

Medicaid Long Term Services and Supports Annual Expenditures Report

Federal Fiscal Years 2017 and 2018

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LIST OF ACRONYMS

ACA = Affordable Care Act

AD = older adults and people with physical disabilities

AIDS = acquired immunodeficiency syndrome

ASD = autism spectrum disorder

A&D = Aged and Disabled

BHC = behavioral health conditions

CHIP = Children's Health Insurance Program

CMS = Centers for Medicare & Medicaid Services

CPI = consumer price index

DD = developmental disabilities

DSH = disproportionate share hospital

FFP = Federal Financial Participation

FFS = fee-for-service

FIDE = fully integrated dually eligible

FMR = Financial Management Report

FY = fiscal year

HCBS = home- and community-based services

HIV = human immunodeficiency virus

ICF/IID = Intermediate Care Facilities for Individuals with Intellectual Disabilities

ID = intellectual disabilities

LTSS = long-term services and supports

MACPAC = Medicaid and CHIP Payment and Access Commission

MBES = Medicaid Budget and Expenditure System

MCO = managed care organization

MSC+ = Minnesota Senior Care Plus

MFP = Money Follows the Person

MLTSS = managed long-term services and supports

MSHO = Minnesota Senior Health Options

NA = not available

OD = other disabilities

PACE = Program of All-Inclusive Care for the Elderly

PAHP = prepaid ambulatory health plan

PCA = personal care assistance

PD = physical disabilities

PIHP = prepaid inpatient health plan

PMAP+ = Prepaid Medical Assistance Plan Plus

SED = serious emotional disturbances

SNBC = Special Needs Basic Care

SUD = substance use disorder

TD = technologically dependent

Executive Summary

Long-term services and supports (LTSS) cover a wide range of medical and nonmedical services and supports for people with physical, cognitive, mental, or other disabilities or conditions. These can include institutional care such as those provided in nursing facilities and mental health facilities, and home and community-based services (HCBS) such as personal care and home health, among other services approved by CMS.

Medicaid is the primary payer of LTSS, covering just over half of all spending for such services and supports (O'Malley Watts et al. 2020). Over the past several decades, the U.S. Supreme Court 1999 *Olmstead* decision, federal and state initiatives, and consumer preferences have led to shifts in LTSS expenditure patterns across settings and service types.

This report is the latest in a series of reports on Medicaid LTSS expenditures sponsored by the Centers for Medicare & Medicaid Services (CMS), which has tracked trends in Medicaid LTSS spending since 1981 (Wenzlow et al. 2016). It contains detailed information about Medicaid LTSS expenditures at the national and state levels by service category, LTSS setting, payment model, and targeted population subgroups for federal fiscal year (FY) 2017 (October 2016 to September 2017) and FY 2018 (October 2017 to September 2018).

The report is based on data from several sources, including Medicaid CMS-64 expenditure reports, state-reported managed LTSS (MLTSS) expenditures, Money Follows the Person (MFP) worksheets for proposed budgets, CMS 372 report data for section 1915(c) waiver programs, and U.S. Census data. Due to the COVID-19 pandemic, five states (California, Illinois, New York, South Carolina, and Virginia) could not submit MLTSS data for this report. South Carolina's MLTSS program was small enough that we could still include the state in all applicable calculations. The MLTSS programs in California, Illinois, New York, and Virginia accounted for a large share of overall Medicaid LTSS spending, so we therefore excluded spending on LTSS in these states from total LTSS, HCBS, and institutional expenditures. This report also reflects several changes to the methodology used in previous reports, such as calculating expenditures by payment date rather than date of service, using a more systematic approach to collecting and validating state-reported MLTSS data, and updating the section 1915(c) waiver program targeted population categories.

Key findings

- **Total Medicaid LTSS expenditures.** Total Medicaid LTSS spending was \$124 billion in FY 2017, increasing to \$129 billion in FY 2018. Since 2008, overall Medicaid LTSS expenditures have grown by about 2 percentage points each year when adjusted for inflation. This growth has been primarily driven by an increase in HCBS expenditures, which have increased by about 5 to 10 percentage points each year (inflation adjusted), while institutional LTSS expenditures have steadily decreased by about 2 to 4 percentage points in that same time period (inflation adjusted).
- **LTSS as a percentage of total Medicaid spending.** The share of LTSS out of total Medicaid expenditures declined from 47 percent in FY 1988 to 32 percent in FY 2018. There are several reasons that explain the overall decline in LTSS spending as a percentage of total Medicaid expenditures, including state LTSS system rebalancing initiatives promoting HCBS that may be less costly than institutional services and increased spending for non-LTSS populations and services.

- **HCBS as a percentage of total Medicaid LTSS expenditures.** The percentage of HCBS expenditures of total Medicaid LTSS expenditures has steadily increased over the last three decades, but it has slowed in recent years. The U.S. total surpassed the long-standing benchmark of 50 percent of LTSS expenditures in FY 2013 and has remained higher than 50 percent since then, reaching 55.4 percent in FY 2017 and 56.1 percent in FY 2018. In FY 2017, Oregon, Minnesota, and New Mexico spent more than 75 percent of their Medicaid LTSS expenditures on HCBS, and in FY 2018, these same three states, as well as Arizona and Wisconsin, did the same. Florida, Indiana, Louisiana, Mississippi, New Jersey, and Rhode Island all spent less than 40 percent of total Medicaid LTSS expenditures on HCBS in both FY 2017 and 2018.
- **MLTSS expenditures.** The absolute amount spent on MLTSS programs increased more than three-fold in the past 20 years, climbing from \$6.7 billion in FY 2008 to \$30.1 billion in FY 2018. This growth reflects more states using MLTSS, rising from 8 in 2006 to 25 states in FY 2018, including the 10 states that operated Financial Alignment Initiative demonstrations, which covered Medicaid LTSS for dually eligible beneficiaries.
- **Service categories comprising the greatest share of institutional and HCBS expenditures.** Nursing facilities represented the greatest share of institutional LTSS expenditures, accounting for 78.9 percent of these expenditures in FY 2017 and 2018. Section 1915(c) waiver programs represented the majority of HCBS expenditures in FY 2017 and 2018, accounting for slightly more than 50 percent of these expenditures in both years.
- **Section 1915(c) waiver program expenditures.** All but three states (Arizona, Rhode Island and Vermont)¹ operated at least one section 1915(c) waiver program to provide HCBS in FY 2017 and 2018. In FY 2018, section 1915(c) waiver program expenditures totaled \$49.7 billion, about 7 percent higher than FY 2017 (\$46.2 billion). The share of expenditures on section 1915(c) waiver programs out of total Medicaid LTSS was 29 percent in FY 2018, roughly the same as the share in the previous five years. Nearly three-quarters (72 to 73 percent) of total waiver program expenditures were spent on people with autism spectrum disorder or intellectual or developmental disabilities (ASD, ID or DD) in FY 2017 and 2018. Among the remainder, about 22 percent of total waiver program expenditures were spent on older adults and people with physical or other disabilities (PD or OD) in both years, and each of the other population groups accounted for 3 percent or less of total waiver program expenditures.
- **Total LTSS spending by targeted population subgroups.** Older adults and people with physical or other disabilities (PD or OD) accounted for the majority of total LTSS spending in FY 2017 and 2018, representing about 55 to 56 percent of total expenditures in these years. People with ASD, ID, or DD accounted for about 25 to 26 percent of spending, while people with behavioral health conditions accounted for approximately 6 percent of spending, and multiple populations accounted for the remainder. However, within these population subgroups, HCBS accounted for a majority of LTSS spending for people with ASD, ID, or DD and for multiple populations, but it accounted for a much lower share of LTSS spending for older adults and people with PD or OD and for people with behavioral health conditions.
- **State variation.** LTSS expenditures vary considerably across states and are influenced by factors such as demographics, the Medicaid landscape, and existing program structures within a given state.

¹ Arizona, Rhode Island, and Vermont provided similar services to HCBS-eligible populations in demonstrations authorized under section 1115 of the Social Security Act. While other states also use section 1115 authority to provide HCBS, all other states had at least one active section 1915(c) waiver program in these years.

I. Introduction

A. Background and purpose of report

Long-term services and supports (LTSS) encompass a wide range of medical and nonmedical services and supports for people with physical, cognitive, mental, or other disabilities or conditions. The type, intensity, and cost of services provided to people who require LTSS vary widely depending on their health and functional status, the nature and severity of their disability, the setting in which they reside, and the availability of formal and informal supports. Medicaid is the primary payer of LTSS in the United States, accounting for about 52 percent of all LTSS spending (O'Malley Watts et al. 2020). Private insurance, Medicare, and other public sources provide only limited LTSS coverage, so the majority of people who require LTSS rely on informal supports from family and friends to meet their needs. When people cannot obtain sufficient informal support and must pay for LTSS out of pocket, many of them deplete their resources and become eligible for Medicaid.

Medicaid covers a wide range of institutional and home and community-based LTSS, but the type of services, populations covered, and delivery models differ substantially across states. Over the last several decades, states have sought to rebalance their LTSS systems by increasing home and community-based services (HCBS) and reducing reliance on institutional care. Federal statutory and policy changes over this period have allowed states greater flexibility to provide Medicaid HCBS through regular state plan benefits, such as the Community First Choice State Plan Option that was established under the Affordable Care Act (ACA) of 2010.² In an effort to increase access to HCBS, improve beneficiaries' experience, and have greater budget predictability, states have also increasingly used managed LTSS (MLTSS), rather than fee-for-service (FFS), to deliver LTSS.³ Under MLTSS programs, states make per-member-per-month capitated payments to managed care plans to cover LTSS for eligible Medicaid beneficiaries. In addition to these program changes, some states have also extended LTSS to populations not previously eligible, such as those with less than an institutional level of care, under section 1915(i) State Plan HCBS authority and through section 1115 demonstration programs.⁴ These changes, along with strong consumer preferences to live and receive LTSS in the community, have led to shifts in LTSS expenditure patterns across service types and populations in recent years.

This report is the latest in a series of reports sponsored by the Centers for Medicare & Medicaid Services (CMS) to document Medicaid LTSS expenditures by different categories of service, type of LTSS (institutional and HCBS), and levels (state and national). It covers expenditures in federal fiscal year (FY) 2017 (October 1, 2016, to September 30, 2017) and 2018 (October 1, 2017, to September 30, 2018).

This report includes total Medicaid LTSS expenditure information previously documented in the annual Medicaid LTSS expenditure reports (Eiken et al. 2018a). It also includes section 1915(c) waiver program expenditure information based on the CMS-64 report data previously documented in the annual Medicaid expenditures for section 1915(c) waiver programs reports (for example, Eiken et al. 2018b). A companion report to this one, Medicaid section 1915(c) Waiver Programs Annual Expenditures and Beneficiaries

² See <https://www.medicaid.gov/medicaid/home-community-based-services/home-community-based-services-authorities/community-first-choice-cfc-1915-k/index.html>.

³ See <https://www.medicaid.gov/medicaid/managed-care/managed-long-term-services-and-supports/index.html>.

⁴ See <https://www.medicaid.gov/medicaid/home-community-based-services/home-community-based-services-authorities/home-community-based-services-1915i/index.html>.

Report: Analysis of CMS 372 Annual Reports, 2015-2017, includes information on Medicaid section 1915(c) waiver program expenditures and beneficiaries based on the CMS 372 data (Ross et al. 2021).

B. Data and methods

This report relies on several data sources to calculate Medicaid LTSS expenditures: (1) CMS-64 Medicaid expenditure report data, (2) state-reported MLTSS data, (3) Money Follows the Person (MFP) worksheets for proposed budgets, (4) CMS 372 data on section 1915(c) waiver program population groups, and (5) U.S. Census data. Brief descriptions of these data sources follow. Details on the data, methods, and data anomalies are available in Appendices A and B.

CMS-64 data. States must submit expenditures and other information to CMS to determine the amount of Federal Financial Participation (FFP) they will receive for authorized Medicaid and Children’s Health Insurance Program (CHIP) expenditures. States submit this information in a series of CMS-64 forms, hereafter referred to as the CMS-64 data. CMS uses the CMS-64 submissions to calculate state-by-state and state-specific summary expenditure data for each FY. The summary information is contained in the Medicaid Financial Management Report (FMR) Net Services for Medical Assistance Program. We used CMS-64 FMR Net Services report data for FY 2017 and 2018 for all service category expenditures except section 1915(c) waiver program, MLTSS, and MFP expenditures. For section 1915(c) waiver program expenditures, we used information contained on the CMS-64 Schedule A waiver report to calculate expenditures for each waiver program claimed by the state.

State-reported MLTSS data. Because CMS-64 data do not identify MLTSS expenditures separately from other state managed care expenditures and do not disaggregate expenditures by service category, we collected data directly from states on MLTSS program expenditures. For this report, we also systematically validated the data submissions to check for consistency in populations and services covered, as well as federal authorities, for each MLTSS program.

MFP budget documentation. To capture LTSS expenditures for the MFP demonstration, we used data from state MFP worksheets for proposed budgets provided by CMS for all states with active MFP demonstrations in 2017 and 2018.

CMS 372 data. CMS requires states operating section 1915(c) waiver programs to provide annual information on each waiver program in the CMS Form 372(S), hereafter referred to as the annual 372 reports, via the Waiver Management System. This is a web-based system that includes the annual 372 reports and other information about section 1915(c) waiver programs, such as their eligible targeted population groups and subgroups. We linked information from the CMS 372 data on targeted population and subgroups for each section 1915(c) waiver program to categorize waiver program-level expenditures reported in CMS-64 Schedule A waiver reports by LTSS targeted population. The waiver program-level LTSS targeted population categories are the same as those used in the companion report (Ross et al. 2021).

U.S. Census Bureau data. To compare across states, we used data from the U.S. Census Bureau for total state population to calculate Medicaid expenditures per 1,000 residents.

We combined information from each of these data sources to calculate LTSS expenditures by service category, type of LTSS (institutional or HCBS), and LTSS targeted population subgroups as well as to determine state and national totals. We also calculated the overall percentage of LTSS expenditures for HCBS for each state, which is a key measure that CMS, states, and other stakeholders use to monitor

states' progress toward rebalancing their LTSS system toward more HCBS. In addition, we calculated the percentage of LTSS spending on HCBS for each state by LTSS targeted population subgroups.

Excluding states with missing or aggregate MLTSS data. Because the time period during which we requested states report MLTSS program expenditures coincided with the COVID-19 public health emergency, five states could not provide this information (California, Illinois, New York, South Carolina, and Virginia). MLTSS programs account for a large share of overall LTSS expenditures in four of these states: California, Illinois, New York, and Virginia. Consequently, we excluded these states from our calculations of the percentage of HCBS out of total LTSS expenditures and from all calculations of total Medicaid, total LTSS, total HCBS, and total institutional LTSS. We otherwise included these states in the service category and section 1915(c) waiver program output, which present FFS expenditures for these states based on the CMS-64 and MFP data. We included South Carolina in all totals because the missing MLTSS program made up a small proportion of the state's total LTSS expenditures. North Carolina submitted total MLTSS expenditures but did not break out spending by service category, total institutional, or total HCBS, so we also excluded it from our calculations of the percentage of HCBS out of total LTSS expenditures and from all calculations of total HCBS and total institutional LTSS. Kansas, Massachusetts, Pennsylvania, Vermont, and Texas did not provide service category breakouts for either HCBS or institutional MLTSS expenditures, so we excluded them from the calculations of the percentage HCBS out of total LTSS by the LTSS targeted population subgroups and from the service category expenditures in the table presenting national LTSS expenditures by LTSS targeted population subgroups (Appendix Table C.2). These exclusions are described in Appendix A and are noted under the relevant tables in Appendix C.

C. Overview of key changes from prior reports

There are several key changes in the methods used to calculate LTSS expenditures in FY 2017 and 2018 compared to those used to produce prior year reports in this series. First, we calculated expenditures from the CMS-64 data based on payment date, which is consistent with how CMS calculates expenditures for the FMR Net Services report data. Previous reports calculated expenditures from the CMS-64 based on service date. Second, we made several changes to MLTSS data collection and validation from states. We asked states to report capitated expenditures for each MLTSS program. Previously, the method for states to estimate MLTSS expenditures was not specified, so states used different methods to estimate expenditures. We also requested that states report section 1915(c) waiver program and non-section 1915(c) waiver program expenditures by several institutional and HCBS categories; we did not estimate spending for specific population groups based on the type of service, as done in previous reports. Due to the timing of the data collection, several states were unable to report data or were unable to report the requested categories. This is described further in Appendix A and in state notes in Appendix B.

Third, we updated the categories of section 1915(c) waiver program LTSS targeted population groups to be consistent with the new set of categories in the 2016-2017 annual section 1915(c) waiver program report based on the CMS 372 data. This includes a new category—Multiple subpopulations—for the section 1915(c) waiver program population groups that was not previously used in past reports. Fourth, this report includes information previously contained in separate annual Medicaid expenditures for section 1915(c) waiver programs reports based on the CMS-64 data. Section VII, Appendix A, and Appendix Tables C.16 and C.40 to C.47 contain the information about section 1915(c) waiver program

expenditures from CMS-64 data that was previously included in the separate reports.⁵ Lastly, this report now includes the overall LTSS summary tables and relevant LTSS service category tables in Appendix C; a companion Excel attachment (Appendix D data tables) includes this same expenditure data reported by state as well as breakouts for MLTSS and other non-LTSS service category expenditures.

Missing state data, and, to a lesser extent, various changes to the methodology and state reporting differences and anomalies across the various data sources, contribute to fluctuations in trends in FY 2017 and 2018 compared to prior years. We have addressed these anomalies throughout the report to the extent that we are able to provide explanations that can help explain trends.

D. Road map to report

In the remaining sections of this report, we summarize information about Medicaid LTSS expenditures in FY 2017 and 2018 and present them in relation to historical Medicaid LTSS expenditures. In Section II, we examine national-level trends in total Medicaid LTSS expenditures during the last 10 years (FY 2008 to 2018). Section III presents changes in LTSS as a percentage of total Medicaid spending over the last 30 years (FY 1988 to 2018), and Section IV presents data on HCBS as a percentage of total Medicaid LTSS spending over the last 30 years (FY 1988 to 2018). Section V provides more detailed information on MLTSS expenditures over the last 10 years (FY 2008 to 2018). The next three sections describe the distribution of expenditures by service category (Section VI), section 1915(c) waiver program expenditures (Section VII), variation in expenditures by population (Section VIII), and Medicaid LTSS expenditures per state resident (Section IX). In Section X, we present our conclusions.

⁵ Information on beneficiaries and expenditures in section 1915(c) waiver programs from the CMS 372 data is available in the companion report (Ross et al. 2021).

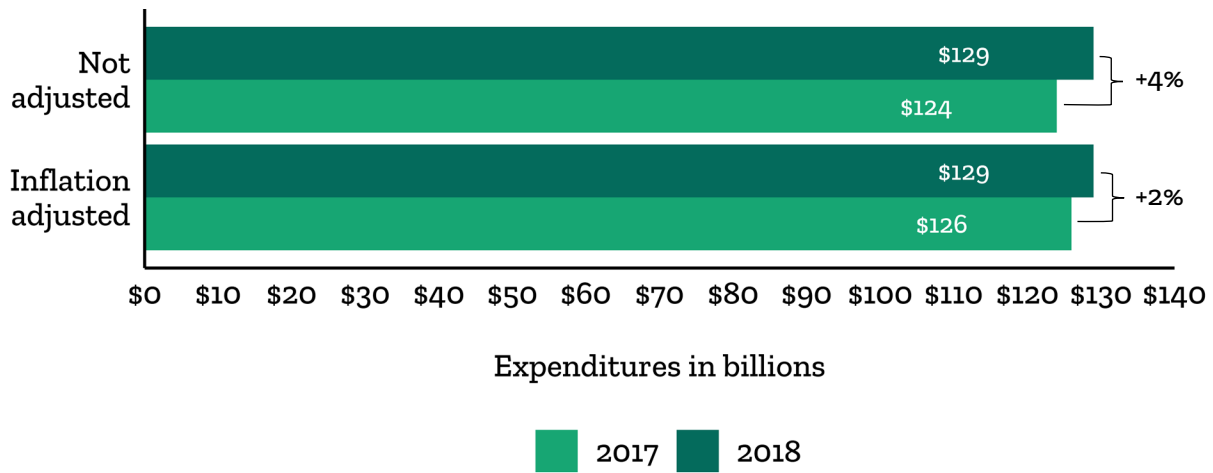
II. Trends in total Medicaid LTSS expenditures

Total spending and annual rate of growth. As Figure II.1 shows, national Medicaid LTSS expenditures totaled \$124 billion in FY 2017 and \$129 billion in FY 2018, a growth of 4 percent (or, when adjusted for inflation, 2 percent). This rate of growth is similar to the previous eight years: Medicaid LTSS expenditures generally grew by about 4 to 7 percent each year when not adjusted for inflation, and by about 2 percent each year from FY 2008 to 2016 when adjusted for inflation.⁶

The unadjusted total Medicaid LTSS expenditures showed a net gain of about 37 percent from FY 2008 to 2016, as expenditures grew from \$124 billion to \$179 billion. By comparison, the inflation-adjusted spending shows more modest, consistent growth, with total Medicaid LTSS expenditures increasing from \$165 billion in FY 2008 to \$179 billion in FY 2016, or a net gain of about 8 percent (Figure II.1). The one exception to the growth trend within this time period occurs in FY 2011 and 2012, when the unadjusted expenditures appear to stagnate, and the inflation-adjusted expenditures appear to decrease by about 2 to 3 percent. There was a large decline in expenditures from FY 2016 to 2017 and 2018 because of missing data from California, Illinois, New York, and Virginia from total Medicaid LTSS expenditures. These states did not report MLTSS expenditures for FY 2017 and 2018, and because the MLTSS programs account for a large proportion of Medicaid LTSS expenditures in these states, we excluded them from calculations of total Medicaid LTSS, total HCBS, and total institutional LTSS expenditures. Further details on the methodology and data limitations are available in Appendices A and B.

⁶ Expenditures are inflation-adjusted based on the 2018 average medical consumer price index from the U.S. Bureau of Labor Statistics. Further details on the methodology used are available in Appendix A.

