

COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION



TECHNICAL APPENDIX B1
DATA SOURCES

ADDENDUM TO 2013 COST TRENDS REPORT

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Summary

This technical appendix lays out the data sources used by the Health Policy Commission for our 2013 annual cost trends report.

1 National Health Expenditures Accounts

Organization: Centers for Medicare & Medicaid Services

Year(s) of data used: 2009

Description of data: The Centers for Medicare and Medicaid Services (CMS) prepares the National Health Expenditures Accounts to quantify the complete set of health expenditures in the U.S. in a comprehensive, multidimensional, and consistent way. The data presented in this report as health expenditures are from the "Personal Health Care, Goods and Services" category, which includes spending for all medical goods and services that are rendered and used during the process of treating conditions and diseases for specific people. Additional spending to support the health care industry, such as cost of administration for the insurance industry, public health activity, investment in research, structures and equipment, is not included in this figure at the state-level. The data are available by state of residence and are also aggregated nationally, which allows each state to compare its spending to other states and to the national average. The sources CMS uses to build this dataset include the American Hospital Association, Census Bureau's Economic Census, and the Census Bureau's Service Annual Survey. More information on the data source is available from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/dsm-12.pdf>

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

2 Medical Expenditures Panel Survey

Organization: Agency for Healthcare Research and Quality

Year(s) of data used: 2009

Description of data: The Medical Expenditures Panel Survey (MEPS), conducted by the Agency for Healthcare Research and Quality, is a national survey of health care spending and utilization habits. It is composed of a Household Component, which collects health care usage and demographic data from a representative sample of households and medical providers, and an Insurance Component, which collects information on employer-based health plans. Data from each group (households, providers, and employers) are recorded from interviews conducted over the course of 2 years. This data set allows expenditure, payment method and medical service utilization to be studied across different demographic groups.

Available from: <http://meps.ahrq.gov/mepsweb/>

3 Center for Health Information and Analysis

3.1 Total Medical Expenses

Organization: Center for Health Information and Analysis

Year(s) of data used: 2009 - 2012

Description of data: The Center for Health Information and Analysis (CHIA) collects Total Medical Expenses (TME) reports annually from the 10 largest commercial payers in Massachusetts on Total Medical Expenses (TME). 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.

Available from: <http://www.mass.gov/chia/researcher/chia-publications.html>

3.2 Relative Price/Price Variation

Organization: Center for Health Information and Analysis

Year(s) of data used: 2012

Description of data: Payers report Relative Price data annually to CHIA by provider category. Relative price is the contractually negotiated amounts paid to providers by each private and public carrier for health care services, including non-claims related payments and expressed in the aggregate relative to the payer's network-wide average amount paid to providers. Payers report hospital categories separately for inpatient and outpatient and report separately for acute, chronic, rehabilitation, and psychiatric hospitals.

Available from: <http://www.mass.gov/chia/researcher/chia-publications.html>

3.3 Massachusetts Health Insurance Survey

Organization: Center for Health Information and Analysis

Year(s) of data used: 2011

Description of data: CHIA surveys individuals for the Massachusetts Health Insurance Survey (MHIS). Data collection for the survey relies on three interview modes: telephone, web, and mail. Information for the random digit dial (RDD) sample is obtained using traditional telephone interviewing methods, with mail and web-based options offered to the sample members for whom addresses could be obtained.

Available from: <http://www.mass.gov/chia/researcher/chia-publications.html>

3.4 Massachusetts Health Care Cost Trends – Premiums and Expenditures

Organization: Center for Health Information and Analysis

Year(s) of data used: 2009 to 2012

Description of data: CHIA’s findings related to premium trend in this study are based primarily on premium, claims, membership, and non-medical expense data provided by the largest health insurance payers in Massachusetts from 2009 to 2011 for Massachusetts residents and out-of-state residents that are covered under Massachusetts contracts. Preliminary analysis on quoted 2012 premium rate increases is also provided for small, mid-size, and large groups. The premium trend findings focus mainly on the fully insured market; however, some self-insured enrollment data are reported. The findings related to premiums are based. For this study, CHIA requested that payers provide data on their commercial medical products for all group sizes including individuals. Products that are specifically excluded are: Medicare Advantage, Commonwealth Care, Medicaid, Medicare supplement, FEHBP, and non-medical (e.g., dental) lines of business.

