COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION

TECHNICAL APPENDIX D
DATA SOURCES

ADDENDUM TO 2019 COST TRENDS REPORT

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1 Summary

This technical appendix lays out the data sources used by the Health Policy Commission (HPC) in the 2019 Cost Trends Report.

2 Agency for Healthcare Research and Quality

2.1 Healthcare Cost and Utilization (HCUP), Nationwide Inpatient Sample (NIS)

Description of data: The Healthcare Cost and Utilization Project (HCUP) is a family of databases and related software tools and products developed through a Federal-State-Industry partnership and sponsored by AHRQ. HCUP databases are derived from administrative data and contain encounter-level, clinical and nonclinical information including all-listed diagnoses and procedures, discharge status, patient demographics, and charges for all patients, regardless of payer (e.g., Medicare, Medicaid, private insurance, uninsured). The HCUP databases are based on the data collection efforts of organizations in participating States that maintain statewide data systems and are Partners with AHRQ. The Nationwide Inpatient Sample (NIS) is the largest publicly available all-payer hospital inpatient care database in the United States. Researchers and policymakers use NIS data to identify, track, and analyze trends in health care utilization, access, charges, quality, and outcomes.

Available from: http://www.hcup-us.ahrq.gov/nisoverview.jsp

2.2 Medical Expenditure Panel Survey (MEPS)

Description of data: The Medical Expenditure Panel Survey is an annual survey containing detailed information on health care expenditures, insurance, and health status conducted by the Agency for Healthcare Research and Quality. The survey has two components: an individual household survey and a survey of employers (the Insurance Component). The survey makes data available via pre-populated tables. For this report, we use the Insurance Component tables which can be found at the URL below. We use average premiums for all firm sizes.

Available from: http://meps.ahrq.gov/mepsweb/data_stats/quick_tables.jsp

2.3 Prevention Quality Indicators (PQI)

Description of data: The Prevention Quality Indicators are a set of measures and composite measures of area level outpatient access to quality care. They investigate issues of access to care at a regional level. The PQI were developed into software (the QI module) that can be implemented on a wide-range of data.

Available from: http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx

3 American Hospital Association

3.1 Trendwatch

Description of data: The AHA surveys their members annually in the form of the AHA Annual Survey. Trendwatch synthesizes these data, providing analysis on the latest in hospital and health system trends.

Available from: https://www.aha.org/guidesreports/2019-10-25-trendwatch-chartbook-2019

4 Center for Health Information and Analysis

Description of source: In 2012, the Massachusetts Legislature passed Chapter 224 of the Acts of 2012 (Chapter 224), *An Act Improving the Quality of Health Care and Reducing Costs Through Increased Transparency, Efficiency and Innovation*. Chapter 224 created the Center for Health Information and Analysis (CHIA) to monitor the Massachusetts health care system and to provide information to support improvements in quality, affordability, access, and outcomes. In this Annual Report and in other reports in the Health System Performance series, CHIA provides statistics and analysis to support these goals.

4.1 Annual Report on the Performance of the Massachusetts Healthcare System

Description of data: Detailed data on spending and trends for the several years including Total Medical Expenses, Total Health Care Expenditures, and other data are included with CHIA's annual report and supplemental data books.

Available from: http://www.chiamass.gov/annual-report/

4.2 Annual Report – Alternative Payment Methods

Description of data: CHIA annual report on the performance of the healthcare system examines APM coverage in the Massachusetts commercial market, compares coverage rates, and examines types of alternative payment methods in use. CHIA also collects supplemental APM data on the extent to which global budgets included some downside risk. CHIA currently plans to continue to collect this data in future years as part of the standard APM data collection.

Available from: http://www.chiamass.gov/annual-report/

4.3 Annual Report – Total Medical Expenses

Description of data: Total Medical Expenses (TME) represents the full amount paid to providers for health care services delivered to a payer's covered enrollee population (payer and enrollee cost–sharing payments combined). TME covers all categories of medical expenses and all non-claims related payments to providers, including provider performance payments. On an annual basis, the 10 largest commercial payers file TME reports with the Center for Health Information and Analysis (CHIA).