Figure II.1. Medicaid LTSS expenditures (not adjusted and inflation adjusted), in billions, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

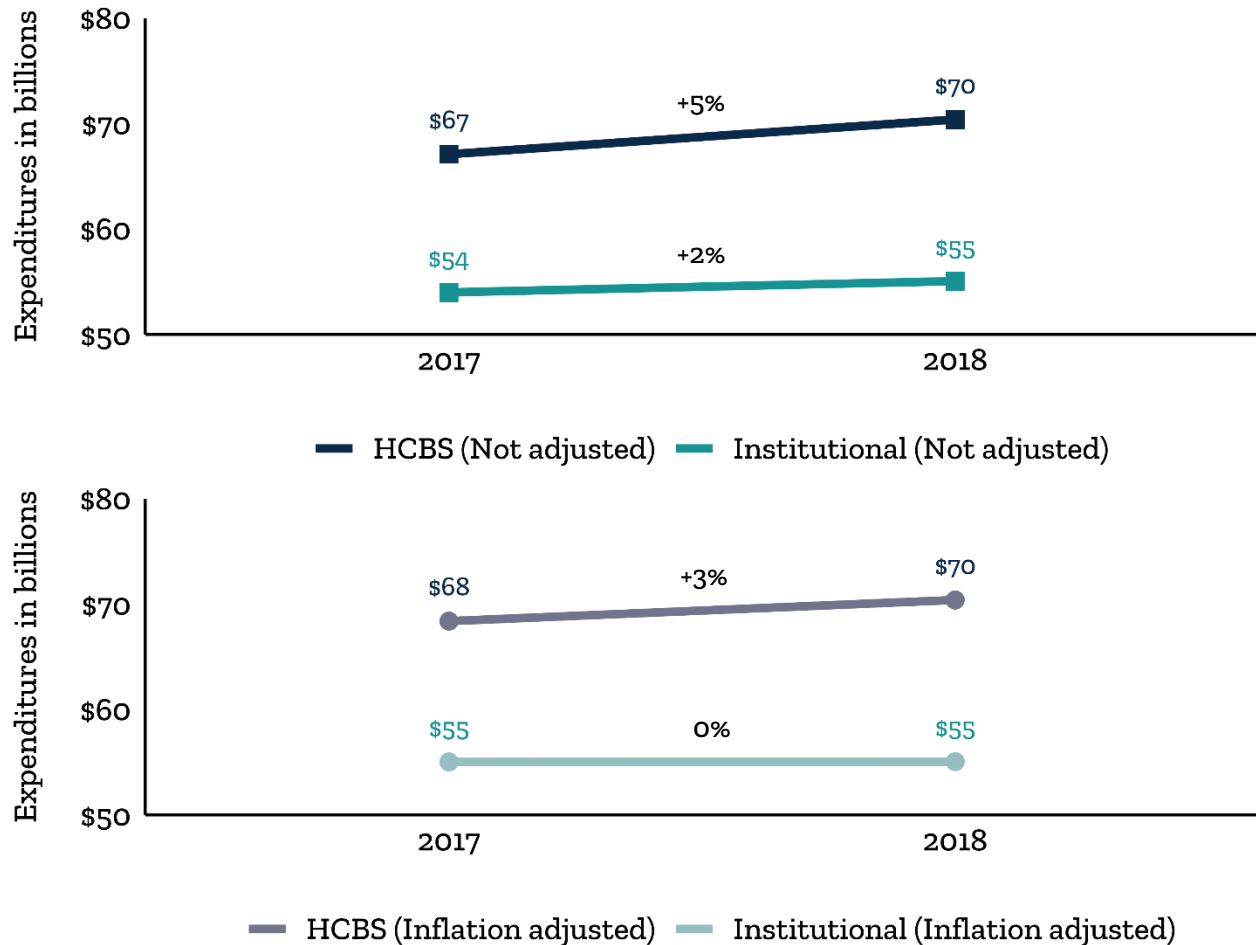
Notes: We calculated inflation-adjusted expenditures by adjusting expenditures to FY 2018 dollars using the medical CPI. We did not include data prior to FY 2017 due to missing data and changes in methodology which impact the interpretability of historical trending. We excluded California, Illinois, New York, and Virginia from the totals in FY 2017 and 2018 because of missing data. Because we included North Carolina in the total Medicaid LTSS expenditures in this figure but excluded it from total HCBS and total institutional LTSS expenditures presented in Figure II.2 in this section, the total HCBS and total institutional LTSS in those figures will not sum to the total Medicaid LTSS presented in this figure. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CPI = consumer price index; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

Total Medicaid LTSS growth over the last decade is attributable largely to an increase in HCBS expenditures, which made up 55 percent of Medicaid LTSS expenditures in FY 2017 and 56 percent in FY 2018, a substantial increase from FY 2008, when 43 percent of total LTSS expenditures were devoted to HCBS (Figure II.2). HCBS expenditures rose from \$71 billion in FY 2008 to \$102 billion in FY 2016 (adjusted for inflation). The decline in FY 2017 HCBS spending to \$68 billion is attributable to missing data from five states whose HCBS expenditures were counted in FY 2016 total expenditures.⁷ From FY 2008 to 2018, inflation-adjusted expenditures on institutional care steadily decreased by about 2 to 4 percentage points each year, and, at the same time, HCBS expenditures increased by about 5 to 10 percentage points each year. The exception to this is was FY 2017, which saw a decline due to missing data from five states.

⁷ In addition to the four states that were excluded from total LTSS calculations, North Carolina was also excluded from the calculations of total HCBS and total institutional because it did not provide MLTSS data separately for these two expenditure categories. Therefore, the total HCBS and total institutional LTSS in Figure II.2 will not sum to the total Medicaid LTSS presented in Figure II.1.

Figure II.2. Medicaid HCBS and institutional expenditures (not adjusted and inflation adjusted), in billions, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: We calculated inflation-adjusted expenditures by adjusting expenditures to FY 2018 dollars using the medical CPI. We did not include data prior to FY 2017 due to missing data and changes in methodology which impact the interpretability of historical trending. We excluded California, Illinois, New York, North Carolina, and Virginia in FY 2017 and 2018 because of missing data. Because we excluded North Carolina from the total HCBS and institutional LTSS expenditures in this figure but included it in total Medicaid LTSS expenditures presented in Figure II.1 in this section, the total HCBS and total institutional LTSS in this figure will not sum to the total Medicaid LTSS presented in Figure II.1. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CPI = consumer price index; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

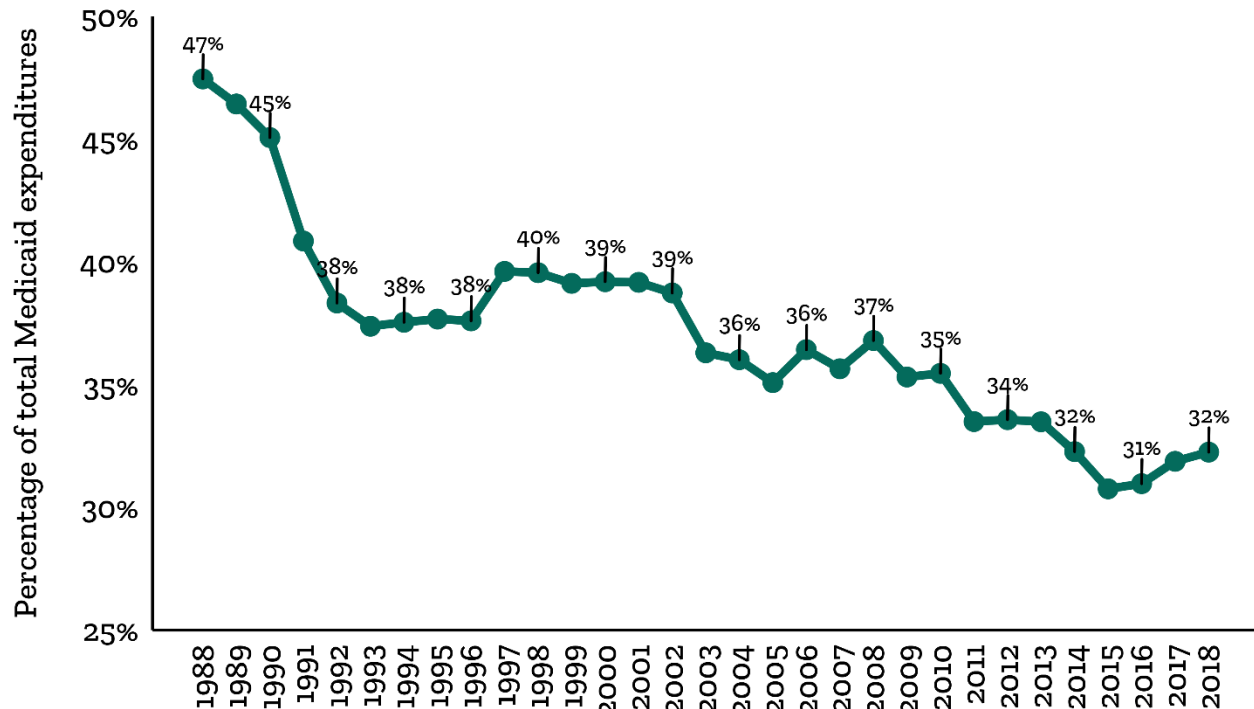
HCBS expenditure growth varied by state. Between FY 2017 and 2018, Nebraska, Pennsylvania, and Wisconsin all saw increases of about 20 percent in total HCBS expenditures, while conversely Colorado and New Jersey saw decreases of about 25 percent (Appendix Table C.15).⁸ Changes in institutional expenditures were not as pronounced between the two years with the exception of Iowa, which saw an increase of about 59 percent, from \$737.7 million in FY 2017 to \$1.2 billion in FY 2018 (Appendix Table C.7). This was due to a programmatic change in the state, which is detailed among other state data reporting nuances in Appendix B.

⁸ The decrease in New Jersey's HCBS expenditures was attributable in part to a large decline in expenditures reported for the state's only section 1915(c) waiver program for people with intellectual or developmental disabilities, which was terminated in November 2017 (Appendix Table C.41). In Colorado, the decline in HCBS expenditures was related to a large prior period adjustment in the state for section 1915(i) State Plan HCBS expenditures (Appendix Table C.28) and other changes in HCBS expenditures.

III. Medicaid LTSS as a percentage of total Medicaid expenditures

Medicaid LTSS as a percentage of total Medicaid spending declined substantially from FY 1988 to 2018 (Figure III.1). Specifically, this proportion decreased from 47 percent in FY 1988 to 38 percent in FY 1992, then held steady from FY 2010 to 2018 at about one-third of total Medicaid spending (varying from 30 to 35 percent). In FY 2018, spending on Medicaid LTSS accounted for 32 percent of total Medicaid expenditures, representing a total decrease of 15 percentage points from FY 1988.

Figure III.1. Medicaid LTSS expenditures as a percentage of total Medicaid expenditures, FY 1988 to 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget. Data for FY 1988 to 2014 were obtained from Wenzlow et al. (2016), and data for FY 2015 and 2016 were obtained from an unpublished version of the 2017 LTSS Expenditure Report.

Notes: Before FY 2008, data do not include expenditures for services provided through managed care programs. As noted in Eiken et al. (2018a), data for FY 2014 to 2016 do not include LTSS within a large California managed care program and for certain states and program authorities from FY 2008 to 2016. We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 calculations because of missing data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

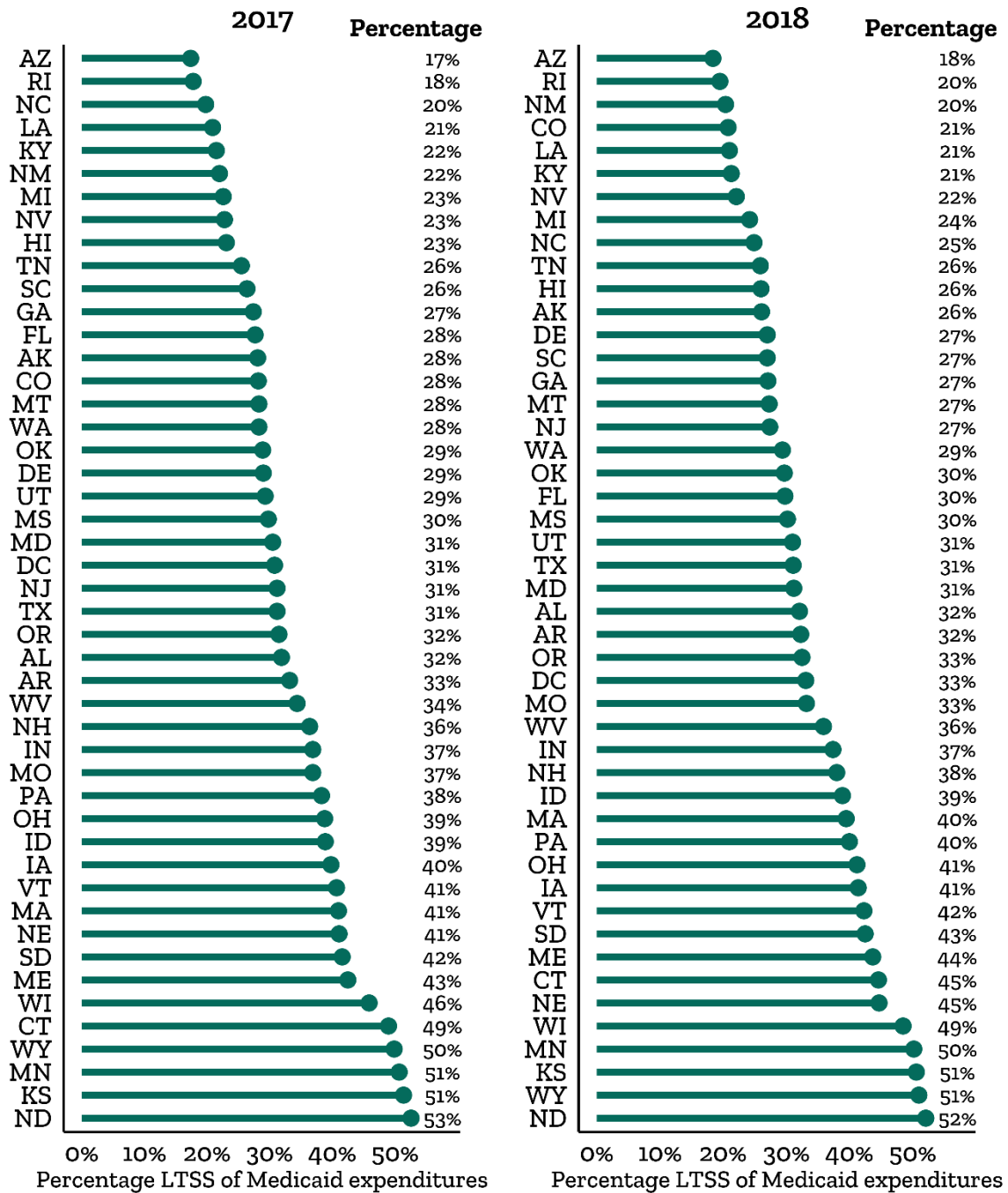
Factors that could have contributed to the overall decline in Medicaid LTSS spending as a percentage of total Medicaid expenditures include state LTSS system rebalancing initiatives which promote more cost-effective HCBS, such as the MFP program, as well as increased spending for non-LTSS populations and services. For example, over the last several decades, the composition of Medicaid eligible populations shifted toward a greater proportion of children and adults younger than age 65 without disabilities (MACPAC 2019). This shift may have contributed to the decline in Medicaid LTSS as a percentage of total Medicaid expenditures as these populations typically do not use LTSS. Specifically, from 1988 to

2013, the number of Medicaid beneficiaries who were children or adults who did not qualify for Medicaid based on disability more than tripled (from 15,540,000 in FY 1988 to 47,592,000 in FY 2013), but the number of eligible older adults and people with disabilities increased by a smaller percentage during this time period (more than doubling between FY 1988 and 2013, from 6,646,000 in FY 1988 to 14,623,000 in FY 2013).

Although Medicaid LTSS as a percentage of total Medicaid expenditures represented about a third of spending nationally in FY 2018, proportions for individual states varied considerably (Figure III.2 and Appendix Table C.4). In FY 2018, the states with the highest percentage of Medicaid LTSS spending out of total state Medicaid expenditures were North Dakota, Wyoming, and Kansas (52, 51, and 51 percent, respectively), whereas the three states with the lowest percentage of Medicaid LTSS spending out of total state Medicaid expenditures were Arizona, Rhode Island, and New Mexico (18, 20, and 20 percent, respectively).⁹ Colorado and Connecticut experienced the greatest decline in Medicaid LTSS spending as a percentage of total Medicaid expenditures from FY 2017 to 2018, decreasing by 7 and 4 percentage points, respectively. Differences in state demographics related to LTSS needs could explain some of this variation. In addition, states have significant flexibility in the design of key Medicaid program features such as eligibility criteria, breadth of covered benefits, payment structures, and reimbursement rates, which affect both LTSS and non-LTSS shares of total state Medicaid spending.

⁹ As we excluded California, Illinois, New York, and Virginia because of missing data, they are not accounted for in these rankings.

Figure III.2. Medicaid LTSS expenditures as a percentage of total Medicaid expenditures, by state, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 because of missing data. U.S. territories are not shown; their Medicaid LTSS expenditures as a percentage of total Medicaid expenditures was 0.1 percent in FY 2017 and 2018. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

IV. HCBS as a percentage of total Medicaid LTSS expenditures

HCBS as a percentage of total Medicaid LTSS expenditures serves to help assess states' performance and progress toward rebalancing Medicaid LTSS systems away from institutional services toward greater use of HCBS. States vary substantially in performance on this measure.

FY 2017. Nationally, HCBS spending as a percentage of total Medicaid LTSS expenditures was 55.4 percent in FY 2017.¹⁰ This ranged from 31.5 percent in Mississippi to 82.7 percent in Oregon (Figure IV.1 and Appendix Table C.35). More than half (24) of all states for which data on HCBS spending was available (46) in FY 2017 spent 50 percent or more of total Medicaid LTSS expenditures on HCBS.

55%

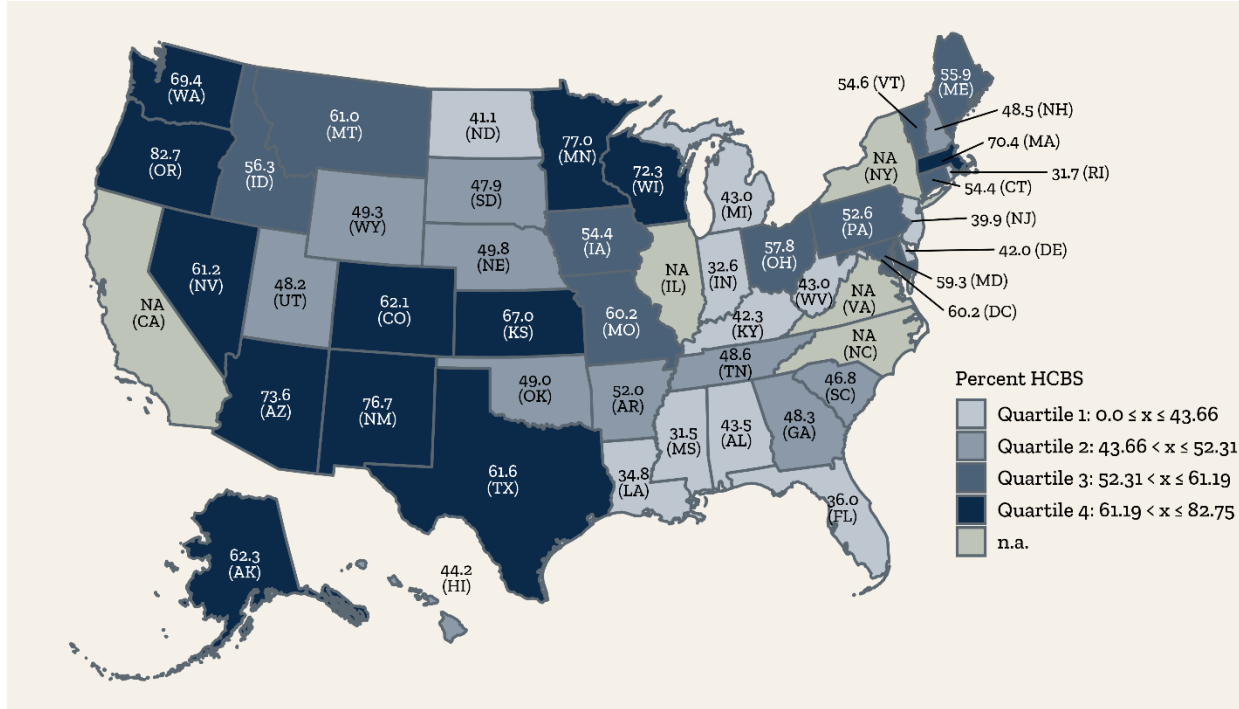
FY 2017 U.S. TOTAL HCBS
EXPENDITURES AS A
PERCENTAGE OF
TOTAL MEDICAID
LTSS EXPENDITURES

In descending order, Oregon, Minnesota, and New Mexico spent more than 75 percent of their Medicaid LTSS expenditures on HCBS. Other states in the highest quartile of performance in descending order included Arizona, Wisconsin, Massachusetts, Washington, Kansas, Alaska, Colorado, Texas, and Nevada. At the other end of the spectrum, states in the lowest quartile of LTSS system rebalancing in FY 2017 included Mississippi at the bottom, followed by Rhode Island, Indiana, Louisiana, Florida, New Jersey, North Dakota, Delaware, Kentucky, Michigan, West Virginia, and Alabama.

States in the highest quartile had the greatest range in performance for HCBS as a percentage of total Medicaid LTSS expenditures, with a 21.5 percentage point difference between Nevada at the lowest end of the top quartile (61.2 percent) and Oregon at the highest end of the quartile (82.7 percent). In contrast, there was just a 12.0 percentage point spread among states in the lowest quartile of performance, with Mississippi at the lowest end of the quartile (31.5 percent) and Alabama at the highest end of the quartile (43.5 percent). The difference between states at the highest and lowest ends in the second and third quartiles was 7.8 and 8.4 percentage points, respectively.