Available from: <http://www.mass.gov/chia/researcher/chia-publications.html>

3.5 Hospital Cost Reports

Organization: Center for Health Information and Analysis

Year(s) of data used: 2012

Description of data: CHIA collects cost reports from acute hospitals in Massachusetts each fiscal year. These reports contain information related to beds, volume of services delivered, revenues, and expenses.

These data have several important limitations for analysis due to hospitals’ variation in cost accounting methods and allocation methodologies as well as differences in corporate structures. Despite these limitations, the cost reports represent the best public data set on hospital costs in Massachusetts and are widely used for analysis of trends in hospital operating expenses.

Available from: <http://www.mass.gov/chia/researcher/hcf-data-resources/hospital-and-community-health-center-cost.html>

3.7 All-Payers Claims Database

Organization: Center for Health Information and Analysis

Year(s) of data used: 2009 to 2011

Description of data: The Massachusetts All-Payer Claims Database (APCD) contains medical, pharmacy, and dental claims from all payers that insure Massachusetts residents, as well as information about member, insurance product, 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, or self-pay spending that consumers incur outside of their insurance coverage.

For the 2013 cost trends report, we used a sample from the APCD that consists of claims for the state's Medicare Fee-For-Service and three largest commercial payers – Blue Cross Blue Shield of Massachusetts (BCBS), Harvard Pilgrim Health Care (HPHC), and Tufts Health Plan (THP) – which represent 80 percent of the commercial market. Medicare claims analyses do not include expenditures by Medicare Advantage plans. Our analyses incorporated claims-based medical expenditures for Medicare and commercial payers, but not pharmacy spending, payments made outside the claims system, or MassHealth spending. Examination of APCD data from MassHealth is ongoing, and MassHealth claims analyses will be included in future work by the Commission. Available from: <http://www.mass.gov/chia/researcher/hcf-data-resources/apcd/>

4 Behavioral Risk Factor Surveillance System

Organization: Center for Disease Control and Prevention/Massachusetts Department of Public Health

Year(s) of data used: 2011

Description of data: The Behavioral Risk Factor Surveillance System (BRFSS) is a system of health-related telephone surveys that collect state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. BRFSS collects data in all 50 states as well as the District of Columbia and three U.S. territories. With technical and methodological assistance from Centers for Disease Control (CDC), state health departments use in-house interviewers or contract with telephone call centers or universities to administer the BRFSS surveys continuously through the year. States use a standardized core questionnaire, optional modules, and state-added questions. The survey is conducted using Random Digit Dialing (RDD) techniques on both landlines and cell phones.

Available from: <http://apps.nccd.cdc.gov/brfss/>

5 Bureau of Labor Statistics

5.1 Employment and Wage Data by Area and Occupation

Organization: Bureau of Labor Statistics

Year(s) of data used: 2001, 2009, 2012

Description of data: The Bureau of Labor Statistics (BLS) publishes wage data by area and occupation on an annual basis. The BLS wage data by area and occupation are measured from the National Compensation Survey, Occupational Employment Statistics Survey, and the Current Population Survey.

Available from: <http://www.bls.gov/bls/blswage.htm>

5.2 Producer Price Index

Organization: Bureau of Labor Statistics

Year(s) of data used: 2001, 2009

Description of data: The BLS Producer Price Index (PPI) program measures the average change over time in the selling prices received by domestic producers for their output.

Available from: <http://www.bls.gov/ppi/>

6 American Community Survey

Organization: U.S. Census Bureau

Year(s) of data used: 2009 to 2012

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.

