**Documentation for the State Health Expenditure Data Files**

**State Health Expenditures by State of Residence**

This paper provides key information on the State Health Expenditures by state of residence (1991-2020) data files released by the CMS Office of the Actuary on August 12, 2022.

Please send questions to CMSDNHS@cms.hhs.gov.

I. Data Overview and Important Notes

The State Health Expenditures by state of residence are constructed by adjusting our state of provider estimates for border-crossing patterns in consuming health care; in other words, we re-allocate spending from the state in which a health service or good was consumed to the state in which a patient lives. Documentation that discusses the data and methods used for both the state of provider estimates and residence estimates in detail are available elsewhere on our website.[[1]](#footnote-1)

Please note the following:

* Only the health spending by state of residence estimates adjust for border-crossing and thus re-assigns spending to the state in which a patient lives. As a result, per capita estimates are only appropriate when using state of residence estimates.
* As with all other National Health Expenditure Accounts estimates, all spending levels are expressed in nominal terms unless otherwise specified.
* While these files contain US government data and are thus in the public domain, citation of the source is requested.
  + **SUGGESTED CITATION FOR STATE OF RESIDENCE DATA:** Centers for Medicare & Medicaid Services (2022). *Health Expenditures by State of Residence.* Retrieved (date accessed) at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/resident-state-estimates.zip>

II. Data File Information

The State Health Expenditures data files are posted to the CMS website as a collection of zipped CSV-formatted files. The following tables provide the location and key information necessary to navigate the State Health Expenditure data files.

**Table 1: State Health Expenditure Data by State of Residence File Names, Contents, Notes, and References**

URL: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/resident-state-estimates.zip>

| **File Names and Location** | **Contents** | **Notes and References** |
| --- | --- | --- |
| US\_AGGREGATE20.CSV | Total personal health care spending by state and by service, 1991-2020 | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| US\_POPULATION20.CSV | US Population by State, 1991-2020 | NOTE: Population obtained from the U.S. Bureau of the Census, released December, 2020. SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| US\_PER\_CAPITA20.CSV | Per capita personal health care spending by state and by service, in dollars, 1991-2020 *(aggregate spending divided by population)* | NOTE: Population obtained from the U.S. Bureau of the Census, released December, 2020. SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICARE\_AGGREGATE20.CSV | Total Medicare personal health care spending by state and by service, 1991-2020 | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICARE\_ENROLLMENT20.CSV | Medicare enrollment by state, 1991-2020 | NOTE: Enrollees reflect the number of persons enrolled in the Hospital and/or Supplementary Medical Insurance programs as of July 1, 1991-2020.  SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICARE\_PER\_ENROLLEE20.CSV | Per enrollee Medicare personal health care spending by state and by service, 1991-2020 *(aggregate spending divided by enrollment)* | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICAID\_AGGREGATE20.CSV | Total Medicaid personal health care spending by state and by service, 1991-2020 | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICAID\_ENROLLMENT20.CSV | Medicaid enrollment by state, 1991-2020 | NOTE: Enrollees measured in fiscal person years, adjusted to a calendar year basis.  SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| MEDICAID\_PER\_ENROLLEE20.CSV | Per enrollee Medicaid personal health care spending by state and by service, 1991-2020 *(aggregate spending divided by enrollment)* | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| PHI\_AGGREGATE20.CSV | Total private health insurance personal health care spending by state and by service, 2001-2020 | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| PHI\_ENROLLMENT20.CSV | Private Health Insurance Population by State, 2001-2020 | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |
| PHI\_PER\_ENROLLEE.CSV | Per enrollee private health insurance personal health care spending by state and by service, in dollars, 2001-2020 *(aggregate spending divided by enrollment)* | SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. |