¹⁰ To calculate the national total, we divided the total amount of HCBS expenditures by the total amount of Medicaid LTSS expenditures for all states, excluding California, Illinois, New York, North Carolina, and Virginia because of missing data for these states in FY 2017.

Figure IV.1. Medicaid HCBS expenditures as a percentage of total Medicaid LTSS expenditures, by state, FY 2017



Sources: Mathematica’s analysis of FY 2017 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: The state percentages are rounded to one decimal place in the figure, but states were grouped into quartiles based on the unrounded values. We excluded California, Illinois, New York, North Carolina, and Virginia because of missing data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; n.a. = not applicable.

FY 2018. National HCBS spending as a percentage of total Medicaid LTSS expenditures was 56.1 percent in FY 2018.¹¹ The share ranged from 30.0 percent in Rhode Island to 83.4 percent in Oregon (Figure IV.2 and Appendix Table C.35). More than half (27) of all states for which data on HCBS spending was available (46) spent 50 percent or more of total Medicaid LTSS expenditures on HCBS in FY 2018, three more states than in FY 2017 (Appendix Table C.35).

In FY 2018, in descending order, Oregon, Minnesota, New Mexico, Wisconsin, and Arizona exceeded 75 percent of Medicaid LTSS expenditures for HCBS. Wisconsin and Arizona performed near the top of states on this measure in earlier years, but FY 2018 is the first year that they exceeded 75 percent of Medicaid LTSS expenditures for HCBS. Except Oregon, all of these states provide a substantial

56%

FY 2018 U.S. TOTAL
HCBS EXPENDITURES
AS A PERCENTAGE OF
TOTAL MEDICAID LTSS
EXPENDITURES

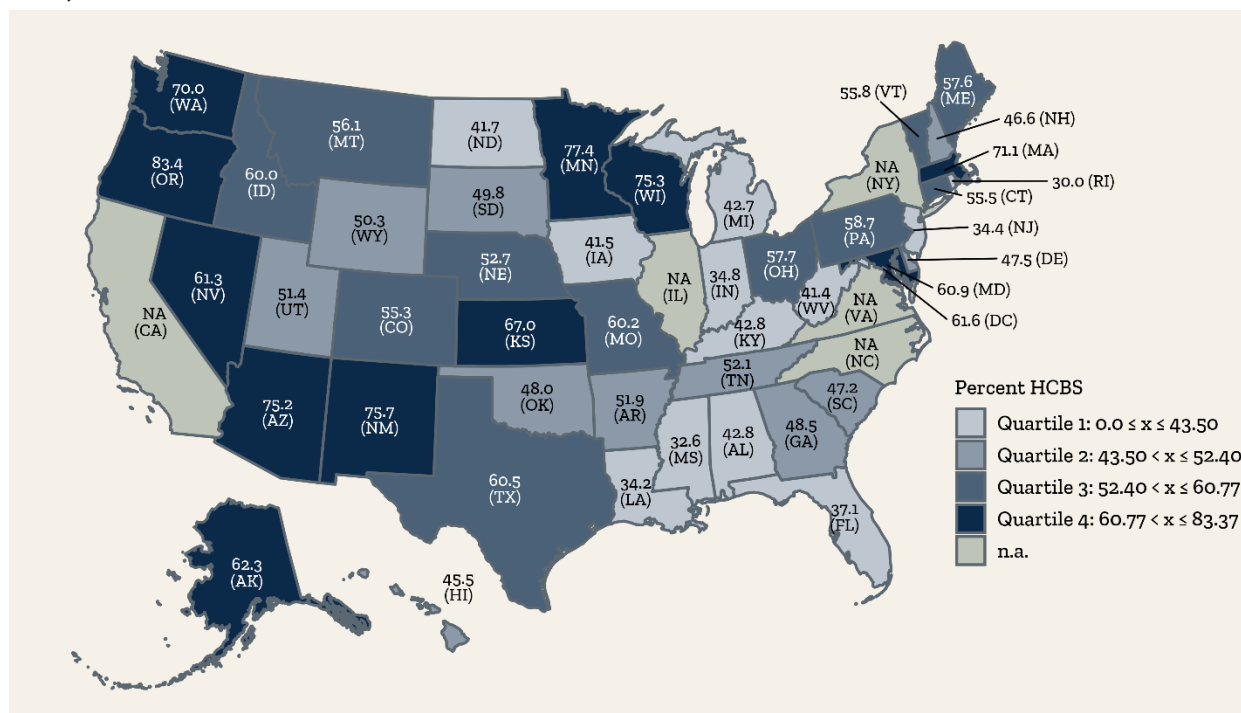
¹¹ To calculate the national total, we divided the total amount of HCBS expenditures by the total amount of Medicaid LTSS expenditures for all states excluding California, Illinois, New York, North Carolina, and Virginia because of missing data for these states in 2018.

portion of LTSS expenditures through MLTSS programs (see Section V). Other states in the highest quartile of performance, in descending order, included Massachusetts, Washington, Kansas, Alaska, the District of Columbia, Nevada, and Maryland.

States in the lowest quartile of performance, with LTSS rebalancing ratios lower than 43.6 percent, included Rhode Island at the bottom, followed by Mississippi, Louisiana, New Jersey, Indiana, Florida, West Virginia, Iowa, North Dakota, Michigan, Kentucky, and Alabama.

States in the highest quartile in FY 2018 had the greatest range in performance, with a 22.5 percentage point difference between Oregon at the highest end and Maryland at the lowest end of the quartile. The difference between states at the highest and lowest ends was 12.9 percentage points for the lowest quartile, 7.7 percentage points for the third quartile, and 6.6 percentage points for the second quartile.

Figure IV.2. Medicaid HCBS expenditures as a percentage of total Medicaid LTSS expenditures, by state, FY 2018



Sources: Mathematica’s analysis of FY 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: The state percentages are rounded to one decimal place in the figure, but states were grouped into quartiles based on the unrounded values. We excluded California, Illinois, New York, North Carolina, and Virginia because of missing data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; n.a. = not applicable.

FY 2017 to 2018 state changes in LTSS rebalancing ratio. Most states improved LTSS rebalancing ratios from FY 2017 to 2018, but in several states, the increases were small. Two states increased their scores by over 5 percentage points, representing the greatest improvements from FY 2017 to 2018. Delaware’s ratio increased from 42.0 to 47.5 percent of LTSS expenditures for HCBS, which was attributable to a combination of decreases in several categories of institutional expenditures, most notably a decline in Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID)

expenditures between the two years (Appendix Table C.9) and increases in HCBS expenditures including for MLTSS (Appendix Table C.15). Pennsylvania increased from 52.6 to 58.7 percent of LTSS expenditures for HCBS primarily through increases in HCBS expenditures across different programs including for MLTSS and section 1915(c) waiver programs (Appendix Table C.15).

In contrast, three states—Iowa, New Jersey, and Colorado—had relatively large declines in the LTSS rebalancing ratio from FY 2017 to 2018. In Iowa, performance declined from 54.4 percent of LTSS expenditures for HCBS to 41.5 percent. This decline was primarily driven by large increases in reported MLTSS expenditures on nursing facility services because of increases in rates and the number of nursing facility residents (Appendix B and Appendix Table C.8). New Jersey's performance declined from 39.9 percent of LTSS expenditures for HCBS to 34.4 percent. The change was attributable in part to a large decline in expenditures reported for New Jersey's only section 1915(c) waiver program for people with intellectual or developmental disabilities,¹² which was terminated in November 2017 (Appendix Table C.41). In Colorado, the decline (from 62.1 to 55.3 percent) was related to a large prior period adjustment in the state for section 1915(i) State Plan HCBS expenditures (Appendix Table C.28) and other changes in HCBS expenditures.¹³

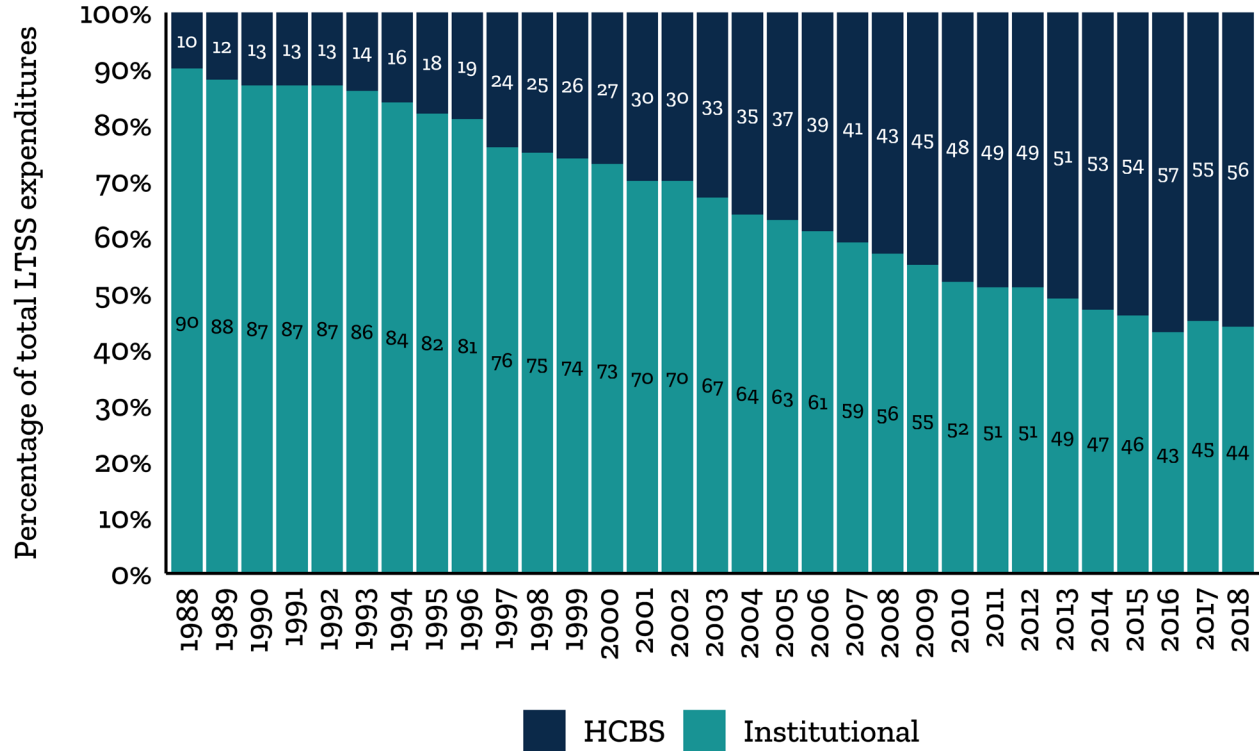
FY 2008 to 2018 national change in LTSS rebalancing ratio. The share of HCBS spending relative to total Medicaid LTSS expenditures has steadily increased over the last three decades (Figure IV.3). The national total surpassed 50 percent of LTSS expenditures in FY 2013 and has remained higher than 50 percent since. HCBS expenditures as a share of total Medicaid LTSS expenditures declined slightly in FY 2017 and 2018 relative to the ratio in FY 2016 (57 percent).¹⁴ Yet several states have made substantial progress in this measure over time, so the national total masks the variation among states (Figures IV.1 and IV.2 maps).

¹² In 2017, NJ transitioned its section 1915(c) Community Care Waiver program, which served Medicaid-eligible individuals over the age of 21 with developmental disabilities, into a section 1115(a) demonstration.

¹³ As of 2018, Colorado did not operate a section 1915(i) State Plan program.

¹⁴ The FY 2017 and 2018 measures were influenced by the exclusion of California, Illinois, New York, North Carolina, and Virginia from the calculations.

Figure IV.3. Medicaid HCBS and institutional LTSS expenditures as a percentage of total Medicaid LTSS expenditures, FY 1988 to 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget. Data for FY 1988 to 2014 were obtained from Wenzlow et al. (2016), and data for FY 2015 and 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: As noted in Eiken et al. (2018a), data for FY 2014 to 2016 do not include LTSS within a large California managed care program, expenditures through managed care plans before FY 2008, or for certain states and program authorities starting in FY 2008. We excluded California, Illinois, New York, North Carolina, and Virginia from FY 2017 and 2018 calculations because of missing data. U.S. territories were not included in the calculations. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

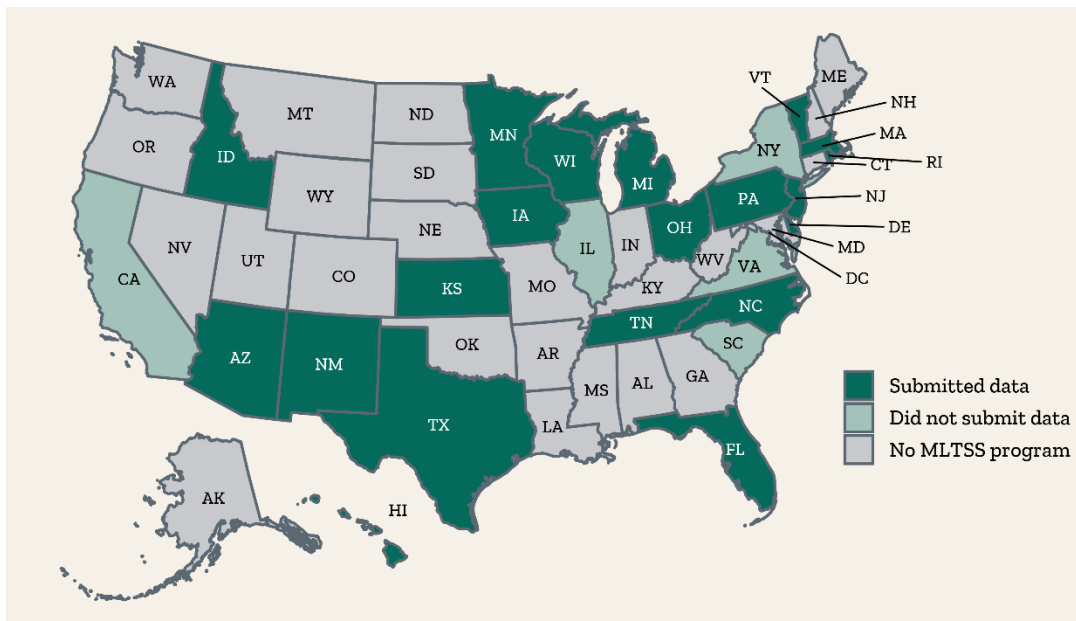
FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

V. MLTSS expenditures

MLTSS programs differ from traditional FFS models, through which the Medicaid agency pays providers for each service. Under managed care arrangements, states contract with managed care plans to provide a specific set of Medicaid-covered LTSS benefits. The plans are responsible for providing these services to beneficiaries in return for a set payment per enrollee per month referred to as a capitated rate. Although the design of capitated payments varies by states, most states set a single capitation rate for all covered LTSS benefits regardless of the setting, which is known as a blended rate. States that use a blended rate give managed care plans a financial incentive to provide care in home and community-based settings because of the generally lower cost of such care. MLTSS programs also enable states to use financial incentives to reward plans for improving the quality of care.

As of FY 2018, 25 states had MLTSS programs operating under various federal authorities, including section 1115 demonstrations or a combination of section 1915(a)/1915(c), 1915(b)/1915(c), or 1115/1915(c) authorities.¹⁵ In all, 10 of the 25 states operated Financial Alignment Initiative capitated model demonstrations that provided Medicaid LTSS through integrated care plans for people who are dually eligible for both Medicare and Medicaid.¹⁶ Of the 25 states operating MLTSS programs in FY 2017 or 2018, five states (California, Illinois, New York, South Carolina, and Virginia) could not submit data on MLTSS expenditures for FY 2017 and 2018 (Figure V.1).

Figure V.1. Map of states with MLTSS programs, FY 2017 and 2018



Source: Mathematica’s analysis of FY 2017 and 2018 state-submitted MLTSS data.

Notes: The states displayed in the map had one or more active (non-PACE) MLTSS program in FY 2017 or 2018. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care for the Elderly.

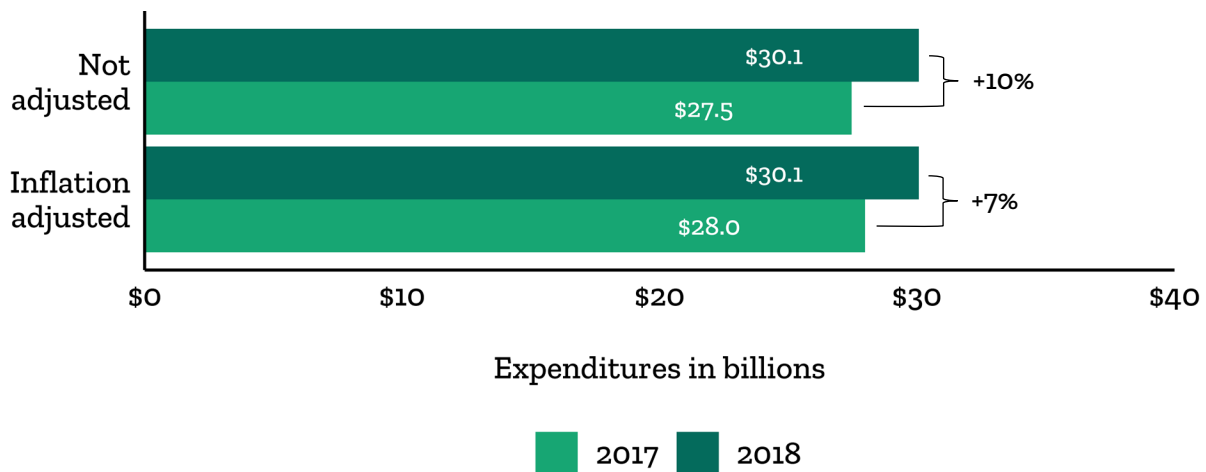
¹⁵ Although PACE programs are capitated programs that provide LTSS, we did not include them as MLTSS programs for the purposes of this report.

¹⁶ Virginia ended its Financial Alignment Initiative Demonstration on December 31, 2017 and transferred most enrollees into a new MLTSS program that began in 2018.

MLTSS expenditure trends, FY 2008-2018. As more states adopted or expanded existing MLTSS programs, expenditures for these programs rose steadily, increasing from \$6.7 billion in FY 2008 to \$11.7 in FY 2012 (adjusted to inflation). After FY 2012, MLTSS expenditures increased at a greater rate, peaking in FY 2016 at \$43.6 billion, then fell to \$30.1 billion in FY 2018 (adjusted to inflation; see Figure V.2); the decline from FY 2016 to 2017 was driven primarily by missing data for MLTSS programs in California, Illinois, New York, and Virginia. Overall, between FY 2008 and 2018, MLTSS expenditures more than tripled over the ten-year period.¹⁷ In FY 2018, spending on MLTSS as a share of all Medicaid LTSS spending nationally was 23 percent, indicating the substantial role of MLTSS in LTSS delivery.

Since 2010, annual growth in total MLTSS expenditures increased steadily from FY 2011 to 2014, before declining again in FY 2015 and 2016 (adjusted to inflation). As we noted, the steep decrease in annual percentage change of total MLTSS expenditures from FY 2016 to 2017 (a 36 percent decline, adjusted for inflation) is because of missing MLTSS expenditure data for California, Illinois, New York, and Virginia. Declines in MLTSS spending in other states, however, also contributed to the fall in the rate of annual change from FY 2016 to 2017, including Pennsylvania, Rhode Island, Delaware, Michigan, New Mexico, North Carolina, and Tennessee (Appendix D tables).

Figure V.2. Medicaid MLTSS expenditures (not adjusted and inflation adjusted), in billions, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 state-submitted MLTSS data.

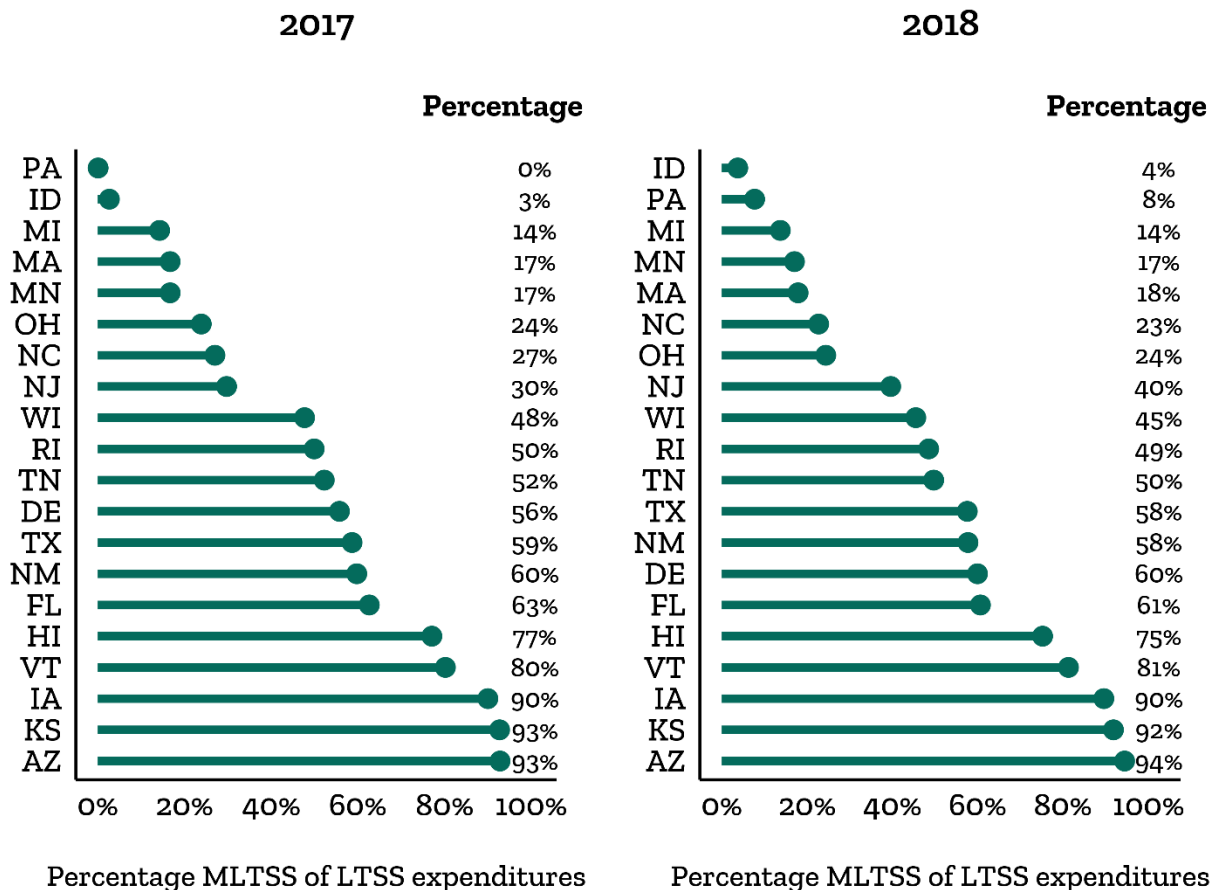
Notes: We calculated inflation-adjusted expenditures by adjusting expenditures to FY 2018 dollars using the medical CPI. We did not include data prior to FY 2017 due to missing data and changes in methodology, which impact the interpretability of historical trending. We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 calculations because of missing data. PACE expenditures are not included in MTLSS totals. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CPI = consumer price index; FY = fiscal year; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care for the Elderly.