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

7 The Bureau of Economic Analysis

Organization: U.S. Department of Commerce

Year(s) of data used: 1960 to 2012

Description of data: The Bureau of Economic Analysis (BEA, an agency of the Department of Commerce, produces economic accounts statistics that enable government and business decision-makers, researchers, and the American public to understand economic growth, regional economic development, inter-industry relationships, related to the overall performance of the U.S. economy.. BEA's statistics include the national income and product accounts (NIPAs), which feature the estimates of gross domestic product (GDP) and related measures.

Available from: <http://www.bea.gov/index.htm>

8 Research by Harvard University team for Institute of Medicine

Organization: Institute of Medicine

Year(s) of data used: 2005 to 2010

Description of data: A Harvard University team prepared an analysis of commercial data for consideration by the Committee on Geographic Variation in Health Care Spending and Promotion of High-value Care of the Institute of Medicine (IOM). The primary data source was 2005-2010 Truven Health Analytics MarketScan Commercial Claims and Encounters Database (MarketScan). MarketScan includes 113 million person-year observations over the three-year primary study period (2007-2009) submitted by both private health plans and employers. This data was supplemented with input cost index data from CMS and other sources (e.g., Census data). The researchers assessed variation between Hospital Referral Regions (HRRs) using Ordinary Least Squares (OLS) regression to adjust for patient level differences in demographics, health status, and insurance characteristics. The primary measure of HRR spending was the average of residuals within each HRR from the OLS regression, adjusted to reflect the sampling variation associated with sample size within HRRs. The primary analysis was based on spending adjusted for differences in the cost of inputs such as wages across areas, though the researchers also assessed variation in total spending and in a variety of measures of quantity (i.e., utilization). This allowed for assessing how much variation in spending is due to variation in prices versus quantities. (Full methodology available from:

<http://www.iom.edu/Reports/2013/Variation-in-Health-Care-Spending-Target-Decision-Making-Not-Geography/~media/Files/Report%20Files/2013/Geographic-Variation2/Subcontractor-Reports/Harvard%20University%20Report.pdf>)

Available from: <http://www.iom.edu/Reports/2013/Variation-in-Health-Care-Spending-Target-Decision-Making-Not-Geography/Data-Sets.aspx#Commercial%20Insurance>

9 Truven Health Analytics MarketScan® Commercial Claims and Encounters Database

Organization: Prepared by Chapin White, Senior Health Research at the Center for Studying Health System Change, based on data from Truven Health Analytics.

Year(s) of data used: 1995 to 2009

Description of data: Price index data were prepared by Chapin White, Senior Health Researcher at the Center for Studying Health System Change, based on data from the 1995-2009 Truven Health Analytics MarketScan® Commercial Claims and Encounters Database (copyright © 2011 Truven Health Analytics, all rights reserved). The price indexes were calculated using inpatient claims from self-funded large-employer plans that contribute data to the MarketScan commercial database. The private price index equals the total allowed amount in each hospital referral region (HRR) in a year divided by a hypothetical total allowed amount, where the hypothetical total allowed amount is calculated using national average prices for each Diagnosis Related Group (DRG) year. The national average prices are calculated using the same MarketScan commercial database. The analysis excludes rare diagnosis related groups by including data only for DRGs that occur in 50 or more HRRs because the rare DRGs do not occur frequently enough for a reliable calculation of national average price.

Available from: Provided to the Commission by Chapin White.

For related information, see: White C. Contrary To Cost-Shift Theory, Lower Medicare Hospital Payment Rates For Inpatient Care Lead To Lower Private Payment Rates. *Health Affairs*. 2012;32(5):935-943. <http://content.healthaffairs.org/content/32/5/935.full>.