Available from (databook): http://www.chiamass.gov/annual-report/

4.4 Annual Report – Private Commercial Contract Enrollment, Coverage Costs, Cost-Sharing, and Payer Use of Funds

Description of data: Monitors health insurance coverage in the Commonwealth of Massachusetts, where coverage is defined by unique Massachusetts residents in primary, medical membership within the top 12 commercial payers and, to the extent data allow, within MassHealth (Medicaid) and Medicare. Enrollment Trends is produced using the Massachusetts All-Payer Claims Database (MA APCD), supplemented with payer-reported data (where needed), and data from MassHealth, the Massachusetts Health Connector, and the Centers for Medicare and Medicaid Services (CMS).

In producing enrollment trends, CHIA uses the MassHealth enrollment snapshot, which includes MassHealth enrollment by benefit type and demographic category. The snapshot report is produced by the MassHealth Budget Office.

Available from: http://www.chiamass.gov/annual-report/

4.5 Enrollment Trends

Description of data: Enrollment Trends is a recurring report released every six months. *It* monitors Massachusetts member enrollment in health insurance for all payers with a large presence in Massachusetts, including commercial and public payers.

Available from: http://www.chiamass.gov/enrollment-in-health-insurance/

4.6 All-Payer Claims Database

Description of data: The Massachusetts All-Payer Claims Database (APCD) is an essential resource with which researchers can examine health care spending and the evolution of health care and health insurance markets. The APCD contains medical, pharmacy, and dental claims from all payers that insure Massachusetts residents, as well as information about members, insurance products, and provider characteristics. It does not include payments that occur outside of the claims system, such as supplemental payments related to quality incentives or alternative payment methods, nor does it include self-pay spending that consumers incur outside of their insurance coverage.

The HPC used an analytic data set that consisted of claims for the five of the larger commercial payers – Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), Tufts Health Plan (THP), Neighborhood Health Plan (now AllWays Health Partners), and Anthem BCBS (Unicare). Together these payers represent 71% of the commercial market in Massachusetts. Due to the Gobeille v Liberty Mutual Insurance ruling (2016), most claims from self-insured employers are no longer included in the APCD and thus, the APCD's representation of the commercial market is less than it would otherwise be.

Available from: http://www.chiamass.gov/ma-apcd/

4.7   Massachusetts Acute Hospital Case Mix Database

Description of source: The Massachusetts Acute Hospital Case Mix Database is a database comprised of:

- Inpatient Discharge Database

- Outpatient Observation Database

- Emergency Department Database

Acute Hospital Case Mix data includes case specific, diagnostic discharge data that describe socio-demographic characteristics of the patient, the medical reason for the admission, treatment and services provided to the patient, the duration and status of the patient's stay in the hospital, and the full, undiscounted total and service-specific charges billed by the hospital to the general public.

This patient-level data supports the analyses of such issues as preventable hospitalizations, hospital market analysis, alternative care settings, the patient care continuum, and comparative costs and outcomes in acute care hospitals.

Hospital Inpatient Discharge Database

Description of data: The Hospital Inpatient Discharge Database (HIDD) contains comprehensive patient-level information including socio-demographics, clinical data, and charge data. It is used to establish reasonable and adequate rates, to enable hospitals to be grouped for comparing costs, to assist in the formulation of health care delivery and financing policy, and to assist in the provision and purchase of health care services.

Outpatient Observation Database

Description of data: The Outpatient Hospital Observation Discharge Database (OOD) contains comprehensive patient-level information, including socio-demographics, clinical data, and charge data. The OOD is used by hospitals, strategic planners, policy makers, researchers, and program evaluators to establish payment rates and to inform health care policy development and public health studies. For more information about this data, please see the documentation manual.