¹⁷ Because expenditures for MLTSS programs in California, Illinois, New York, and Virginia are not included in total MLTSS expenditures for FY 2017 and 2018, this increase is likely much higher in reality.

MLTSS expenditures, FY 2017 and 2018. Although MLTSS as a percentage of total Medicaid LTSS expenditures represented about a fourth of spending nationally in FY 2018, proportions for individual states varied substantially (Figure V.3). In FY 2018, the states with the highest percentage of MLTSS spending out of total state Medicaid LTSS expenditures were Arizona, Kansas, and Iowa (94, 92, and 90 percent, respectively), whereas the states with the lowest percentage of MLTSS spending out of total state Medicaid LTSS expenditures were Idaho and Pennsylvania (4 and 8 percent, respectively).¹⁸ New Jersey and Pennsylvania experienced the greatest increase in MLTSS spending as a percentage of total Medicaid LTSS expenditures from FY 2017 to 2018, increasing by 10 and 8 percentage points, respectively.

Figure V.3. MLTSS expenditures as a percentage of total Medicaid LTSS expenditures, by state, FY 2017 and 2018



Sources: Mathematica's analysis of FY 2017 and 2018 state-submitted MLTSS data, CMS-64 data, and MFP worksheets for proposed budget.

Notes: The states in the chart had one or more active (non-PACE) MLTSS program in FY 2017 or 2018. We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 calculations because of missing data. PACE expenditures are not included in MLTSS totals. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care for the Elderly.

¹⁸ As we excluded California, Illinois, New York, and Virginia because of missing data, they are not accounted for in these rankings.

Three states had large increases in total MLTSS expenditures from FY 2017 to 2018:

- **Pennsylvania.** Pennsylvania’s Community HealthChoices program is a Medicaid managed care program that provides medical benefits and LTSS for people dually eligible for Medicare and Medicaid or people who require a nursing facility level of care. Reported MLTSS expenditures for Pennsylvania increased drastically from FY 2017 to 2018 because of the implementation of this program on January 1, 2018 (Appendix D tables). Enrollment during this time period more than tripled, increasing from 7,985 to 35,998 from FY 2017 to 2018.
- **Idaho.** Idaho’s Medicare Medicaid Coordinated Plan program is a voluntary managed care program that provides all Medicare and most Medicaid services, including LTSS for people dually eligible for Medicare and Medicaid. Reported MLTSS expenditures for this program were 47 percent higher in FY 2018 compared with FY 2017. Spending increased in FY 2018 for several service categories including ICF/IID, home health, personal care, and other HCBS (Appendix D tables). These increases, as well as the overall increase in MLTSS expenditures, were attributable to growth in enrollment from 2,816 to 4,798 and the addition of a second health plan to the market on January 1, 2018.
- **Iowa.** Iowa’s IA Health Link program is a Medicaid managed care program that provides MLTSS for all Medicaid beneficiaries, who are required to enroll in the program. Reported MLTSS expenditures for this program were 23 percent higher in FY 2018 compared with FY 2017. MLTSS expenditures for institutional nursing home expenditures rose from \$393.3 million in FY 2017 to \$771.4 million in FY 2018 (Appendix D tables). This increase, and the overall increase in MLTSS expenditures, were due to increases in nursing facility per diem rates and increases in the number of beneficiaries receiving nursing facility services between FY 2017 and 2018.

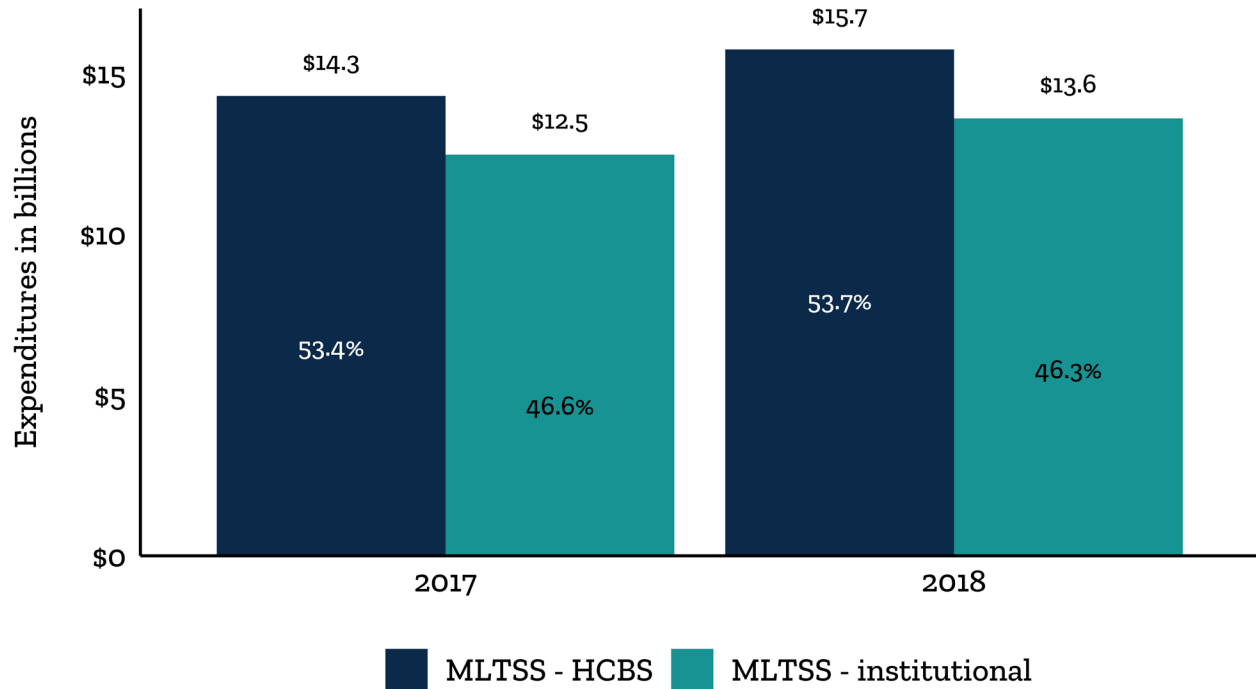
MLTSS expenditures for several states represented a large proportion of total MLTSS expenditures nationally for FY 2017 and 2018. In FY 2018, four states (Arizona, Florida, Ohio, and Texas) accounted for 50 percent of total MLTSS spending nationally (Appendix D tables). Specifically, in FY 2018, MLTSS expenditures for Texas accounted for 22 percent of total national MLTSS expenditures, and MLTSS expenditures for Florida accounted for 14 percent of total national MLTSS expenditures. As we noted previously, total national MLTSS expenditures in this report excluded expenditures for MLTSS programs in California, Illinois, New York, and Virginia for FY 2017 and 2018.

MLTSS spending on HCBS and institutional care, FY 2017 and 2018. As Figure V.4 shows, from FY 2017 to 2018, MLTSS expenditures for HCBS increased from \$14.3 billion to \$15.7 billion, representing a 10 percent increase (Appendix D tables). Likewise, institutional MLTSS expenditures increased by 9 percent from \$12.5 billion to \$13.6 billion (Appendix D tables).¹⁹ In FY 2018, total HCBS expenditures for five states—Arizona, Florida, Kansas, Texas, and Wisconsin—accounted for 61 percent of national MLTSS expenditures devoted to HCBS. In FY 2018, total institutional expenditures for four states—Florida, Iowa, Ohio, and Texas—accounted for 61 percent of total institutional MLTSS expenditures. From FY 2017 to 2018, total HCBS expenditures as a percentage of total MLTSS expenditures increased by less than 1 percentage point.

¹⁹ As we excluded California, Illinois, New York, and Virginia because of missing data, they are not accounted for in these rankings.

From FY 2017 to 2018, the states with the greatest increases in MLTSS expenditures for HCBS were Pennsylvania, Idaho, and Delaware, and the states with the greatest increases in institutional MLTSS expenditures were Pennsylvania, Iowa, and Idaho. Increases in MLTSS expenditures in Pennsylvania and Idaho were attributable to MLTSS program expansions.

Figure V.4. Medicaid HCBS and institutional MLTSS expenditures, in billions, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 state-submitted MLTSS data.

Notes: We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 calculations because of missing data. North Carolina did not provide break outs of total MLTSS expenditures by HCBS and institutional services, so we also excluded North Carolina from the total in this figure even though we included it in total MLTSS expenditures in Figures V.2 and V.3. PACE expenditures are not included in MLTSS totals. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care for the Elderly.

VI. Distribution of expenditures by service category

A. HCBS service category expenditures

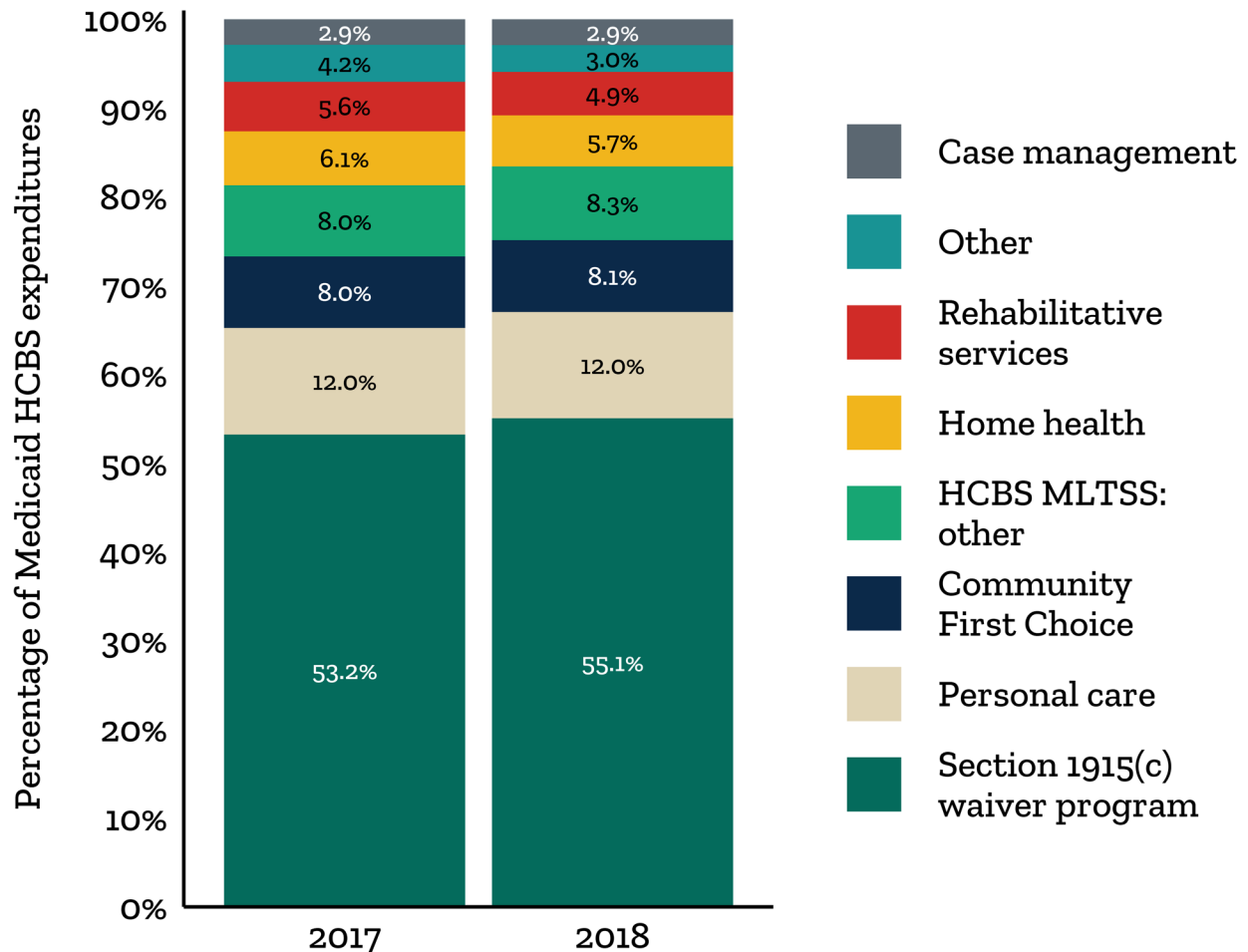
The distribution of HCBS expenditures across HCBS service categories was largely consistent from FY 2017 to 2018, with changes of 1 or 2 percentage points between section 1915(c) waiver programs, rehabilitative services, home health, and other HCBS (Figure VI.1).

- **Section 1915(c) waiver programs** accounted for most HCBS expenditures in FY 2017 and 2018, representing slightly more than 50 percent of expenditures in both years. Several states saw large increases in their section 1915(c) waiver program expenditures from FY 2017 to 2018, including Colorado, Iowa, Oregon, and Wisconsin. Colorado in particular nearly doubled its expenditures, which increased from \$609.7 million in FY 2017 to \$1.2 billion in FY 2018. For a full list of state section 1915(c) waiver program expenditures, refer to Appendix Table C.16 and Tables C.40 to C.47.
- **Personal care** covered as a state plan benefit represented about 12 percent of overall HCBS expenditures in FY 2017 and 2018. Although the percentage of personal care out of total HCBS expenditures remained consistent throughout the two years, expenditures varied at the state level. Eight states that previously did not report personal care expenditures in FY 2016 reported these expenditures in FY 2017 and 2018: Hawaii, Iowa, Kansas, New Mexico, Ohio, Pennsylvania, Rhode Island, and Tennessee. California, which accounted for 23 percent of all personal care expenditures, saw an increase of 72 percent in personal care expenditures from FY 2017 to 2018.²⁰ For a full list of state personal care expenditures, refer to Appendix Table C.17.
- Although only eight states had **Community First Choice** programs, a state plan option that covers personal care, attendant services, and other HCBS supports, they accounted for a large proportion of overall LTSS spending, representing about 8 percent of all HCBS expenditures in FY 2017 and 2018. New York had the largest growth in Community First Choice expenditures, which doubled from FY 2016 to 2017 from \$2.4 billion to \$4.9 billion. Subsequently, in FY 2017 and 2018, New York accounted for about a third of all Community First Choice expenditures.²¹ For a full list of state Community First Choice expenditures, refer to Appendix Table C.18.
- **HCBS MLTSS: other** is a category covering a diverse set of HCBS expenditures reported by states in their MLTSS data submissions, including spending on home delivered meals, transportation services, habilitation, and assistive technology, among others. For further details on state-reported HCBS MLTSS: other expenditures, see Appendix B.
- Services in the **Other** category cover an aggregate of six HCBS services—PACE, private duty nursing, health homes, section 1915(i), section 1915(j), and MFP—which together accounted for less than 5 percent of total HCBS expenditures. For a full list of state HCBS MLTSS: other, PACE, private duty nursing, health homes, section 1915(i), section 1915(j), and MFP expenditures, refer to Tables C.19, C.23, C.24, C.25, C.28, C.33, and C.34, respectively.

²⁰ California's FY 2016 to 2018 expenditures were calculated only using FFS data. Because California is missing MLTSS data for FY 2016 to 2018, it is likely that the state actually accounts for a higher proportion of total personal care expenditures than reported here.

²¹ New York's FY 2017 and 2018 expenditures were calculated only using FFS data. Because New York is missing MLTSS data for FY 2017 and 2018, it is likely that the state actually accounts for a higher proportion of total Community First Choice expenditures than reported here.

Figure VI.1. Distribution of Medicaid HCBS expenditures by service category, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: We excluded California, Illinois, New York, and Virginia because of missing data. HCBS MLTSS: other includes other relevant HCBS expenditures reported by states within their MLTSS data submissions, such as home delivered meals, transportation services, and habilitation. Other is an aggregate of PACE, private duty nursing, health homes, section 1915(i), section 1915(j), and MFP expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care for the Elderly.

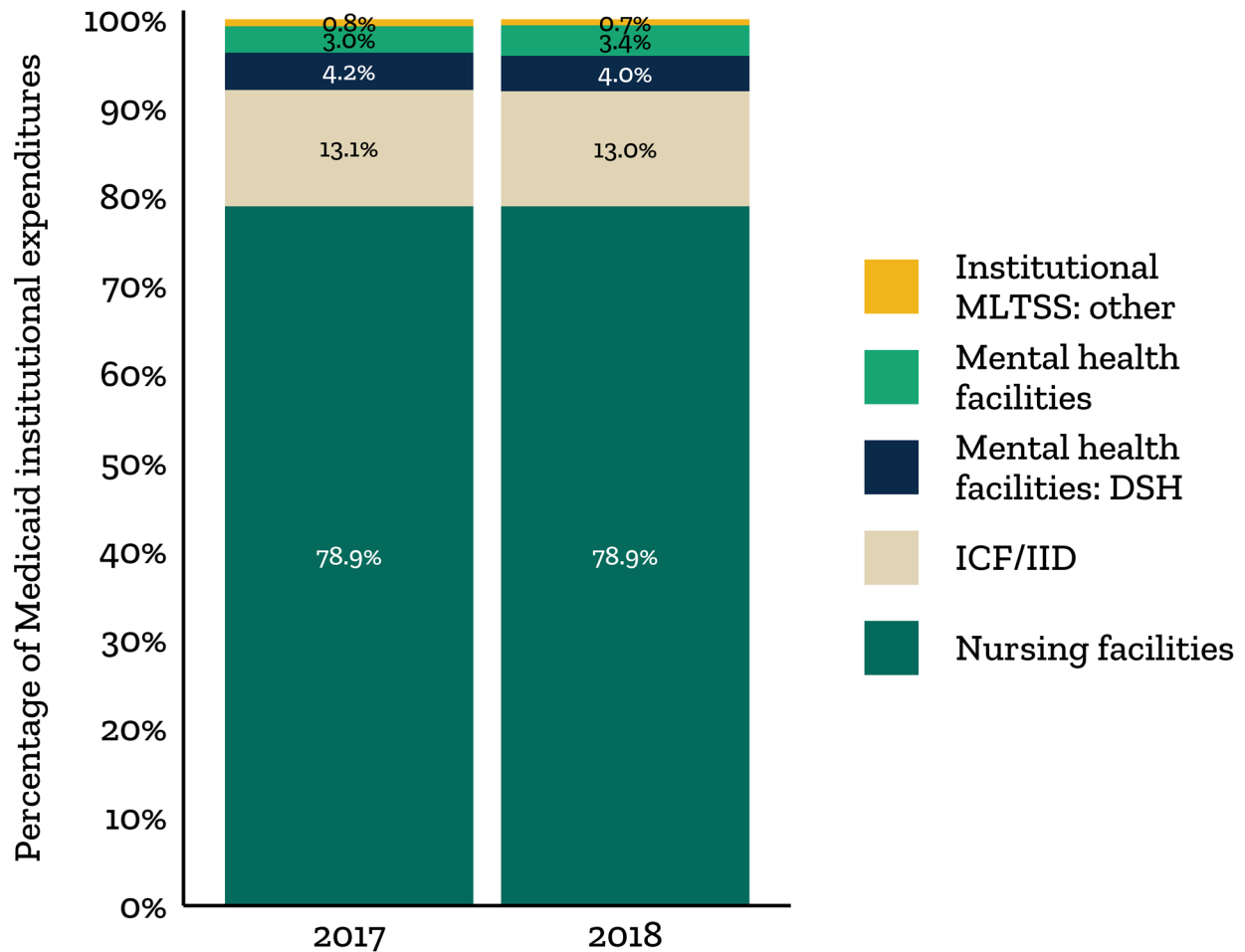
B. Institutional service category expenditures

Similar to HCBS expenditures, the distribution of institutional service categories remained virtually unchanged from FY 2017 to 2018, with shifts of less than 1 percentage point across the categories (Figure VI.2.).

- The majority of institutional LTSS expenditures were spent on **nursing facility services**, representing 79 percent of such expenditures in FY 2017 and 2018 (Figure VI.2). Programmatic changes in Iowa led to an increase of 81 percent in its nursing facility expenditures from FY 2017 to 2018. Further details on this change and other state reporting nuances are available in Appendix B. Appendix Table C.8 includes a full list of state nursing facility service expenditures.
- **ICF/IID** accounted for 13 percent of institutional LTSS spending in both fiscal years. Arizona, North Carolina, and Vermont saw large changes in expenditures, which was more of a reflection on methodology changes this year than any real increase in expenditures. Further details on these changes and other state reporting nuances are available in Appendices A and B. Appendix Table C.9 includes a full list of state ICF/IID expenditures.
- Expenditures for **mental health facilities**²² were about 7 percent of all institutional LTSS spending; **mental health disproportionate share hospital (DSH)** payments were slightly higher than mental health facility non-DSH payments by about 1.5 percentage points in FY 2017 and 2018. Tables C.12 and C.13 include a full list of mental health facility expenditures and mental health DSH payments, respectively.
- **Institutional MLTSS: other** is comprised of institutional LTSS expenditures reported by states in their MLTSS data submissions that do not fit into one of the existing service categories. Four states (Arizona, Florida, Hawaii, and Minnesota) reported expenditures in this category, which included nursing home supplemental funds, hospice care, and several aggregate institutional expenditures. These expenditures are reported in Appendix Table C.14.