10 The American Hospital Association Annual Survey

Organization: The American Hospital Association

Year(s) of data used: 1991 to 2012

Description of data: The American Hospital Association's (AHA's) Annual Survey Database provides a comprehensive snapshot of U.S. hospitals based on primary survey data from the AHA Annual Survey of Hospitals, AHA membership data, and U.S. Census Bureau identifiers. The database includes up to 1,000 data fields covering operation information on 6,500 hospitals related to organizational structure, facility and service lines, inpatient and outpatient utilization, expenses, physician arrangements, staffing, corporate and purchasing affiliations, teaching status, geographic indicators, and cross-reference identifiers (Medicare Provider Number and National

Provider Identification), among other indicators for analysis. The database is used primarily by health policy researchers in academic, government, and private organizations.

Available from:

http://ams.aha.org/EWEB/DynamicPage.aspx?WebCode=ProdDetailAdd&ivd_prd_key=f15837e6-7d5b-4beb-ba50-0c6c381ae53b

11 The Henry J. Kaiser Family Foundation State Health Facts

Organization: The Henry J. Kaiser Family Foundation

Year(s) of data used: 2009 to 2012

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/>

12 Massachusetts Health Quality Partners

Organization: Massachusetts Health Quality Partners

Year(s) of data used: 2011

Description of data: Massachusetts Health Quality Partners (MHQP) is a broad-based coalition of physicians, hospitals, health plans, purchasers, patient and public representatives, academics, and government agencies working together to promote improvement in the quality of health care services in Massachusetts. MHQP's Quality Insights Report measures how often primary care doctors provide their patients preventive care services (such as cancer screenings), and chronic disease care (such as diabetes care). These measures are evidence-based (researched) and recognized nationwide. Data are from the HEDIS® measure set developed by the National Committee for Quality Assurance (NCQA) and used with its permission.

MHQP's report includes information on managed healthcare services received by members (patients) of five Massachusetts commercial health plans: Blue Cross Blue Shield of

Massachusetts, Fallon Community Health Plan, Harvard Pilgrim Health Care, Health New England, and Tufts Health Plan. These managed care members represent more than half of all Massachusetts residents who have commercial health insurance. MHQP's report does not include information on services received by patients without health insurance, or those with Medicaid, Medicare, or insurance companies not listed above.

Available from: <http://www.mhqp.org/quality/whatisquality.asp?nav=030000>

13 Massachusetts Health Data Consortium Discharge Database

Organization: Massachusetts Health Data Consortium

Year(s) of data used: 2011

Description of data: The Mass Health Data Consortium (MHDC)'s Inpatient Discharge Database contains the most typical information about a discharge, such as the patient's age, sex, diagnoses, procedures, and DRG groups. Additionally, the database contains a number of lookup tables for data elements such as hospitals, payers, and ICD9 Codes.

Available from: <http://www.mahealthdata.org>

14 National Nursing Home Survey

Organization: Division of Health Care Statistics, National Center for Health Statistics

Year(s) of data used: 2004

Description of data: The National Nursing Home Survey (NNHS) is a survey sampling nursing homes with at least three beds that are either certified by Medicare or Medicaid or had a state license to operating as a nursing home. The survey collects information on nursing facilities and on characteristics of recipients of care.

Available from: http://www.cdc.gov/nchs/nnhs/nnhs_products.htm

15 The Dartmouth Atlas Project

Organization: The Dartmouth Atlas of Health Care

Year(s) of data used: 2010

Description of data: The Dartmouth Atlas of Health Care is a project based at The Dartmouth Institute for Health Policy and Clinical Practice at Dartmouth College. The project identifies and documents variation in the use of medical resources by geography within the U.S. Researchers at the Dartmouth Atlas use Medicare claims data and develop population-based “small area analysis” to provide information and analysis about defined national, regional, and local geographic areas, as well as specific hospitals and their affiliated physicians. This research is often used by policymakers, the media, health care analysts and others to analyze the relative efficiency and effectiveness of health systems across the U.S.

Available from: <http://www.dartmouthatlas.org/tools/downloads.aspx?tab=40>