**Table 2: Variable Names and Descriptions for State Health Expenditure Data Files**

| **VARIABLE** | **DESCRIPTION** |
| --- | --- |
| Code | Numerical code assigned to each Item |
| Item | Identifies health spending level of aggregation/payer/service/good, enrollment, or population; appropriate units/scale (e.g. millions of dollars) |
| Group | Level of aggregation by geography |
| Region\_Number | Numerical Code Assigned to each Region, for sorting purposes |
| Region\_Name | Bureau of Economic Analysis Region Name |
| State\_Name | U.S. State Name |
| Y1991 | Spending, population, or enrollment level for 1991 |
| Y1992 | Spending, population, or enrollment level for 1992 |
| Y1993 | Spending, population, or enrollment level for 1993 |
| Y1994 | Spending, population, or enrollment level for 1994 |
| Y1995 | Spending, population, or enrollment level for 1995 |
| Y1996 | Spending, population, or enrollment level for 1996 |
| Y1997 | Spending, population, or enrollment level for 1997 |
| Y1998 | Spending, population, or enrollment level for 1998 |
| Y1999 | Spending, population, or enrollment level for 1999 |
| Y2000 | Spending, population, or enrollment level for 2000 |
| Y2001 | Spending, population, or enrollment level for 2001 |
| Y2002 | Spending, population, or enrollment level for 2002 |
| Y2003 | Spending, population, or enrollment level for 2003 |
| Y2004 | Spending, population, or enrollment level for 2004 |
| Y2005 | Spending, population, or enrollment level for 2005 |
| Y2006 | Spending, population, or enrollment level for 2006 |
| Y2007 | Spending, population, or enrollment level for 2007 |
| Y2008 | Spending, population, or enrollment level for 2008 |
| Y2009 | Spending, population, or enrollment level for 2009 |
| Y2010 | Spending, population, or enrollment level for 2010 |
| Y2011 | Spending, population, or enrollment level for 2011 |
| Y2012 | Spending, population, or enrollment level for 2012 |
| Y2013 | Spending, population, or enrollment level for 2013 |
| Y2014 | Spending, population, or enrollment level for 2014 |
| Y2015 | Spending, population, or enrollment level for 2015 |
| Y2016 | Spending, population, or enrollment level for 2016 |
| Y2017 | Spending, population, or enrollment level for 2017 |
| Y2018 | Spending, population, or enrollment level for 2018 |
| Y2019 | Spending, population, or enrollment level for 2019 |
| Y2020 | Spending, population, or enrollment level for 2020 |
| Average\_Annual\_Percent\_ Growth | Average annual growth rate for spending, population, or enrollment, 1991-2020 |

**Table 3: Code Key**

| **CODE** | **DESCRIPTION** |
| --- | --- |
| 1 | Personal Health Care |
| 2 | Hospital Care |
| 3 | Physician & Clinical Services |
| 4 | Other Professional Services |
| 5 | Dental Services |
| 6 | Home Health Care |
| 7 | Prescription Drugs and Other Non-durable Medical Products |
| 8 | Durable Medical Products |
| 9 | Nursing Home Care |
| 10 | Other Health, Residential, and Personal Care |
| 11 | Population or Enrollment |
| NOTE: Level of aggregation, payer, and unit of analysis is specified in the Item column and is evident in each filename. | |

III. How to Use the State Health Expenditures Data Files and Data

The state health spending data as presented can be accessed and easily mined for any purpose, at any level of complexity, and with a variety of software.

The CSV files can be opened for immediate and intuitive viewing in Microsoft Excel. To take advantage of Excel’s analysis tools, data filters, pivot tables/charts, and general chart/graph functionality:

* Save a copy of the CSV files as Excel spreadsheets.
* Highlight all data rows/columns pertinent to your needs.
* Select the data analysis function that you would like to use. In Excel, selected functions can be found as follows:
  + Data Filters: select the Filter command from the Data Ribbon. Click on the filter icon in each column to customize/sort the data to your specifications.
  + Pivot Tables/Charts and other chart/graph options: select applicable command from the Insert ribbon and follow the on-screen instructions.

Please consult the help documentation of the version of Microsoft Excel that you are running for specific instructions on how to use these or any other data analysis functions.

The data can just as easily be read into econometric or other data management/data analysis software.

The following calculations/metrics are typically used when analyzing the State Health Expenditures data:

| Calculation/Metric | Purpose | Example: |
| --- | --- | --- |
| Descriptive Statistics | To provide basic statistics for a given variable; typically provided with regression analysis. | Mean, Standard Deviation, Maximum, Minimum |
| Average Annual Growth | To provide the rate of change in a particular variable from one year to the next or the average rate of change over a period of years. | AAG= (growth in final year of analysis/growth in first year of analysis)^(1/(number of years))-1\*100% |
| Percent Distribution | Typically used to determine the share of spending associated with a given payer, service within a state; a state’s spending as a share of the national total, etc. | % spending associated with hospital care in State A = total hospital spending for State A/total personal health care spending in State A \*100% |
| Location Quotient | Standardizes the relationship of spending among the states to the percent difference between spending in a state to the national average. | LQ=per capita total personal health care spending for State X/average per capita total personal health care spending for US\*100% |

1. Please see the “Downloads” section on each of the following page:

   <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsResidence.html> [↑](#footnote-ref-1)