Emergency Department Database

Description of data: The Emergency Department (ED) Database contains patient demographics, clinical characteristics, services provided, charges, and hospitals and practitioner information, as well as mode of transport. The report uses data from all Massachusetts residents who visited an acute hospital Emergency Department site from the fiscal year 2011 to the fiscal year 2016.

Available from: http://www.chiamass.gov/case-mix-data/

4.8   Massachusetts Hospital Cost Report

Description of data: CHIA collects annual hospital cost report for both acute care and non-acute care hospitals. The Massachusetts Hospital Cost Report leverages data already reported by hospitals to Medicare on the CMS 2552-10 filing, while still collecting data specific to Massachusetts hospitals. This report uses data from 2010 to 2018.

Available from: http://www.chiamass.gov/hospital-cost-reports-2/

5 Centers for Medicare & Medicaid Services

5.1   National and State Health Expenditures Accounts

Description of data: The National Health Expenditures Accounts aim to quantify the complete set of health expenditures in the U.S. in a comprehensive, multidimensional, and consistent way. Health spending is measured in a comprehensive yet mutually exclusive structure to allow accounting for the full set of spending, for example, by payer and/or by service category. The data presented in this report as health expenditures derive primarily from the subset called Personal Health Expenditures (which exclude some health spending such as public health and research spending) and, in some cases, from the further subset of those expenditures that are paid for via private health insurance. The sources CMS uses to build this dataset include the U.S. Census Bureau, the American Medical Association, the American Hospital Association and IMS as well as household data from surveys such as the National Medical Care Expenditure Survey (National Center for Health Services Research, 1987) and later, the Medical Expenditure Panel Survey-Household Component (Agency for Healthcare Research and Quality, 1996-2006 and 2009-2014).

Available from: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html?redirect=/NationalHealthExpendData/

5.2   Medicare Shared Savings Program and Accountable Care Organization Performance and Next Generation Accountable Care Organization Performance

Description of data: These data sets present data on enrollment, finances, and quality performance results for Medicare Shared Savings Programs and Accountable Care Organizations (ACOs).

Available from: Medicare shared savings program results – https://data.cms.gov/ACO/Medicare-Shared-Savings-Program-Accountable-Care-O/x8va-z7cu/data; Pioneer program results – http://innovation.cms.gov/initiatives/Pioneer-aco-model/; Next Generation ACO program results – https://innovation.cms.gov/initiatives/Next-Generation-ACO-Model/

5.3   Medicare Provider Utilization and Payment Data, Public Use File (PUF)

Description of data: The PUF provides information on services and procedures provided to Medicare beneficiaries by physicians and other healthcare professionals. The universe is 100% of Medicare enrollment and fee-for-service data from Part B non-institutional, final action claims. Procedures are denoted by Healthcare Common Procedure Coding System (HCPCS) codes. The data are arrayed by State—HCPCS—Setting combinations (i.e., the location, procedure, and site of service).

Available from: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/index.html

5.4   Number of ACO Assigned Beneficiaries by County PUF

Description of data: Assigned beneficiary person-year counts are based on certified ACO Participant Lists for the performance year (PY) associated with the file year (e.g. PY 2015, PY 2016, PY2017) and based on the assignment methodology and definition of dual eligible beneficiaries in effect for that performance year.

Available from: https://data.cms.gov/Special-Programs-Initiatives-Medicare-Shared-Savin/2017-Number-of-ACO-Assigned-Beneficiaries-by-Count/y488-g7nb

5.5   Medicare Geographic Variation Public Use File

Description of data: Public use file that examines geographic variation in the utilization and quality of health care services for the Medicare fee-for-service population. The Geographic Variation Public Use File includes demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), hospital referral region (HRR) level, and county level

Available from: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.html

6 Health Policy Commission

6.1   Massachusetts Cost Trends Hearing

Description of data: As part of Massachusetts government's commitment to health care cost containment, the Health Policy Commission has held annual cost trend hearings since 2010. The hearings examine health care provider, provider organization and private and public health care payer costs, prices and cost trends, with particular attention to factors that contribute to cost growth within the Commonwealth's health care system. Prior to these public hearings, a sample of payers and providers are identified from across Massachusetts to submit written testimony ("Pre-filed testimony") in response to questions from the Attorney General Office (AGO), the Center for Health Information and Analysis (CHIA) and beginning in 2013, the Health Policy

Commission (HPC). At these hearing, public agencies and industry experts also asked to present on particular health spending trends or focus areas.