²² More information on the definition of mental health facilities is included in Appendix A.

Figure VI.2. Distribution of Medicaid institutional LTSS expenditures by service category, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data and state-submitted MLTSS data.

Notes: We excluded California, Illinois, New York, and Virginia because of missing data. Institutional MLTSS: other includes other relevant institutional expenditures reported by states within their MLTSS data submissions, such as nursing home supplemental funds and hospice care. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

DSH = disproportionate share hospital; FY = fiscal year; ICF/IID = Intermediate Care Facilities for Individuals with Intellectual Disabilities; LTSS = long-term services and supports; MLTSS = managed long-term services and supports.

VII. Section 1915(c) waiver program expenditures

Section 1915(c) of the Social Security Act allows states to provide LTSS in home- and community-based settings as an alternative to institutions for Medicaid-eligible beneficiaries who meet institutional level-of-care criteria. Nearly all states use section 1915(c) waiver programs as a primary way to deliver HCBS to certain populations. During FY 2017 and 2018, all states except Arizona, Rhode Island, and Vermont operated at least one section 1915(c) waiver program.²³

In 2017, states operated a total of 278 section 1915(c) waiver programs across all LTSS targeted populations (Ross et al. 2021).^{24,25} Waiver programs focused on the following populations:

1. 80 programs in 41 states targeted older adults or people with physical or other disabilities (PD or OD)
2. 119 programs in 47 states targeted people with autism spectrum disorder (ASD) or intellectual or developmental disabilities (ID or DD)
3. 12 programs in 11 states targeted people with serious mental health conditions or with serious emotional disturbance (SED); people with substance use disorder (SUD) may be included in these programs
4. 28 programs in 19 states targeted people who are medically fragile or technologically dependent (TD)
5. 7 programs in 7 states targeted people with HIV/AIDS
6. 22 programs in 18 states targeted people with brain injuries
7. 10 programs in 7 states targeted multiple subgroups

The last group is a new category added for classification purposes for this report that captures waiver programs serving several targeted populations and subgroups under one waiver program.

A. Trends in overall section 1915(c) waiver program expenditures

Total expenditures FY 2008 to 2018. Expenditures for section 1915(c) waiver programs in FY 2017 totaled \$46.2 billion, which increased to \$49.7 billion in FY 2018. Spending in FY 2017 was lower than in FY 2016 at \$48.2 billion (Figure VII.1 and Appendix Table C.16). We included section 1915(c) expenditures for California, Illinois, New York, and Virginia in FY 2017 and 2018 based on CMS-64

²³ Arizona, Rhode Island, and Vermont provided similar services to HCBS-eligible populations in demonstrations authorized under section 1115 of the Social Security Act. While other states also use section 1115 authority to provide HCBS, all other states had at least one active section 1915(c) waiver program in these years.

²⁴ As we describe in Section VIII, we further grouped these waiver program expenditures, along with expenditures for other LTSS service categories, into the four major LTSS targeted population subgroups (older adults and people with PD or OD; people with ASD, ID, or DD; people with behavioral health conditions; and multiple populations) in order to examine total HCBS and institutional expenditures for the four groups.

²⁵ To identify the populations, we used CMS 372 data for waiver programs in 2017, as the 2018 data were not yet available at the time of our analysis. This information is documented in Ross et al. 2021.

data. Inflation-adjusted expenditures indicate a decline in total expenditures in FY 2017 and 2018 compared with FY 2016.²⁶

Eight states had large declines in section 1915(c) waiver program expenditures from FY 2016 to 2017, including Kansas, Iowa, North Carolina, Wisconsin, Florida, Illinois, Colorado, and California. Declines in these states outweighed increases in other states between the two years, but some states had moderately large increases from FY 2016 to 2017, including New Hampshire, Mississippi, Oregon, Ohio, Nevada, Pennsylvania, and Delaware. From FY 2017 to 2018, the only state with a substantial decline in overall section 1915(c) waiver program expenditures was New Jersey because it terminated its only waiver program in November 2017.²⁷ Six states had substantial increases, however, from FY 2017 to 2018: Colorado, Oregon, Iowa, Wisconsin, Nebraska, and Illinois.²⁸

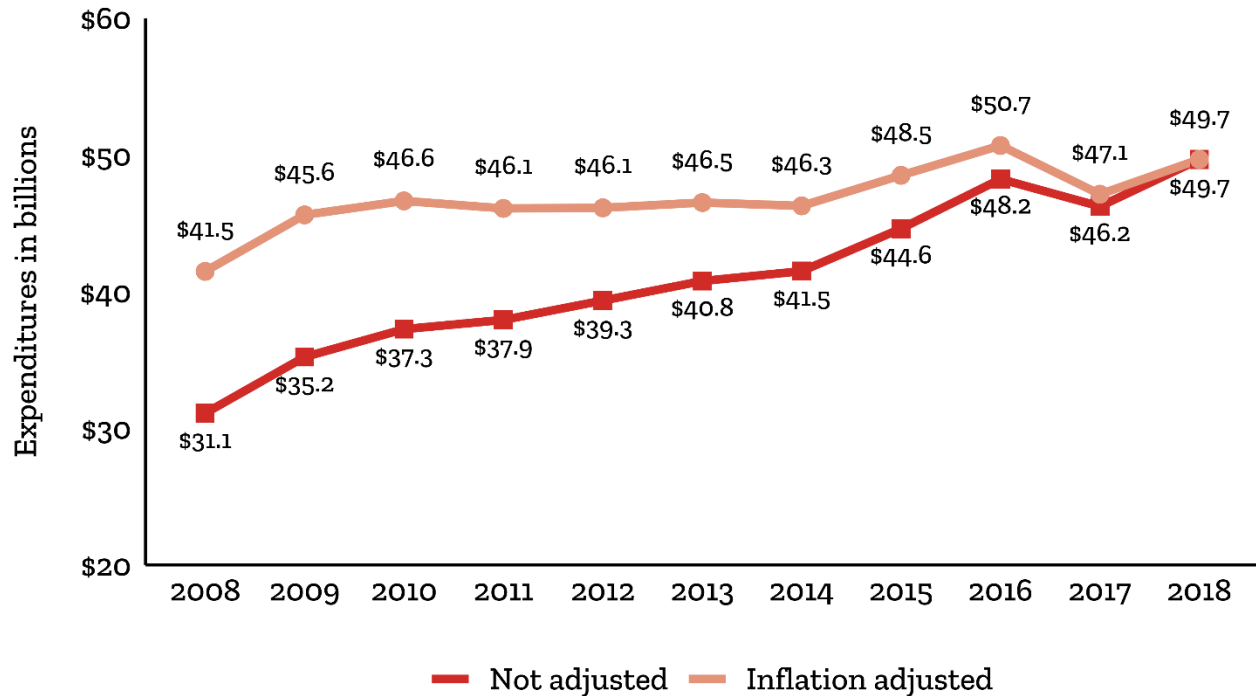
Several states make up a substantial proportion of the overall national section 1915(c) waiver program expenditures. In all, 16 states made up 75 percent of total waiver program expenditures in FY 2017 and 2018. In FY 2017, these included Missouri, Indiana, Florida, Maryland, New Jersey, Georgia, Illinois, Texas, Connecticut, Massachusetts, Virginia, Minnesota, Ohio, California, Pennsylvania, and New York; the only difference in FY 2018 was the addition of Colorado in place of New Jersey among the set of states making up 75 percent of national waiver program expenditures. Two states—Pennsylvania and New York—spent between \$5 to 6 billion in waiver program expenditures, together accounting for 25 percent of total section 1915(c) waiver program expenditures in each FY.

²⁶ Some of these changes in FY 2017 and 2018 were related to the way states that operate their section 1915(c) waiver programs under MLTSS programs report data in the CMS-64. In these cases, states do not report managed care expenditures under the section 1915(c) waiver programs in CMS-64 reports, but these expenditures are captured in MLTSS program expenditures collected directly from states. For example, Kansas operates all of its section 1915(c) waiver programs under its MLTSS program, which operates under a concurrent 1115 demonstration authority, so there were few expenditures captured in the CMS-64 data at the section 1915(c) waiver program-level for Kansas.

²⁷ In 2017, NJ transitioned its section 1915(c) Community Care Waiver program into a section 1115(a) demonstration.

²⁸ Some of the changes from year-to-year in particular states appear to be data reporting anomalies and not real changes. Data limitations that we were able to verify are described in Appendix B.

Figure VII.1. Total Medicaid section 1915(c) waiver program expenditures (not adjusted and inflation adjusted), in billions, FY 2008 to 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 and CMS 372 data. Data for FY 2008 to 2014 were obtained from Wenzlow et al. (2016), and data for FY 2015 and 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

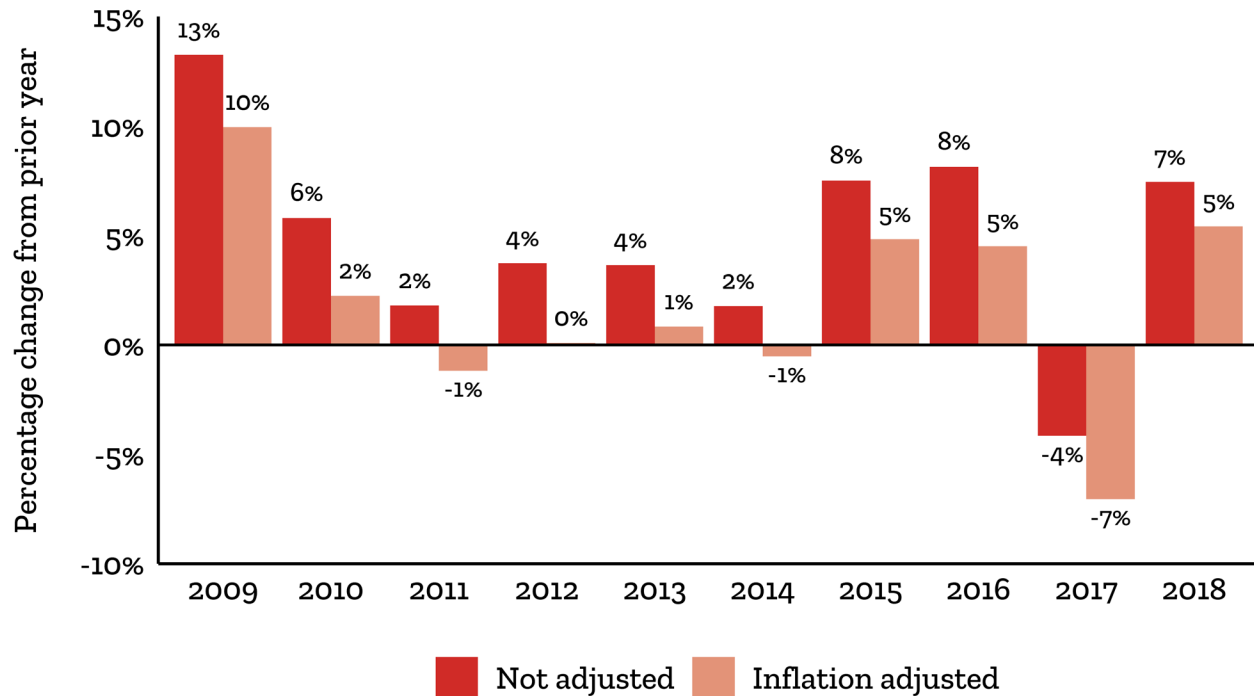
Notes: We calculated inflation-adjusted expenditures by adjusting expenditures to FY 2018 dollars using the medical CPI. We included California, Illinois, New York, and Virginia in FY 2017 and 2018 based on CMS-64 data. These four states are included in Figures VII.1 and VII.2 because we are able to use CMS-64 data to calculate section 1915(c) waiver program expenditures, but excluded from Figure VII.3 because we are not able to calculate total Medicaid LTSS due to missing MLTSS data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CPI = consumer price index; FY = fiscal year.

Annual expenditures rate of growth FY 2009 to 2018. The rate of expenditure growth from FY 2009 to 2018 was highest in FY 2009 (13 percent not adjusted, 10 percent inflation adjusted), followed by FY 2015 and 2016 (Figure VII.2). We included section 1915(c) expenditures for California, Illinois, New York, and Virginia in FY 2017 and 2018 based on CMS-64 data. Inflation-adjusted rates of growth were small in other years from FY 2010 to 2014. Expenditures declined in FY 2017 compared with FY 2016 (not adjusted and inflation adjusted), but expenditures increased in FY 2018.²⁹

²⁹ Changes in section 1915(c) expenditure growth over time may be due to programmatic changes in states, state reporting methodologies for CMS-64 data, and methodological changes in how these expenditures are calculated (see Appendix A).

Figure VII.2. Medicaid section 1915(c) waiver program expenditure growth (not adjusted and inflation adjusted), FY 2009 to 2018



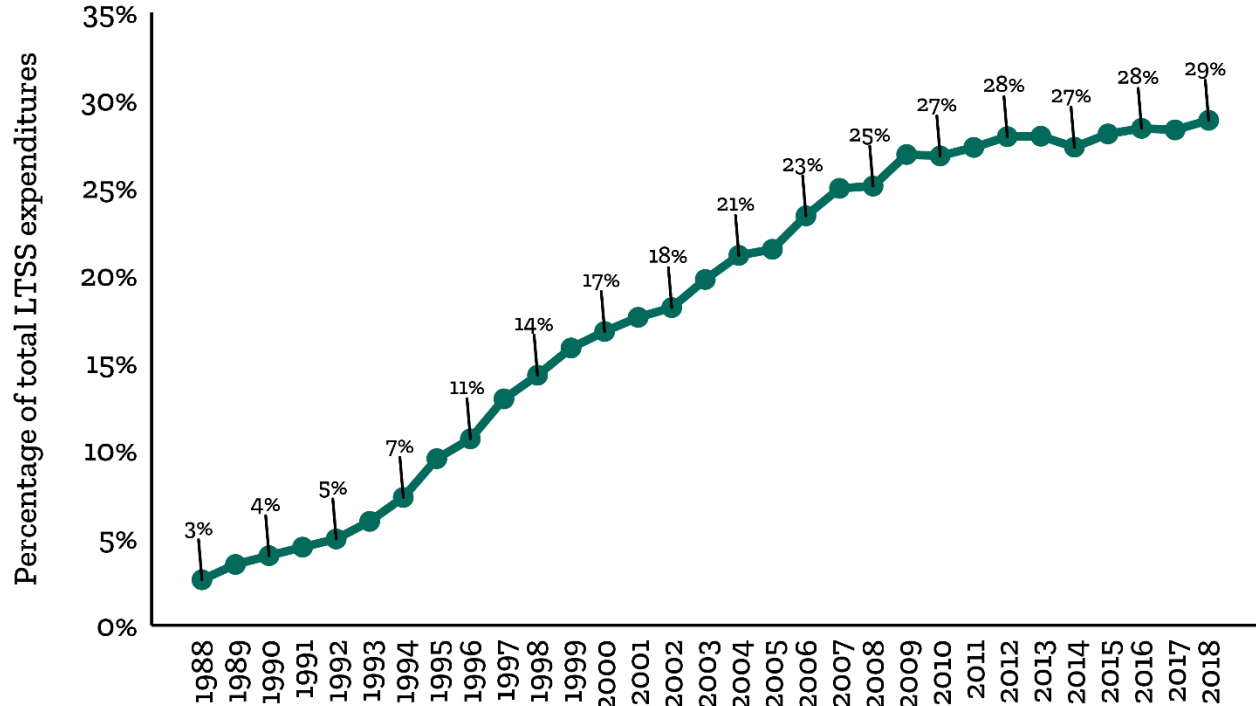
Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 and CMS 372 data. Data for FY 2008 to 2014 were obtained from Wenzlow et al. (2016), and data for FY 2015 and 2016 were obtained from an unpublished version of the 2017 1915(c) Expenditure Report.

Notes: We calculated inflation-adjusted expenditures by adjusting expenditures to FY 2018 dollars using the medical CPI. We included California, Illinois, New York, and Virginia in FY 2017 and 2018 based on CMS-64 data. These four states are included in Figures VII.1 and VII.2 because we are able to use CMS-64 data to calculate section 1915(c) waiver program expenditures, but excluded from Figure VII.3 because we are not able to calculate total Medicaid LTSS due to missing MLTSS data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CPI = consumer price index; FY = fiscal year.

Section 1915(c) waiver program spending as a share of total Medicaid LTSS. Section 1915(c) waiver program spending represented 28 and 29 percent of total Medicaid LTSS in FY 2017 and 2018, respectively (Figure VII.3). The share of expenditures on section 1915(c) waiver programs of total Medicaid LTSS expenditures grew rapidly up until around FY 2010, when it reached 27 percent, and it has fluctuated from 27 to 29 percent since. Overall, section 1915(c) waiver program expenditures accounted for more than half of total HCBS expenditures in FY 2017 and 2018. These patterns indicate that section 1915(c) waiver programs continue to play a major role in HCBS delivery across states, despite the additional Medicaid authorities that states use for HCBS, such as section 1915(i) and section 1915(k) state plan HCBS options. We excluded section 1915(c) expenditures for California, Illinois, New York, and Virginia from Figure VII.3 because we are not able to calculate total Medicaid LTSS due to missing MLTSS data.

Figure VII.3. Medicaid section 1915(c) waiver program expenditures as a percent of total Medicaid LTSS, FY 1988 to 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 and CMS 372 data. Data for FY 1988 to 2014 were obtained from Wenzlow et al. (2016), and data for FY 2015 and 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: We excluded California, Illinois, New York, and Virginia from FY 2017 and 2018 calculations because of missing total LTSS expenditures for these states. These four states are included in Figures VII.1 and VII.2 because we are able to use CMS-64 data to calculate section 1915(c) waiver program expenditures, but excluded from Figure VII.3 because we are not able to calculate total Medicaid LTSS due to missing MLTSS data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; LTSS = long-term services and supports.

B. Trends in section 1915(c) waiver program expenditures for LTSS targeted populations

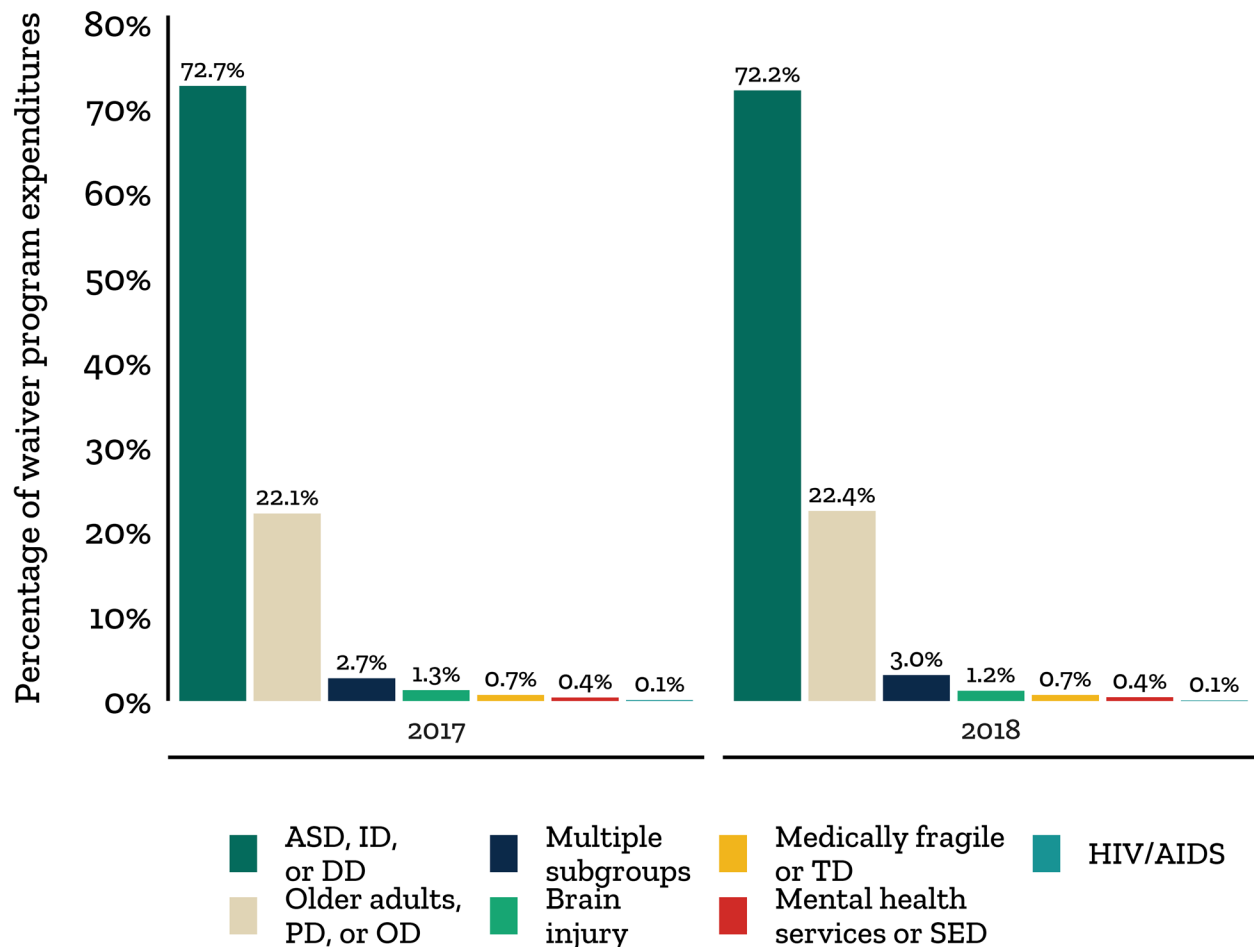
Section 1915(c) waiver program expenditures for different LTSS targeted populations vary substantially (Figure VII.4 and Appendix Tables C.40 to C.46). Waiver programs for the ASD, ID, or DD population accounted for about 72.7 percent of the \$46.2 billion in total waiver program expenditures in FY 2017 and 72.2 percent of \$49.7 billion in FY 2018. Four states—Delaware, Hawaii, New Jersey, and Tennessee—only operated waiver programs for the ASD, ID, or DD populations.³⁰

Waiver programs for older adults, PD, or OD accounted for about 22.1 percent of total expenditures in FY 2017 and 22.4 percent in FY 2018.

