**Annual Report on the Performance of the Massachusetts Health Care System:**

**September 2015**

**Technical Appendix**

**Table of Contents**

* Total Health Care Expenditures (THCE)
* Health Care Cost Growth Benchmark
* Total Medical Expenses (TME)
* Managing Physician Group TME
* Alternative Payment Methods (APM)

**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]](#footnote-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]](#footnote-2)

**Data Year:** Calendar years (CYs) 2012, 2013, 2014

**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 |
| Non-TME Filers | Actuarial estimates from CMS\* MLR reporting data and Supplemental Health Care Exhibit from the National Association of Insurance Commissioners (NAIC) by commercial payers with Massachusetts contracts |
| **Public Coverage Expenditures** |  |
| MassHealth 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 |
| Medicare Part D | CMS data summary to CHIA |
| Health Safety Net | Reported by MassHealth |
| Medical Security Program | Reported by commercial payers to CHIA |
| Veteran Affairs | National Center for Veteran Analysis and Statistics (FYs 2012, 2013, and 2014) |
| **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 2014 performance year, examining THCE growth between CYs 2013 and 2014, and a final assessment for the 2013 performance year, examining THCE growth between CYs 2012 and 2013. The initial assessment for the 2013 performance year was presented in CHIA’s September 2014 *Annual Report*. The final assessment for the 2013 performance year updates the initial results with up to 16 months of claims out and settlements.

This initial assessment of THCE was 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. The final assessment for THCE growth between 2013 and 2014 will be published in next year’s *Annual Report*, with an expected publication date of September 2016.

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 was TME-reported data, which was 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 submitted 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]](#footnote-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]](#footnote-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.

To include expenditures from the commercial payers with smaller market shares in Massachusetts that are not required to submit TME data, CHIA utilized expense information from publicly-available data sources. For both 2012 and 2013 spending, the Medical Loss Ratio (MLR) reports filed with the federal Center for Consumer Information and Insurance Oversight (CCIIO) were used. For 2014 spending, the data from Supplemental Health Care Exhibit was used due to the timing of data availability at the time of compiling this report. Only commercial payers with established Massachusetts contracts were included in the calculation, as THCE is intended to capture health care expenditures for Massachusetts residents only. To estimate the proportion of the reported spending that applies to Massachusetts residents, CHIA used hospital-reported discharge data to estimate the proportion of hospital inpatient discharges that were non-Massachusetts residents. This proportion was then applied to the reported spending to exclude the estimated proportion of expenditures on behalf of non-Massachusetts residents. This approach ensured that THCE included expenditures from all private health insurance plans that are licensed to sell health insurance in Massachusetts.

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]](#footnote-5) Massachusetts beneficiaries’ expenditures from Medicare Parts A, B and 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. The data source for Veteran Affairs spending was the annual reported expenditures of “Medical Care” by the National Center for Veteran Analysis and Statistics.[[6]](#footnote-6)

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[[7]](#footnote-7); (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*.[[8]](#footnote-8)

**Health Care Cost Growth Benchmark**

Health Care Cost Growth Benchmarkis 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 2014 at 3.6%. Subsequently, the HPC established the health care cost growth benchmark for 2014 at 3.6%.

**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 2012, 2013 and 2014

**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 2013 TME data is considered final, with up to 16 months of claims run-out. The 2014 TME data is considered preliminary and includes paid claims available to the payers at the time of the May 2015 submission. However, claims continued to be paid throughout 2015 for services rendered in 2014. In order to report the preliminary 2014 TME data that is complete and comparable to the final 2013 TME, the payers applied completion factors, which include payer estimates for incurred but not reimbursed (IBNR) ratios by type of service to the preliminary 2014 TME data.

The reported payment data, especially the non-claims payments, provided by payers in the preliminary 2014 TME submission could differ materially from the final results. For certain payers taking into account the quality and financial performance of providers, much of the measured quality scores and financial/risk performance for 2014 were not available at the time of the TME submission deadline, which was May 1st 2015. Payers included estimates for the final settlements in the preliminary data. As such, the final 2014 TME reported by some payers could differ from their preliminary 2014 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 2012, 2013 and 2014

**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.[[9]](#footnote-9)

**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:** CY2014

**Data Source:** In May of 2015, CHIA collected 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 CY 2014. 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 May 15th, 2015.

The APM data is collected by insurance category, by product type, and by payment method for reporting 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 payment methods for physician groups and members based on the payment method allocation hierarchy: (1) global payment; (2) limited budget; (3) bundled payment; (4) other, non-FFS based; and (5) FFS.

In May of 2015, CHIA also collected supplemental data from payers whose members’ primary care providers were engaged in global payment contracts for 2014. 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 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.[[10]](#footnote-10)

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 2013 - 2014 TME Data and 2014 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 |
| **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-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 |
| **Minuteman Health** | Commercial full-claims |
| **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, BCBSMA, HNE and United reported updated 2012 final TME data to ensure consistent risk adjustment tools were applied across 2012, 2013 and 2014 data.

¶ HPHC’s commercial partial-claim population is administered by Health Plans Inc.

§ UniCare does not report physician group TME because it only offers indemnity plans and its members are not required to select primary care physicians.

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: August 20, 2015) [↑](#footnote-ref-1)
2. Defined in M.G.L. c. 12C, Section 1. [↑](#footnote-ref-2)
3. Please see CHIA’s regulation 957 CMR 2.00 for the submission requirements of TME data. [↑](#footnote-ref-3)
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. [↑](#footnote-ref-4)
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. [↑](#footnote-ref-5)
6. Spending information from Veterans Affairs is available at <http://www.va.gov/vetdata/Expenditures.asp> (Last accessed August 20, 2015). [↑](#footnote-ref-6)
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. [↑](#footnote-ref-7)
8. 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: August 20, 2015) [↑](#footnote-ref-8)
9. 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. [↑](#footnote-ref-9)
10. [↑](#footnote-ref-10)