claims available to the payers at the time of the May 2017 submission. However, claims continued to be paid throughout 2018 for services rendered in 2017. In order to report the preliminary 2017 TME data that is complete and comparable to the final 2015 TME, the payers applied completion factors, which include payer estimates for incurred but not reported (IBNR) ratios by type of service to the preliminary 2017 TME data.

The reported payment data, especially the non-claims payments, provided by payers in the preliminary 2016 TME submission in May 2017 could differ materially from the final results provided by payers in May 2018. For certain payers, much of the measured quality scores and financial/risk performance for 2016 were not available at the time of the preliminary TME submission deadline, which was May 2017. Payers included estimates for the final settlements in the preliminary data. Subsequently, payers have updated their TME submissions to reflect actual settlements. As such, the final 2016 TME reported by some payers could differ from their preliminary 2016 TME.

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 2015, 2016, 2017

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]

Alternative Payment Methods (APM)

Definition:

APMs are payment methods used by a payer to reimburse heath 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 2015, 2016, 2017

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, MassHealth MCO plans, and Commonwealth Care plans for CYs 2015, 2016, and 2017. 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. And these final settlements for quality and financial performance have not been completed at the time of APM data submission deadline, which was June 2018.

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.

CHIA also collects supplemental data from payers whose members' primary care providers were engaged in global payment contracts for 2017. Data was collected by risk type, carved-out benefits and commercial market segment. Risk type was identified as a payment arrangement that was either shared savings only or that had both upside and

[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.

downside risk. Payers indicated whether the benefits carved out of the global budget were pharmacy, behavioral health, other or some combination of the three. APM member months were attributed to one of five commercial market segment classifications: Individual, Small Group (Employer group with 1-50 eligible employees), Mid-Size (51-100), Large (101-499) and Jumbo (500 or more).

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.[16]

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 2015- 2017 TME Data and 2015-2017APM 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
BMC HealthNet (BMCHP)	Commercial full-claims; MassHealth MCO; Commonwealth Care
CeltiCare Health Plan (CeltiCare)	Commercial full-claims; MassHealth MCO; Commonwealth Care
Connecticut General Life Insurance Company – Medical and Cigna Health and Life Ins. Co. (Cigna-East)	Commercial full-claims
CIGNA Health and Life Insurance Company (CHLIC, or Cigna West)	Commercial full and partial-claims
Fallon Health (Fallon)	Commercial full and partial-claims; MassHealth MCO; Medicare and Medicaid Dual Eligibles, 21 – 64 and 65+; Commonwealth Care; Medicare Advantage
Harvard Pilgrim Health Care (HPHC)¶	Commercial full and partial-claims
Health New England (HNE)*	Commercial full-claims; MassHealth MCO; Medicare Advantage
Neighborhood Health Plan (NHP)	Commercial full-claims; MassHealth MCO; Commonwealth Care
Tufts Public Plans - Network Health (Network Health)	Commercial full-claims; MassHealth MCO; Medicare and Medicaid Dual Eligibles, 21 – 64; Commonwealth Care
Tufts Health Plan (Tufts HP)	Commercial full and partial-claims; Medicare Advantage
UniCare Health Insurance Company (UniCare)§	Commercial partial-claims
United Healthcare Insurance Company (United)*	Commercial full-claims; Medicare Advantage
Aetna Health Insurance Company (Aetna)	Commercial full and partial-claims; Medicare Advantage

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Publication Number: 18-255-CHIA-03A