³⁰ New Jersey terminated its waiver program in November 2017.

Compared with these two LTSS targeted populations, fewer waiver programs are targeted to other LTSS populations, with corresponding spending patterns, indicating that LTSS spending differs substantially across population subgroups. Waiver programs for the multiple subgroups target population accounted for 2.7 and 3.0 percent of total waiver program expenditures in FY 2017 and 2018, respectively. Waiver programs for people with brain injuries made up 1.3 percent of total expenditures in FY 2017 and 1.2 percent in FY 2018. The remaining waiver programs for medically fragile or technologically dependent, mental health services or SED, and HIV/AIDS populations accounted for 0.7, 0.4, and 0.1 percent of total expenditures, respectively, in FY 2017 and 2018.

Figure VII.4. Percentage of total Medicaid section 1915(c) waiver program expenditures by LTSS targeted population, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 and CMS 372 data.

Notes: We included California, Illinois, New York, and Virginia in this calculation based on CMS-64 data. New Hampshire is excluded due to their state’s data reporting in the CMS-64. There were a few uncategorized waiver program expenditures reported by states in FY 2017 and 2018 CMS-64 data, but these are not counted in the totals by population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

ASD = autism spectrum disorder; DD = developmental disabilities; FY = fiscal year; ID = intellectual disabilities; LTSS = long-term services and supports; OD = other disabilities; PD = physical disabilities; SED = serious emotional disturbance; TD = technologically dependent.

VIII. Expenditures by LTSS targeted population subgroups

States provide LTSS to diverse populations with different physical, functional, and cognitive limitations and a wide array of health care conditions. Consequently, the amount of HCBS spending varies substantially by LTSS targeted population subgroups. We examined spending for four major LTSS targeted population subgroups:

1. Older adults and people with PD or OD
2. People with ASD, ID, or DD
3. People with behavioral health conditions
4. Multiple populations

To calculate LTSS expenditures by LTSS targeted population subgroups, we made several assumptions about the type of services used by each population and assigned all state expenditures for individual service categories to the relevant population group.^{31,32} For example, we assigned all nursing facility expenditures within a state to older adults and people with PD or OD, even though other population groups might use some nursing facility services. For any service category intended to serve multiple LTSS targeted population subgroups, we assigned the expenditures to the multiple populations category. For instance, states use the Community First Choice section 1915(k) State Plan Option to serve all LTSS population subgroups, so we assigned this service category to the multiple populations category.

In addition to classifying all distinct service categories to the relevant LTSS targeted population subgroup to examine total institutional and HCBS by population, we also assigned the seven section 1915(c) waiver program population groups described above in Section VII to the four overarching LTSS targeted population subgroups to capture waiver program expenditures as part of the HCBS totals for each group (Table VIII.1). Appendix A has a full list of service categories used to define HCBS and institutional services for each population group, as well as details about the methodology.

Table VIII.1. Categorization of section 1915(c) waiver program expenditures into four LTSS targeted population subgroups

LTSS targeted population subgroup	Corresponding section 1915(c) waiver programs
Older adults and people with PD or OD	Older adults, PD, or OD
People with ASD, ID, or DD	ASD, ID, or DD
People with behavioral health conditions	Serious mental health conditions or SED
Multiple populations	Medically fragile or TD HIV/AIDS Brain injury Multiple subgroups

ASD = autism spectrum disorder; DD = developmental disabilities; ID = intellectual disabilities; LTSS = long-term services and supports; OD = other disabilities; PD = physical disabilities; SED = serious emotional disturbance; TD = technologically dependent.

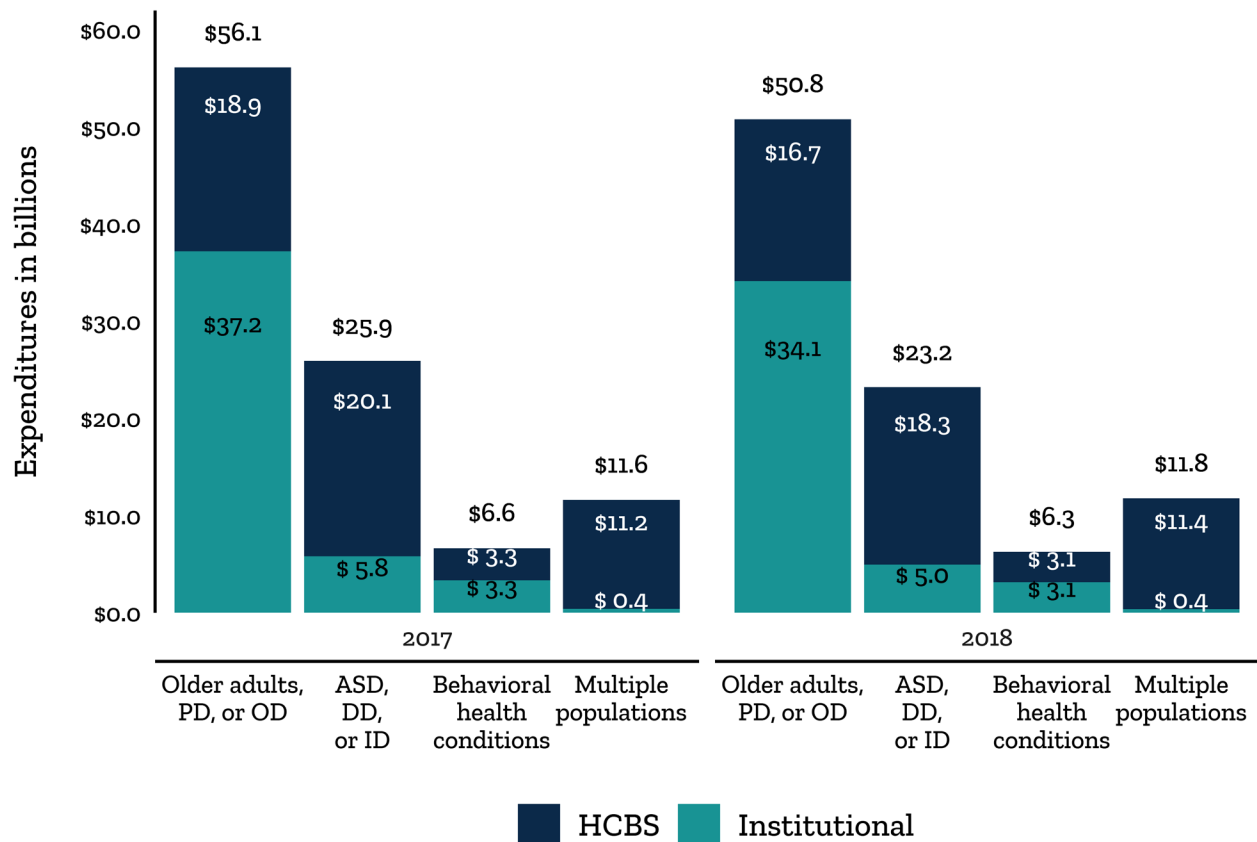
³¹ Some states did not report data in way that enabled us to assign them to population groups. The results for each population group are limited to states that reported data that we could assign consistently by service category.

³² Methodology changes for calculating LTSS expenditures by LTSS targeted population subgroups affect trending between FY 2017 and 2018 and prior data years, particularly for the older adults and people with PD or OD and the multiple populations subgroups. Further details about the methods are available in Appendix A.

Although it is difficult to definitively attribute LTSS expenditures to different LTSS subgroups without detailed information about beneficiary-level service use, the findings suggest that HCBS accounts for a majority of LTSS spending for people with ASD, ID, or DD. However, it accounts for a much smaller share of LTSS spending for older adults and people with PD or OD and for people with behavioral health conditions (Figure VIII.1 and Appendix Tables C.36 to C.39). In particular, LTSS spending for older adults and people with PD or OD lags far behind the other population subgroups in terms of the balance of HCBS and institutional expenditures. Even though many states have made substantial progress in rebalancing their LTSS systems overall, with more than half of states exceeding 50 percent of expenditures on HCBS, the progress is not equally distributed across different population subgroups. These areas present opportunities for states to target new rebalancing efforts.

- **Older adults and people with PD or OD.** In FY 2017, states spent \$56.1 billion for LTSS for this population group, with 33.7 percent of total Medicaid LTSS expenditures devoted to HCBS. In FY 2018, states spent \$50.8 billion, with 32.9 percent of total LTSS for HCBS. Overall, LTSS expenditures for older adults and people with PD or OD comprised 56.0 and 55.2 percent of total LTSS across all populations in FY 2017 and 2018, respectively.
- **People with ASD, ID, or DD.** National spending for this population group in FY 2017 totaled about \$25.9 billion on LTSS, with 77.6 percent devoted to HCBS. Spending on LTSS in FY 2018 was \$23.2 billion, 78.9 percent of which was for HCBS. Spending for people with ASD, ID, or DD was 25.8 and 25.2 percent of total LTSS across all populations in FY 2017 and 2018, respectively.
- **People with behavioral health conditions.** Among people with behavioral health conditions, total LTSS spending was \$6.6 billion in FY 2017 with 50.0 percent of spending for HCBS, and \$6.3 billion in FY 2018 with 49.2 percent for HCBS. Spending for people with behavioral health conditions accounted for 6.6 and 6.8 percent of total LTSS across all populations in FY 2017 and 2018, respectively.
- **Multiple populations.** National LTSS spending for the multiple populations group totaled \$11.6 billion in FY 2017 and \$11.8 billion in FY 2018. Because the only category of institutional expenditures that were categorized for this LTSS targeted population subgroup included other MLTSS institutional expenditures not captured in the nursing facility, ICF/IID, or mental health facility categories, most states did not have any, or had very minimal, institutional spending for this population.
- Although the patterns across the populations were similar in FY 2017 and 2018, total expenditures declined slightly between the two years, primarily because of missing data or other data limitations for several additional states in FY 2018 compared with FY 2017.

Figure VIII.1. Medicaid HCBS and institutional expenditures by LTSS targeted population subgroups, in billions, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP worksheets for proposed budget.

Notes: The results for each population group are limited to states that reported data that we could assign consistently by service category. We excluded FY 2017 and 2018 data for California, Illinois, Kansas, Massachusetts, New Hampshire, North Carolina, New York, Texas, Virginia, and Vermont. We also excluded FY 2018 data for Pennsylvania. HCBS and institutional results might not sum to the total because of rounding. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

ASD = autism spectrum disorder; DD = developmental disabilities; FY = fiscal year; HCBS = home and community-based services; ID = intellectual disabilities; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; OD = other disabilities; PD = physical disabilities.

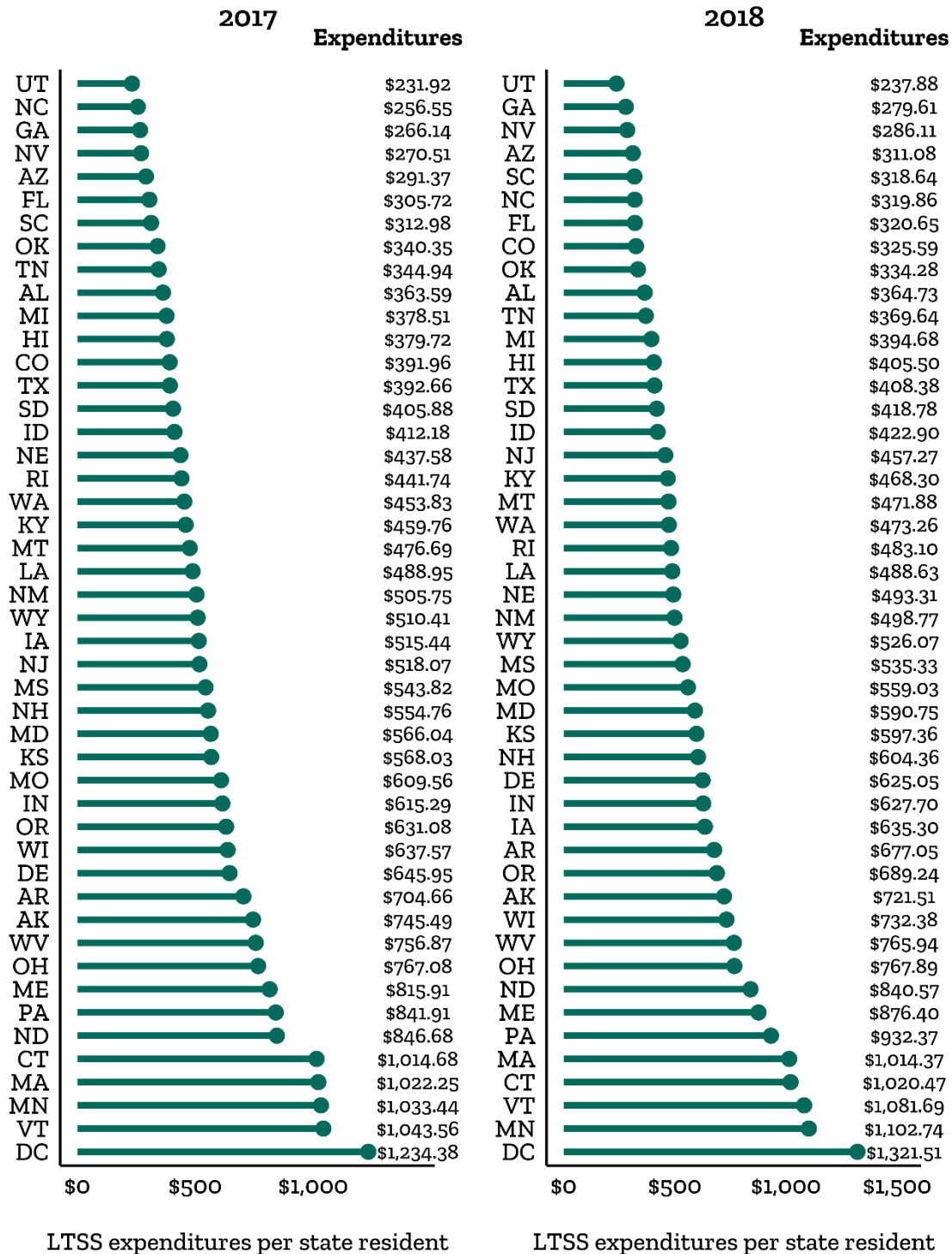
IX. Medicaid LTSS expenditures per state resident per fiscal year

In FY 2018, Medicaid LTSS expenditures per state resident averaged \$522.44 nationally, and varied across states, ranging from \$237.88 in Utah to \$1,321.51 in the District of Columbia (Figure IX.1 and Appendix Table C.6).³³ Between FY 2017 and 2018, this range increased slightly but most states remained in the same general part of the distribution. However, the states with the greatest increases in Medicaid LTSS expenditures per state resident between these years were Iowa, Wisconsin, and Pennsylvania (\$119.86, \$94.81, \$90.46 increase per resident, respectively), whereas the states with the greatest decreases in Medicaid LTSS expenditures per state resident between these years were Colorado, New Jersey, and Missouri (-\$66.37, -\$60.80, -\$50.53 decrease per resident, respectively).

Many factors could have contributed to the states' variation in Medicaid LTSS expenditures per state resident, including differences in state demographics, LTSS eligibility requirements, and coverage of LTSS benefits. States with a higher proportion of older adults and people with disabilities might have higher Medicaid LTSS expenditures per state resident because these population groups use these services more frequently. In addition, state eligibility requirements affect access to these services, as states set different income and asset standards and functional assessment thresholds for LTSS eligibility (Walker et al. 2010; MACPAC 2016). Specifically, higher asset limits and more lenient functional status requirements can improve access to LTSS for people who need these services, which could lead to increases in Medicaid LTSS expenditures per state resident. People who live in primarily rural states often experience challenges in accessing LTSS care, which could affect use of these services and therefore per state resident Medicaid LTSS spending (Houser et al. 2018). States can also determine the breadth of Medicaid LTSS coverage, including the amount, scope, and duration of these services, which impacts Medicaid LTSS spending per state resident. These factors and others likely contribute to states' variation in Medicaid LTSS expenditures per state resident.

³³ As noted previously, total national LTSS expenditures in this report excluded expenditures for California, Illinois, New York and Virginia for FY 2017 and 2018.

Figure IX.1. Medicaid LTSS expenditures per state resident, by state, FY 2017 and 2018



Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, MFP worksheets for proposed budget, and Census data (U.S. Census Bureau, Population Division 2019).

Notes: We excluded California, Illinois, New York, and Virginia from all calculations because of missing data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

X. Conclusions

Total Medicaid LTSS expenditures grew by about 2 percentage points each year since FY 2008, reaching \$124 billion in FY 2017 and \$129 billion in FY 2018. This is primarily attributable to growth in HCBS expenditures, which have increased by about 5 to 10 percentage points each year when adjusted for inflation, and, at the same time, institutional LTSS expenditures steadily decreased by about 2 to 4 percentage points in that same time period.

Expenditures varied by service category, state, setting, and program authority. The absolute amount spent on MLTSS programs, for example, increased more than three-fold in the past 20 years, climbing from \$6.7 billion in FY 2008 to \$30.1 billion in FY 2018. This reflects more states using MLTSS, rising from 8 in 2006 to 25 in FY 2018, including the 10 states that operated Financial Alignment Initiative demonstrations, which covered Medicaid LTSS for dually eligible beneficiaries.

Meanwhile, the share of LTSS out of total Medicaid expenditures declined from 47 percent in FY 1988 to 32 percent in FY 2018. Reasons for this decline include state LTSS system rebalancing initiatives that promote increased use of more cost-effective HCBS and increased spending for non-LTSS populations and services.

The percentage of HCBS expenditures of total Medicaid LTSS expenditures has steadily increased over the last three decades but has slowed in recent years. The U.S. total surpassed the long-standing benchmark of 50 percent of LTSS expenditures in FY 2013 and has remained higher than 50 percent since, reaching 55.4 percent in FY 2017 and 56.1 percent in FY 2018.

In FY 2018, section 1915(c) waiver program expenditures totaled \$49.7 billion, about 7 percent higher than FY 2017 (\$46.2 billion). The share of expenditures on section 1915(c) waiver programs of total Medicaid LTSS was 29 percent in FY 2018, roughly the same as the share in the previous five years. The share of expenditures on section 1915(c) waiver programs of total Medicaid LTSS expenditures grew rapidly up until around FY 2010, when it reached 27 percent, and it has fluctuated around 27 to 29 percent since.

Section 1915(c) waiver programs represented the majority of HCBS expenditures in FY 2017 and 2018, accounting for slightly more than 50 percent of these expenditures in both years, while nursing facilities represented the greatest share of institutional LTSS expenditures, accounting for 79 percent of these expenditures in FY 2017 and 2018.

When we examined expenditures for different LTSS targeted population subgroups, we found that older adults and people with physical or other disabilities accounted for the majority of total LTSS spending in FY 2017 and 2018 (55 to 56 percent in these years), while people with ASD, ID or DD accounted for 25 to 26 percent of spending, people with behavioral health conditions accounted for over 6 percent of spending, and multiple populations accounted for the remainder. However, within these population subgroups, HCBS accounted for a majority of LTSS spending for people with ASD, ID, or DD and for multiple populations, but it accounted for much less for older adults and people with PD or OD, and for people with behavioral health conditions.

Overall, state expenditures for LTSS varies considerably by service category and population subgroups, which is influenced by factors such as demographics and the unique Medicaid landscape and program structures within each state.

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Appendix A. Data sources and methods

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A. Major changes to methodology in this year's report

Our analytic approach differed from prior reports in this series in several significant ways, each of which are worth noting for their potential impact on trends over time. These changes include calculating expenditures based on payment date rather than service date, several updates to state managed long-term services and supports (MLTSS) state-reported data collection and validation, and revised section 1915(c) waiver program target groupings.

Calculating expenditures by payment date. Previous iterations of this report calculated LTSS expenditures from CMS-64 based on date of service. This is different from how states submit expenditures in the CMS-64, which are based on date of payment. Calculating expenditures by date of service required a complex process that relied on combining two different CMS-64 forms—the Base Financial Management Report (FMR) report and state quarterly reports—to reattribute prior period adjustments by service date. Calculating expenditures based on payment date aligns more closely with how states, the Centers for Medicare & Medicaid Services (CMS), and other stakeholders report and use these data. Although this change might affect the comparability of trends in previous years to this year, our comparisons have shown that its effect is minimal in most states.

Updates to state MLTSS data collection and validation. Several changes were made this year in an attempt to standardize state-reported MLTSS data. First, we developed a data collection template and user guide with detailed instructions on how states should enter MLTSS data. States were explicitly asked to report estimated **capitated** expenditures, which was a change from previous years, in which states were generally asked to report their MLTSS expenditures and states would interpret this differently, using a combination of managed care plan cost reports and other sources. Data collection templates were customized to include the specific MLTSS programs in each state to ensure that the appropriate expenditures were being reported (refer to Table A.1 for a list of MLTSS programs reported by each state).

Second, we made changes to the expenditure categories that states reported this year. Previously, states were asked to report expenditures for nursing homes, Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID), state plan personal care, and state plan home health, as well as section 1915(c) waiver program and home and community-based services (HCBS) unspecified expenditures by target population, although many states did not report by target population. This year we asked states to report total expenditures for nursing homes, ICF/IID, Institution for Mental Disease,³⁴ other institutional, personal care, home health, rehabilitative services, targeted case management, other HCBS, and Community First Choice.

In addition, we asked states to break out their HCBS expenditures into two overarching categories: section 1915(c) waiver program expenditures and non-section 1915(c) waiver program expenditures. Within either category, states could report expenditures for personal care, home health, rehabilitative services, targeted case management, or other HCBS. This is different from previous years when states would report section 1915(c) waiver program expenditures separately from personal care, home health, and other HCBS. This change means that MLTSS section 1915(c) waiver program expenditures are categorized differently this year to avoid double-counting section 1915(c) waiver program expenditures from CMS-64 data, which will lead to some changes in trends at the service category-level. For example,

³⁴ We asked states to report Institution for Mental Disease expenditures, which we refer to as mental health facility expenditures throughout this report.

when a state reports MLTSS personal care expenditures under the section 1915(c) waiver program overarching category, we have included them within the personal care category only and not also included in the section 1915(c) waiver program total. Therefore, the section 1915(c) waiver program expenditures shown in the summary tables and in Tables C.16 and C.40-C.47 only include FFS expenditures and do not include any MLTSS data.