Available from: Pre-filed testimony: https://www.mass.gov/info-details/testimony-for-the-2018-health-care-cost-trends-hearing#providers- ; Cost Trends Hearing presentations and resources: https://www.mass.gov/service-details/2018-cost-trends-hearing/.

6.2 Registration of Provider Organizations

Description of data: The HPC is responsible for developing and administering a registration program for Provider Organizations to report information on their organizational and operational structure and governance. Provider Organizations also complete an annual filing with the Center for Health Information and Analysis (CHIA). HPC and CHIA have created a single platform – the Massachusetts Registration of Provider Organization (MA-RPO) Program – that incorporates the required data elements for both the HPC and CHIA. Under the MA-RPO Program, a Provider Organization will submit an annual filing to the Commonwealth, which will satisfy its obligations under both M.G.L. c. 6D, § 11 and M.G.L. c. 12C. The MA-RPO Program is a first-in-the-nation program that increases transparency of provider structure and performance, tracks changes in the healthcare market over time, and provides researchers, policymakers, market participants, and the public with access to the resulting dataset.

Available from: https://www.mass.gov/service-details/registration-of-provider-organizations

7 Henry J. Kaiser Family Foundation

7.1   State Health Facts

Description of data: State Health Facts is a project of the Henry J. Kaiser Family Foundation (KFF) and provides open access to current and easy-to-use health data for all 50 states, the District of Columbia, and the United States; as well as counties, territories, and other geographies. State Health Facts is comprised of more than 800 health indicators and provides users with the ability to map, rank, trend, and download data. Data come from a variety of public and private sources, including Kaiser Family Foundation reports, public websites, government surveys and reports, and private organizations. The data is generally available by state as well as at a national level which allows researchers to compare and analyze certain indicators state-by-state, and to the national average.

Available from: http://kff.org/statedata/

8 SK&A by IQVIA

8.1   SK&A Provider Database

Description of data: SK&A by IQVIA produces a database that includes over two million healthcare practitioners. This data is verified every six months and updated daily. HPC uses the

physician, nurse, and ACO databases. The database includes NPI, practitioner name, address and practice name.

Available from: http://www.skainfo.com

9 U.S. Census Bureau

9.1   American Community Survey

Description of data: The American Community Survey from the United States Census Bureau is a survey that collects demographic data (age, sex, race, household structure, income, health insurance, education, etc.) from communities around the United States. Because the survey data are collected from a sample of people who choose to participate and share their responses, the American Community Survey is stronger for providing population distributions of characteristics, in measures like percentages, means, medians and rates. Summary data from the survey is released annually, in 1-year, 3-year average, and 5-year average formats, where the output values are averages over the period prior to the release year. The 1-year data are the most current, but the least precise due to smallest sample size. The 3-year and 5-year data can both be helpful for studying smaller populations where a 1-year sample size is not large enough to be significant, but both have the tradeoff of being less current than the 1-year data.

Available from: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

9.2   Current Population Survey Annual Social and Economic Supplement (ASEC)

Description of data: The Current Population Survey (CPS), sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics (BLS), is the primary source of labor force statistics for the population of the United States. The Annual Social and Economic (ASEC) Supplement provides the usual monthly labor force data, but in addition, provides supplemental data on work experience, income, noncash benefits, and migration.

Available from: https://www.census.gov/programs-surveys/cps.html