Revised section 1915(c) waiver program targeted population definitions. To ensure targeted population categories reflected information reported in the current section 1915(c) waiver program applications, we utilized the Waiver Characteristics Data file to verify selected LTSS target groups and subgroups. In general, the LTSS population groups used in this report align with those used in past years. However, we found that a small number of section 1915(c) waiver programs represented unique mixes of LTSS participants from different subgroups, which could not be easily categorized into the standard target groups. These program expenditures are reported within a new LTSS target group called “Multiple Subpopulations.” For example, waiver programs in this group might include a mix of section 1915(c) waiver program participants who are older adults, have physical disabilities, have brain injuries, and/or have HIV/AIDS.

We also created a category called uncategorized to account for a handful of section 1915(c) waiver programs that appeared in the CMS-64 Schedule A waiver data but whose waiver numbers do not match any approved waivers listed within the state waivers list on Medicaid.gov.³⁵ These are likely because of the waiver numbers being reported incorrectly in the state submissions to the CMS-64, which we were unable to correct, or to prior period adjustments for waiver programs that terminated before the period for which we have the correct LTSS target group.

B. Data sources

We used the following sources in the LTSS expenditure analysis:

1. CMS-64 Medicaid FMR Net Services data
2. CMS-64 Schedule A Waiver Report data
3. CMS-64 Supplemental Feeder Form (4C) data
4. State-reported MLTSS data
5. CMS 372 annual report data
6. Money Follows the Person (MFP) Budget Worksheet for Proposed Budget data
7. 2016 LTSS Expenditure Report data
8. 2016 section 1915(c) HCBS Waiver Program Report data
9. U.S. Census Bureau data

CMS-64 Medicaid FMR Net Services data

The CMS-64 reports are based on a series of forms through which state Medicaid agencies submit their program expenditures to CMS to calculate the federal financial participation, or the match rate, for the

³⁵ The state waiver list is available at <https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/index.html>.

state's Medicaid costs.³⁶ The CMS-64 FMR Net Services data used in this report are based on a summary file of these expenditures that shows Medical Assistance Payment expenditures by type of service and federal fiscal year. We accessed the data through the CMS Medicaid Budget and Expenditure System (MBES), and it is also publicly available on Medicaid.gov.³⁷

Data from the fiscal year (FY) 2017 and 2018 reports were used to capture FFS payments by service category at the state and national levels. As referenced above, prior period adjustments are included within these data based on date of payment. With the exception of collections, prior period adjustments are applied at the service category level, because there is no way to assign collections at a granular level, they are only applied to the overall Medicaid expenditures shown within this report.

We included the data as reported by states as we were unable to validate most of the service category expenditures. It does appear that there is some state misreporting in this data, as there were several states that did not have active section 1915(i) State Plan programs during FY 2017 and FY 2018 that reported expenditures for this category, as well as states that did have active section 1915(i) State Plan programs during that time period that did not report any expenditures (see Appendix B).

Because of the way that states report their capitated expenditures within the CMS-64, it is not possible to disaggregate costs to the service category level, which is why outreach was conducted to state Medicaid agencies to report that data directly (see State-Reported MLTSS Data section).

CMS-64 Schedule A Waiver Report data

The CMS-64 Schedule A Waiver Report data is a summary report that shows expenditures at the waiver level for section 1915(c) waiver programs, 1915(b) programs, 1115 demonstrations, and other programs. This data is not publicly available, so we accessed it through the CMS MBES.

Data from FY 2017 and 2018 were used to report section 1915(c) waiver program expenditures at the waiver program-level. We linked the data to information from the CMS 372 data by waiver number in order to report section 1915(c) waiver program expenditures by target population. Because the waiver number formatting varied between the two data sources, we standardized to the base waiver number in both sources prior to matching. There were a handful of states that misreported their waiver numbers in the CMS-64. We checked these against the CMS 372 and prior year report data, and in cases where it seemed clear that there was a minor character issue (for example, the state reported waiver number 006 when the correct waiver number was 0006), we updated the waiver number in order to correctly match to the CMS 372 and/or prior year data. In cases that were not clear-cut, we flagged expenditures as uncategorized and reported those in Appendix Table C.47.

CMS-64 Supplemental Feeder Form (4C) data

The CMS-64 Supplemental Feeder Form (4C) provides information about ICF/IID supplemental payments for state government owned or operated facilities, non-state government owned or operated facilities, and private facilities. We accessed this data through the CMS MBES because it is not publicly available.

³⁶ For reference, the CMS-64 forms used for state reporting are available at <https://www.medicaid.gov/medicaid/downloads/chip-cms64-expenditure-forms.pdf>.

³⁷ Publicly available FMR Net Services reports are available at <https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html>.

ICF/IID expenditures are reported in three distinct categories in the CMS-64 FMR Net Services report: public ICF/IID, private ICF/IID, and ICF/IID supplemental payments. In order to appropriately report ICF/IID public and ICF/IID private expenditures in Tables C.10 and C.11, we needed the feeder form to be able to assign supplemental payment ICF/IID expenditures to the correct categories. Expenditures in the feeder form that fell under state government owned or operated facilities were reported as ICF/IID public, while non-state government owned or operated facilities and private facility expenditures were reported as ICF/IID private.

State-Reported MLTSS Data

We collected MLTSS data directly from states that had at least one active MLTSS program during our reporting time period. State outreach is needed for these data because the CMS-64 system only allows reporting of aggregate managed care expenditures and does not provide managed care expenditures at the service category level. Several years ago the CMS-64 added the option for states to broadly report managed care expenditures for acute care, long term institutional, and long term non-institutional, however many states misreport their data by classifying all of their capitation expenditures into one category rather than appropriately splitting them out. In addition, all capitation expenditures are reported by the state, so there is no way to limit them to expenditures for MLTSS programs.

We developed a standardized data collection template and accompanying user guide that detailed how states should input their data. The template was customized to include the specific MLTSS programs in each state that were active in FY 2017 and 2018 and for which we wanted the state to estimate capitated expenditures for (see Table A.1 for a complete list of state-reported MLTSS programs). This included PACE programs, which were not previously covered in state outreach efforts because PACE data is available in the CMS-64. We included PACE this year as a general check on state reported data quality, and in cases where a state had both MLTSS PACE data and CMS-64 PACE data, we used the MLTSS PACE data.

We asked states to provide institutional expenditures for nursing facilities, ICF/IID, mental health facilities, and any other relevant institutional costs that did not fall into the previous categories. We also asked states to provide section 1915(k) expenditures, as well as section 1915(c) waiver program and non-section 1915(c) waiver program expenditures for personal care, home health, rehabilitative services, targeted case management, and any other relevant HCBS costs that did not align with those categories.³⁸ Our template included several areas for states to document what they included in their other institutional and other HCBS categories, as well as any other relevant notes that might affect the interpretation of their data.

To ensure data integrity, we validated each submission for data consistency and accuracy. Our checks included identifying any changes at the state policy or program level that might have impacted expenditures in FY 2017 and 2018; confirming that the correct covered services were being reported; and determining if there was anything in the state data notes that was problematic or required follow-up with the state. Our review process often resulted in us communicating questions to the state for clarification, and in several instances, resulted in re-submissions to correct misreporting. Further details on state specific MLTSS reporting can be found in Appendix B.

³⁸ Other relevant HCBS services that may fall into the HCBS MLTSS: other category include section 1915(i), section 1915(j), health homes, home delivered meals, transportation services, habilitation, and assistive technology, among others.

Table A.1. MLTSS programs reported by state

State	Program	FY 2017	FY 2018
Arizona	Arizona Health Care Cost Containment System	x	x
California	n.a.	n.a.	n.a.
Delaware	Diamond State Health Plan	x	x
Florida	Long-term Care Program	x	x
Hawaii	Hawaii QUEST Integration	x	x
Iowa	IA Healthlink	x	x
Idaho	Medicare-Medicaid Coordinated Plan	x	x
Illinois	n.a.	n.a.	n.a.
Kansas	KanCare	x	x
Massachusetts	Senior Care Options	x	x
Massachusetts	One Care	x	x
Michigan	MI Choice	x	x
Michigan	Health Link	x	x
Minnesota	Minnesota Senior Care Plus (MSC+)	x	x
Minnesota	Prepaid Medical Assistance Plan Plus (PMAP+)	x	x
Minnesota	Special Needs Basic Care (SNBC)	x	x
Minnesota	Minnesota Senior Health Options (MSHO)	x	x
North Carolina	NC Innovations	x	x
New Jersey	Non-FIDE MLTSS	x	x
New Mexico	Centennial Care	x	x
New York	n.a.	n.a.	n.a.
Ohio	MyCare Ohio Opt-out	x	x
Ohio	MyCare Ohio	x	x
Pennsylvania	PA Living Independence for the Elderly (LIFE)	x	x
Pennsylvania	Adult Community Autism Program	x	x
Pennsylvania	Community HealthChoices		x
Rhode Island	Rhody Health Options I	x	x
Rhode Island	Rhody Health Options II	x	x
South Carolina	n.a.	n.a.	n.a.
Tennessee	TennCare CHOICES in Long-term Care	x	x
Tennessee	Employment and Community First CHOICES	x	x
Texas	STAR Kids	x	x
Texas	STAR+PLUS	x	x
Texas	STAR Health	x	x
Texas	Texas Dual Eligible Integrated Care Demonstration Project	x	x
Virginia	n.a.	n.a.	n.a.
Vermont	Global Commitment to Health Demonstration	x	x
Wisconsin	Wisconsin Partnership Program	x	x
Wisconsin	Family Care	x	x

Notes: We collected state-submitted PACE data from Florida, Kansas, Massachusetts, Michigan, North Carolina, New Mexico, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, and Wisconsin. All other PACE data came from the CMS-64 FMR Net Services report.

FMR = Financial Management Report; n.a. = not applicable; PACE = Program of All-Inclusive Care for the Elderly.

CMS 372 annual report data

The CMS 372 annual report data were accessed via the Waiver Management System. These data must be submitted by states 18 months after the close of a given waiver program year, which can occur as late as December 31. Therefore, the final possible due date for each year's CMS 372 report is June 30. For the purposes of this report, we used waiver program year 2017 data, as the 2018 data were not yet available at the time of our analysis.

The CMS 372 data were merged with the CMS-64 Schedule A Waiver Report data by waiver number and used to identify target populations for section 1915(c) waiver programs. As described in the CMS-64 Schedule A Waiver Report section, the waiver number data were standardized across the two data sources to ensure accurate matching. The CMS 372 data were also used as a benchmark in our review of the CMS-64 Schedule A Waiver Report and prior year waiver data.

MFP Worksheet for Proposed Budget data

The Money Follows the Person (MFP) Budget Worksheets are submitted by states to CMS on an annual basis and include federal, state, and total expenditures by line item and calendar year quarter. CMS shared these data with us since they are not publicly available. Like the MLTSS state-reported data, the MFP Budget Worksheets are needed for this analysis because this information is not reported within the CMS-64 FMR Net Services data used in this analysis.

To report data for FY 2017 and 2018, we summed the appropriate calendar year quarters from 2016 to 2018 for all qualified HCBS, demonstration HCBS, and supplemental expenditures. We did not include any administrative costs. Although this report uses the most recent MFP Budget Worksheet data, there were a few states for which only projected expenditure data were available.³⁹

2016 LTSS Expenditure Report Data

The 2016 LTSS Expenditure Report Data were extracted from an unpublished analysis of 2017 LTSS expenditure data because it contained the most up-to-date version of the FY 2016 data. With the exception of the section 1915(c) waiver program tables (Appendix Tables C.16, Table C.40-C.47), all FY 2016 data in this report is based on this data source. As noted above in Section A, there are considerable differences between the FY 2016 data and the FY 2017 and 2018 data that may impact the interpretability of trend data.

2016 section 1915(c) HCBS Waiver Program Report Data

The 2016 section 1915(c) HCBS Waiver Program Report Data were extracted from an unpublished analysis of 2017 section 1915(c) expenditure data based on CMS-64 data. This data is used in the section 1915(c) waiver program tables (Appendix Tables C.16, Table C.40-C.47) and was joined to the FY 2017

³⁹ States for which projected expenditures were used in FY 2017: Delaware and Massachusetts. States for which projected expenditures were used in FY 2018: Delaware, Illinois, Massachusetts, and Michigan.

and 2018 Schedule A Waiver Report data based on waiver number. We thoroughly reviewed waiver numbers that did not match between the two datasets, some of which were expected because of waiver programs that expired or were new in FY 2017 or 2018. Similar to the Schedule A Waiver Report data, a couple of waiver numbers were identified as being misreported in the prior year data and were corrected in order to merge appropriately with this year’s data.

U.S. Census Bureau data

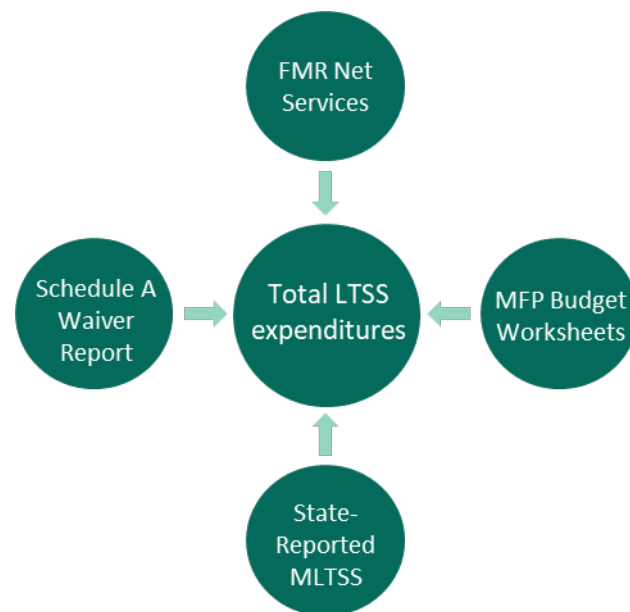
To calculate expenditures per state resident, we extracted the state-level population estimates from the U.S. Census Bureau. Each year, the U.S. Census Bureau publishes currently residing population estimates calculated as of July 1 of that year. To calculate the estimates, the U.S. Census Bureau starts with the base population from the most recent decennial census and adjusts for population changes, such as births, deaths, and net migrations (both international and domestic).⁴⁰ We downloaded the annual population table that includes yearly estimates for all states and the District of Columbia from 2010 to 2019. For this report, we applied both the 2017 and 2018 population estimates from this table.

C. Methodology

We processed, standardized, and merged together each of the data sources from the previous section to create a master file that served as the basis for the calculations in this report. Figure A1 depicts the four data sources that we used to calculate total LTSS expenditures for FY 2017 and 2018: the FMR Net Services and Schedule A waiver report data from CMS-64, MFP Budget Worksheets, and state-reported MLTSS data. We used these same data sources to calculate total HCBS expenditures. Total institutional expenditures were based on FMR Net Services and state-reported MLTSS data, while total Medicaid expenditures came solely from the FMR Net Services data.

In combining these data sources, we had to make a few adjustments to ensure accurate reporting, account for missing data, and minimize duplicate counts, all of which are described in detail below.

Figure A.1. Data flow diagram of FY 2017 and 2018 total LTSS expenditure calculation



FMR = financial management report; FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports.

⁴⁰ For detailed methodology on how the Census Bureau estimates annual population, see Methodology for the United States Population Estimates: Vintage 2019 at <https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2010-2019/natstcopr-methv2.pdf>.

Modifications to standard expenditure aggregation

Exclusion of states with missing or aggregate MLTSS data

Efforts to collect MLTSS expenditure data directly from states this year coincided with the onset of the COVID-19 pandemic. Because many state Medicaid agencies had limited bandwidth to respond to our data request, we extended the timeline for submission by a month and a half. This allowed a number of states to submit data and netted nearly as many submissions as in prior years.

Five states, however, could not submit MLTSS expenditure data this year (California, Illinois, New York, South Carolina, and Virginia), and several states provided data that was not detailed enough to allow us to calculate all expenditure categories. South Carolina's MLTSS program only covers their Financial Alignment Initiative demonstration, which accounts for a small proportion of overall LTSS expenditures, so we could still calculate the percentage HCBS out of total LTSS expenditures for the state and include them in the accompanying summary tables. In the other four states, the MLTSS programs account for such a large share of overall LTSS expenditures that it would not have been possible to reliably calculate percentage HCBS out of total LTSS expenditures.⁴¹ Therefore, we excluded California, Illinois, New York, and Virginia from all tables that report total Medicaid, total LTSS, total HCBS, or total institutional numbers (Appendix Tables C.1 to C.7 and Table C.15) and from the percentage HCBS out of total LTSS expenditures tables (Appendix Tables C.35 to C.39). These states are included in other service category output reflecting their FFS expenditures from the other data sources.

North Carolina reported total MLTSS expenditures without breakouts by service category nor for total institutional or total HCBS. Therefore, North Carolina is included in the total LTSS calculations shown in Tables C.1, C.3, C.4, and C.6, but excluded from percent HCBS out of total LTSS expenditures tables (Tables C.35-C.39) and from all total institutional and total HCBS expenditures (Tables C.1, C.3, C.4, C.7, and C.15). Note that the sum of total institutional and total HCBS expenditures will not equal the total LTSS spending amounts shown in the report due to the way North Carolina is reported.

Kansas, Massachusetts, Vermont, and Texas did not provide service category breakouts for either their total HCBS and/or total institutional MLTSS expenditures for either FY 2017 or 2018. Consequently, these states are included in the total institutional, total HCBS, and total LTSS spending amounts in Tables C.1-C.4, C.6, C.7, and C.15, but are excluded from the service category lines in Appendix Table C.2 (National Medicaid LTSS expenditures by LTSS targeted population subgroups: FY 2016-2018) and from the calculations of the percent HCBS out of total LTSS expenditures by LTSS targeted population subgroup (Tables C.36-C.39). Pennsylvania did not provide service category breakouts for HCBS expenditures in FY 2018 and is therefore excluded from the FY 2018 output in the same tables.

⁴¹ Based on FY 2016 data from the last published LTSS Expenditures report (Eiken et al. 2018a), Illinois reported \$240,480,583 in MLTSS expenditures (about 6 percent of their total LTSS expenditures), New York reported \$10,635,538,164 in MLTSS expenditures (about 40 percent of their total LTSS expenditures), and Virginia reported \$300,057,019 in MLTSS expenditures (about 9 percent of their total LTSS expenditures). South Carolina did not report MLTSS expenditures for FY 2016, but for FY 2015, they reported \$12,916,303 (about 1 percent of their total LTSS expenditures). There are no available historical MLTSS data for California. Several of these states had changes to their MLTSS programs since FY 2016, so these may be underestimates of the potential share of LTSS in more recent years.

Inclusion of U.S. territories

Five U.S. territories—American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands—are included in the totals in this report. Only Guam, the Northern Mariana Islands, and the Virgin Islands reported any LTSS expenditures, which were minimal and limited to nursing facilities and home health services. Because these expenditures were very small, the sum of LTSS spending in these territories is aggregated in one “U.S. Territories” category, which appears as a separate line item in the state summary of LTSS expenditures and total Medicaid tables (Tables C.3-C.5) and is otherwise included in the total Medicaid, LTSS, HCBS, and institutional expenditures throughout this report. While not included as a separate line item in the nursing facility and home health tables (Tables C.8 and C.20), the U.S. territory expenditures are included in the national total in those tables.

Substitution of state-reported PACE and 1915(k) expenditures

This year, we asked states to report PACE and section 1915(k) expenditures in their MLTSS submissions. Both categories appear in the FMR Net Services CMS-64 data and served as a benchmark of state reported data quality. In order avoid double-counting across sources, we created a hierarchy when processing the data wherein if a state had reported PACE and/or section 1915(k) data and there was FMR Net Services CMS-64 data for the same category, we used the state-reported PACE and/or 1915(k) data; in cases where there was only state-reported data available, we used that data; and in cases where there was only FMR Net Services CMS-64 data available, we used that data. The PACE and section 1915(k) data reported in tables C.1, C.2, C.18, and C.23, is therefore a mix of state-reported and FMR Net Services CMS-64 data.

Substitution of New Hampshire’s section 1915(c) waiver report expenditures

We calculated totals for each section 1915(c) waiver program based on total expenditures (payments and prior period adjustments) reported in the Schedule A Waiver Report for all states with any section 1915(c) waiver programs expenditures in FY 2017 or 2018. The only exception to this approach was for New Hampshire due to an issue in the state’s reporting for their section 1915(c) waiver programs; New Hampshire expenditures were categorized under section 1115 demonstration expenditures for the waiver programs, so we used total FMR Net Services expenditures for line 19A⁴² for New Hampshire instead of Schedule A waiver totals for their section 1915(c) waiver programs. While the majority of states reported total expenditures across their section 1915(c) waiver programs that totaled the amount reported under CMS-64 line 19A “Home and Community-Based Services Regular Payment (Waiver),” there were a few states where we found that they reported expenditures other than line 19A in their section 1915(c) waiver program totals. We have listed these issues in the appropriate state notes in Appendix B.

Reporting MLTSS section 1915(c) waiver program expenditures within specific service categories

As discussed in Section A above, states reported section 1915(c) waiver program expenditures in their MLTSS submissions broken out by service category this year. This means that a state could have reported section 1915(c) waiver program expenditures for personal care, home health, rehabilitative services, targeted case management, or other HCBS. To avoid double-counting of expenditures, all of the MLTSS section 1915(c) waiver expenditures are reported within the appropriate service category rather than included in total section 1915(c) waiver program expenditures. For example, section 1915(c) waiver

⁴² Refer to Table A.4 for a definition of line 19A expenditures.

program home health expenditures are only included in home health and not also included in total section 1915(c) waiver program expenditures. Therefore, the section 1915(c) waiver program expenditures shown in this report only include FFS expenditures and do not include any MLTSS data.

Inflation adjustment for historical expenditure figures, FY 2008 to 2018

To more accurately depict long-term trends in expenditure growth from FY 2008 to 2018, we adjusted expenditures in Figures II.1 to II.4, V.2, V.3, VII.1, and VII.2 for inflation based on the medical consumer price index (CPI) in 2018, obtained from the U.S. Bureau of Labor Statistics.⁴³ We calculated the medical CPI for each fiscal year by taking the average of the monthly medical CPI values for the relevant months of the fiscal year. After we obtained medical CPI values for each fiscal year, we used the formula below to inflate historical expenditures to 2018 dollars, with x being a given fiscal year:

$$Expenditures_{2018} = Expenditures_x \left(\frac{CPI_{2018}}{CPI_x} \right)$$

LTSS targeted population subgroup calculations

Because our two main data sources—the FMR Net Services CMS-64 data and the state-reported MLTSS data—are reported in aggregate and are not assigned to population groups, we had to assign all expenditures for individual service categories to each population group in order to examine expenditures for each LTSS targeted population subgroup. We examined four LTSS targeted population subgroups: older adults and people with physical or other disabilities; autism spectrum disorder, intellectual or developmental disabilities; people with behavioral health conditions; and multiple populations. Table A.2 shows how service categories were categorized within these four groups. Nursing facilities, for example, generally serve older adults and individuals with disabilities and are therefore grouped under older adults and people with physical or other disabilities.

Most service categories correspond to one of the four population subgroups, but there are three service categories that were distributed to different population groups: section 1915(i) state plan HCBS, health homes, and section 1915(c) waiver programs. We used section 1915(i) and health home program documentation provided by CMS for approved state programs in FY 2017 and 2018 to assign the populations served in each state to the appropriate LTSS targeted population subgroup. Most states that had either a section 1915(i) and/or health home program had one program that served one population or several programs that served the same population. For those states, it was a one-to-one mapping between the LTSS population subgroups listed in CMS’s documentation to those included in this report. There were a few states that had either one program that served different populations or multiple programs that served different populations. In those cases, we grouped their section 1915(i) and/or health home program expenditures under the multiple populations category.

⁴³ CPI adjustment obtained from the U.S. Bureau of Labor Statistics is available at https://data.bls.gov/timeseries/CUUR0000SAM?output_view=data.

Table A.2. Service categories used to define LTSS targeted population subgroup expenditures

FY 2017 and 2018 service categories	Older adults and people with PD or OD	People with ASD, ID, or DD	People with behavioral health conditions	Multiple populations
Nursing facilities	X			
Personal care	X			
Home health	X			
PACE	X			
Private duty nursing	X			
1915(j) / self-directed personal assistance	X			
1915(i) / state plan HCBS	X	X	X	X
Section 1915(c) waiver programs	X	X	X	X
ICF/IID: total		X		
Mental health facilities			X	
Mental health facilities: DSH			X	
Rehabilitative services (non-school based)			X	
Health homes			X	X
1915(k) / Community First Choice				X
Case management				X
MFP				X
Institutional MLTSS: other				X
HCBS MLTSS: other				X

ASD = autism spectrum disorder; DD = developmental disabilities; DSH = disproportionate share hospital; FY = fiscal year; HCBS = home and community-based services; ICF/IID = Intermediate Care Facilities for Individuals with Intellectual Disabilities; ID = intellectual disabilities; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; OD = other disabilities; PACE = Program of All-Inclusive Care for the Elderly; PD = physical disabilities.

We linked section 1915(c) waiver program data to CMS 372 data to obtain target population information at the waiver program level. The seven CMS 372 target populations were used to report expenditures at the waiver program level (Tables C.40 to C.46). We then aggregated the expenditures from the seven waiver program target groups into the four overall LTSS targeted population subgroups using the logic shown in Table A.3.

Table A.3. Section 1915(c) waiver program target population categorization

CMS 372 target population group	Overall LTSS targeted population subgroup
Autism, Developmental Disability, or Intellectual Disability	Autism spectrum disorder, intellectual or developmental disabilities
Aged, Disabled (Physical), or Disabled (Other)	Older adults and people with physical or other disabilities
Mental Illness or Serious Emotional Disturbance	People with behavioral health conditions
Medically Fragile or Technologically Dependent	Multiple populations
HIV/AIDS	Multiple populations
Waiver includes individuals from two or more target groups	Multiple populations
Brain Injury	Multiple populations

LTSS = long-term services and supports.

D. Data dictionary

Table A.4 documents the specific line items and data sources used in this report along with references to the applicable report tables that they contribute to.

Table A.4. Data dictionary for source data and corresponding expenditure output

Data source	Service category number	Service category description ^a	Applicable report tables
Total LTSS			
CMS-64 FMR Net Services report	2A	Mental Health Facility Services - Reg. Payments	C.1 to C.4; C.6; C.7; C.12; C.35; C.38; Appendix D
CMS-64 FMR Net Services report	2B	Mental Health Facility - DSH	C.1 to C.4; C.6; C.7; C.13; C.35; C.38; Appendix D
CMS-64 FMR Net Services report	3A	Nursing Facility Services - Reg. Payments	C.1 to C.4; C.6 to C.8; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	3B	Nursing Facility Services - Sup. Payments	C.1 to C.4; C.6 to C.8; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	4A	Intermediate Care Facility - Public	C.1 to C.4; C.6; C.7; C.9; C.10; C.35; C.37; Appendix D
CMS-64 FMR Net Services report	4B	Intermediate Care - Private	C.1 to C.4; C.6; C.7; C.9; C.11; C.35; C.37; Appendix D
CMS-64 FMR Net Services report	4C	Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID); Supplemental Payments	C.1 to C.4; C.6; C.7; C.9; C.35; C.37; Appendix D
CMS-64 FMR Net Services report	12	Home Health Services	C.1 to C.4; C.6; C.15; C.20; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	18A3	Medicaid MCO - Community First Choice	C.1 to C.4; C.6; C.15; C.18; C.35; C.39; Appendix D
CMS-64 FMR Net Services report	18B1C	MCO PAHP - Community First Choice	C.1 to C.4; C.6; C.15; C.18; C.35; C.39; Appendix D
CMS-64 FMR Net Services report	18B2C	MCO PIHP - Community First Choice	C.1 to C.4; C.6; C.15; C.18; C.35; C.39; Appendix D

Data source	Service category number	Service category description ^a	Applicable report tables
CMS-64 FMR Net Services report	19A	Home & Community-Based Services - Reg. Pay. (Waiv)	C.1 to C.4; C.6; C.15; C.16; C.35; Appendix D
CMS-64 FMR Net Services report	19B	Home & Community-Based Services - St. Plan 1915(i) Only Pay.	C.1 to C.4; C.6; C.15; C.28 to C.32; C.35 to C.39; Appendix D
CMS-64 FMR Net Services report	19C	Home & Community-Based Services - St. Plan 1915(j) Only Pay.	C.1 to C.4; C.6; C.15; C.33; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	19D	Home & Community Based Services State Plan 1915(k) Community First Choice	C.1 to C.4; C.6; C.15; C.18; C.35; C.39; Appendix D
CMS-64 FMR Net Services report	22	All-Inclusive Care Elderly (PACE)	C.1 to C.4; C.6; C.15; C.23; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	23A	Personal Care Services - Reg. Payments	C.1 to C.4; C.6; C.15; C.17; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	23B	Personal Care Services - SDS 1915(j)	C.1 to C.4; C.6; C.15; C.33; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	24A	Targeted Case Management Services - Com. Case-Man.	C.1 to C.4; C.6; C.15; C.22; C.35; C.39; Appendix D
CMS-64 FMR Net Services report	24B	Case Management - State Wide	C.1 to C.4; C.6; C.15; C.22; C.35; C.39; Appendix D
CMS-64 FMR Net Services report	40	Rehabilitative Services (non-school-based)	C.1 to C.4; C.6; C.15; C.21; C.35; C.38; Appendix D
CMS-64 FMR Net Services report	41	Private Duty Nursing	C.1 to C.4; C.6; C.15; C.24; C.35; C.36; Appendix D
CMS-64 FMR Net Services report	43	Health Home w Chronic Conditions	C.1 to C.4; C.6; C.15; C.25 to C.27; C.35; C.38; C.39; Appendix D
CMS-64 Schedule A waiver report	n.a.	Section 1915(c) waiver program	C.1 to C.4; C.6; C.15; C.16; C.35 to C.47; Appendix D
CMS-64 Supplemental Feeder Form (4C)	4C-1	Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID): Supplemental Payments for state government owned or operated facilities	C.10
CMS-64 Supplemental Feeder Form (4C)	4C-2	Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID): Supplemental Payments for non-state government owned or operated facilities	C.11
CMS-64 Supplemental Feeder Form (4C)	4C-3	Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID): Supplemental Payments for private facilities	C.11
MFP worksheet for proposed budget	n.a.	MFP demonstration	C.1 to C.4; C.6; C.15; C.34; C.35; C.39; Appendix D

Service category			
Data source	number	Service category description ^a	Applicable report tables
State-submitted MLTSS data	n.a.	Mental Health Facility Services	C.1 to C.4; C.6; C.7; C.12; C.35; C.38; Appendix D
State-submitted MLTSS data	n.a.	Nursing Facility Services	C.1 to C.4; C.6; C.7; C.8; C.35; C.36; Appendix D
State-submitted MLTSS data	n.a.	Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID)	C.1 to C.4; C.6; C.7; C.9; C.35; C.37; Appendix D
State-submitted MLTSS data	n.a.	Home Health Services	C.1 to C.4; C.6; C.15; C.20; C.35; C.36; Appendix D
State-submitted MLTSS data	n.a.	Community First Choice	C.1 to C.4; C.6; C.15; C.18; C.35; C.39; Appendix D
State-submitted MLTSS data	n.a.	PACE	C.1 to C.4; C.6; C.15; C.23; C.35; C.36; Appendix D
State-submitted MLTSS data	n.a.	Personal Care Services	C.1 to C.4; C.6; C.15; C.17; C.35; C.36; Appendix D
State-submitted MLTSS data	n.a.	Case Management	C.1 to C.4; C.6; C.15; C.22; C.35; C.39; Appendix D
State-submitted MLTSS data	n.a.	Rehabilitative services (non- school-based)	C.1 to C.4; C.6; C.15; C.21; C.35; C.38; Appendix D
State-submitted MLTSS data	n.a.	HCBS MLTSS: other	C.1 to C.4; C.6; C.15; C.19; C.35; C.39; Appendix D
State-submitted MLTSS data	n.a.	Institutional MLTSS: other	C.1 to C.4; C.6; C.7; C.14; C.35; C.39; Appendix D
State-submitted MLTSS data	n.a.	Total HCBS	C.1 to C.4; C.6; C.15; C.35; Appendix D
State-submitted MLTSS data	n.a.	Total institutional LTSS	C.1 to C.4; C.6; C.7; C.35; Appendix D
State-submitted MLTSS data	n.a.	Total LTSS	C.1 to C.4; C.6; Appendix D
Total Medicaid			
CMS-64 FMR Net Services report	50	Balance	C.1; C.3 to C.5
CMS-64 FMR Net Services report	51	Collections	C.1; C.3 to C.5
Additional non-LTSS services			
CMS-64 FMR Net Services report	1A	Inpatient Hospital - Reg. Payments	Appendix D
CMS-64 FMR Net Services report	1B	Inpatient Hospital - DSH	Appendix D
CMS-64 FMR Net Services report	1C	Inpatient Hospital - Sup. Payments	Appendix D
CMS-64 FMR Net Services report	1D	Inpatient Hospital - GME Payments	Appendix D
CMS-64 FMR Net Services report	7	Prescribed Drugs	Appendix D
CMS-64 FMR Net Services report	7A1	Drug Rebate Offset - National	Appendix D

Data source	Service category number	Service category description ^a	Applicable report tables
CMS-64 FMR Net Services report	7A2	Drug Rebate Offset - State Sidebar Agreement	Appendix D
CMS-64 FMR Net Services report	7A3	MCO - National Agreement	Appendix D
CMS-64 FMR Net Services report	7A4	MCO - State Sidebar Agreement	Appendix D
CMS-64 FMR Net Services report	7A5	Increased ACA OFFSET - Fee for Service	Appendix D
CMS-64 FMR Net Services report	7A6	Increased ACA OFFSET - MCO	Appendix D
CMS-64 FMR Net Services report	18A	Medicaid - MCO	Appendix D
CMS-64 FMR Net Services report	18B1	Prepaid Ambulatory Health Plan	Appendix D
CMS-64 FMR Net Services report	18B2	Prepaid Inpatient Health Plan	Appendix D
CMS-64 FMR Net Services report	18C	Medicaid - Group Health	Appendix D
CMS-64 FMR Net Services report	18E	Medicaid - Other	Appendix D
CMS-64 FMR Net Services report	26	Hospice Benefits	Appendix D
CMS-64 FMR Net Services report	36	Emergency Hospital Services	Appendix D
CMS-64 FMR Net Services report	37	Critical Access Hospitals	Appendix D

^a The service category descriptions come directly from the source data definitions. For CMS-64 categories, these descriptions are pulled directly from the forms that states report.

ACA = Affordable Care Act; CMS = Centers for Medicare & Medicaid Services; DSH = disproportionate share hospital; FMR = Financial Management Report; GME = graduate medical education; HCBS = home and community-based services; LTSS = long-term services and supports; MCO = managed care organization; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; ; n.a. = not applicable; PACE = Program of All-Inclusive Care for the Elderly; PAHP = prepaid ambulatory health plan; PIHP = prepaid inpatient health plan; SDS = Self-directed services.

Appendix B. State data notes

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State	Notes
Alabama	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> We corrected waiver program ID numbers to allow linkage across sources. Alabama appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report.
Alaska	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver number 1566 (effective date 7/1/2018).
Arizona	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Arizona did not operate any section 1915(c) waiver programs in FY 2017 or 2018 because it provides similar services to HCBS-eligible populations under a section 1115 demonstration. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Mental health facilities and some ICF/IID expenditures are included in Other Institutional expenditures for FY 2017 and 2018, which differs from categorization used in previous reports. In previous reports, Institutional Care expenditures reported by Mercy Care Plan, United Healthcare, and Bridgeway health plans were categorized as nursing facility expenditures, and the same Institutional Care expenditures reported by the Division of Developmental Disabilities were categorized as ICF. In addition to expenditures for mental health facilities and ICF/IID, other institutional expenditures include expenditures for dialysis, laboratory, x-ray and imaging, medical equipment and supplies, and rehabilitative services. The Division of Developmental Disabilities could not break out personal care expenses; those services are included in the Other HCBS category for FY 2017 and 2018. Attendant care expenditures are categorized as personal care for FY 2017 and 2018. In prior years, these expenditures were categorized as managed care HCBS – unspecified. Expenditures for home health are specific to services provided by a nurse or aide. Other HCBS expenditures include expenditures for homemaker services, home delivered meals, respite care, assisted living home or center, adult day health, adult foster care, group respite, environmental modifications, medical alert services, self-directed home health, and behavioral health home and services. HCBS expenditures do not include expenditures for rehabilitative services.
Arkansas	No data notes to report.
California	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver number 1166 (effective date 7/1/2018). Waiver number 0855 was terminated in June 2017. California appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> California was unable to report expenditures for its MLTSS and Financial Alignment Initiative programs.
Colorado	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> We corrected waiver program ID numbers to allow linkage across sources. Waiver program number 0211 was terminated in March 2014. Colorado reported section 1915(i) expenditures in FY 2017 and 2018 but did not have an approved section 1915(i) State Plan program in these years. In FY 2018, Colorado reported large section 1915(i) prior period adjustments.

State	Notes
Connecticut	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Connecticut reported expenditures for an uncategorized waiver program in the FY 2018 CMS-64 waiver report. 2. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 1040. The waiver program was terminated January 2018. 3. We corrected waiver program ID numbers to allow linkage across sources. 4. Connecticut had an approved section 1915(i) State Plan program in FY 2017 and 2018 but did not report any expenditures in FY 2017 or 2018.
Delaware	<p>MFP:</p> <ol style="list-style-type: none"> 1. Delaware reported projected MFP expenditures for 2017 and 2018.
District of Columbia	No data notes to report.
Florida	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver number 0962. The waiver program is authorized under a concurrent section 1915(b) authority, and waiver program services are provided through managed care plans. FY 2017 and 2018 waiver program expenditures for 0962 are captured under the MLTSS state-reported data. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Other institutional expenditures in FY 2017 and 2018 include institutional hospice care. 2. Other section 1915(c) waiver program HCBS expenditures for FY 2017 and 2018 include assisted living FFS, medical equipment and supplies, transportation services, home hospice care, and expanded benefits per health plan. The assisted living FFS expenditures reported under the Other HCBS category reflect services covered and expenses paid for by the managed care plans. The FFS label indicates the plans' way of paying its providers, so these are relevant expenditures that Florida has indicated should be included under MLTSS Other HCBS expenditures. 3. Expenditures for the Long-term Care program do not include expenditures for ICF/IID, mental health facilities, and section 1915(c) waiver program targeted case management. 4. Between FY 2017 and FY 2018, non-section 1915(c) waiver program targeted case management expenditures decreased by 58 percent. The state was unable to provide an explanation for this large decrease. 5. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
Georgia	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Georgia reported expenditures for an uncategorized waiver program in the FY 2017 and 2018 CMS-64 waiver reports. 2. Waiver program number 4116 was terminated in March 2018. There were no expenditures reported for this waiver program in FY 2017 or 2018 CMS-64 waiver report.
Hawaii	<p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Other Institutional expenditures include nursing home supplemental funds but exclude spend down costs. 2. Institutional expenditures for the Hawaii QUEST Integration program do not include expenditures for ICF/IID and mental health facilities. 3. HCBS expenditures for the Hawaii QUEST Integration do not include expenditures for non-section 1915(c) home health, rehabilitative services, and targeted case management.
Idaho	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 0859. The waiver program was authorized under a concurrent 1915(i) authority. The waiver was terminated in June 2019.

State	Notes
	<p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Section 1915(c) waiver program home health expenditures only include some A&D waiver expenditures. Institutional expenditures do not include expenditures for mental health facilities. HCBS expenditures do not include expenditures for rehabilitative services and targeted case management. Other HCBS expenditures include expenditures for state plan personal care services. The state reported expenditures for ICF/IID services, but these services were carved out of the Medicare-Medicaid Coordinated Plan program starting January 1, 2018. <p>Data anomalies or notable state trends:</p> <ol style="list-style-type: none"> Between FY 2017 and 2018, section 1915(c) waiver program personal care expenditures increased by 80 percent. The state indicated this was because of an increase in enrollment in the Medicare-Medicaid Coordinated Plan program and an additional health plan entering the market on January 1, 2018.
Illinois	<p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Illinois was unable to report expenditures for its MLTSS and Financial Alignment Initiative programs. <p>MFP:</p> <ol style="list-style-type: none"> Illinois reported a combination of both actual and projected MFP expenditures for 2018.
Indiana	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Waiver program number 0003 was terminated in September 2017. No expenditures were reported for this waiver program in FY 2016 in the prior year report.
Iowa	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Iowa reported section 1915(i) expenditures in FY 2017 and 2018 but did not have an approved section 1915(i) State Plan program in these years. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Non-section 1915(c) other HCBS expenditures include expenditures for habilitation services. <p>Data anomalies or notable state trends:</p> <ol style="list-style-type: none"> Between FY 2017 and 2018, targeted case management expenditures decreased by 78 percent. The state reported that MCOs in the state had transitioned their case management operations to in-house, which likely resulted in this decrease in expenditures. In addition, community-based case management provided by the MCO is an administrative service that means there is limited encounter data available for reimbursement reporting. Between FY 2017 and 2018, nursing facility expenditures increased by 96 percent. The state reported that there were several likely factors contributing to this increase, including increased reimbursement rates and an increase in the number of nursing facility residents and distinct claims for nursing facility services.
Kansas	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Kansas operates its section 1915(c) waiver programs under a concurrent section 1115 authority, and waiver program services are provided through KanCare MCO plans (MLTSS). No expenditures were reported in the FY 2017 CMS-64 waiver report for waiver program numbers 0303, 0476, 4164, or 4165. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program numbers 0476, 4164, or 4165. FY 2017 and 2018 waiver program expenditures are captured under the MLTSS state-reported data. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Kansas did not provide category of service breakouts for total non-section 1915(c) waiver program expenditures for both FY 2017 and 2018. As a result, we excluded the

State	Notes
	<p>state from the category of service lines in the Summary by Population table (Appendix Table C.2) and from the rebalancing population percentage calculations (Appendix Tables C.35 to C.38).</p> <ol style="list-style-type: none"> 2. In Kansas, home health services are provided via non-section 1915(c) state plan. The state was unable to break out these costs for the long-term care population, but they are included in total HCBS expenditures. 3. Section 1915(c) waiver program expenditures include expenditures for Intellectual/Developmental Disabilities, Physical Disability, Frail Elderly, Technology Assisted, Brain Injury, and Autism waiver services. 4. Rehabilitative services include the following Brain Injury services: behavior therapy, cognitive rehabilitation, occupational therapy, speech language therapy, and transitional living skills. 5. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
Kentucky	No data notes to report.
Louisiana	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver program number 0889. The waiver program is authorized under a concurrent section 1915(b) authority, and waiver program services are provided by a PIHP. 2. Louisiana reported expenditures for an uncategorized waiver program in the FY 2018 CMS-64 waiver report.
Maine	No data notes to report.
Maryland	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program number 0353 was terminated in 2014. 2. Maryland reported expenditures for several uncategorized waiver programs (including prior period adjustments for a waiver program that was terminated in 2013) in FY 2017 CMS-64 waiver report. 3. Maryland had an approved section 1915(i) State Plan program in FY 2017 and 2018 but did not report any expenditures in FY 2017.
Massachusetts	<p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Reported expenditures for Massachusetts were developed by applying an estimate of institutional services and HCBS to actual capitation payments for each fiscal year. These estimates were calculated based on the expected portion of capitation dollars for services as estimated through the capitation rate development process. Because the capitation rate development process estimates expenditures for nursing facility and HCBS in aggregate, all institutional expenditures are categorized as Other Institutional and all HCBS expenditures are categorized as Other HCBS. 2. Massachusetts did not provide category of service breakouts for FY 2017 and FY 2018. As a result, we excluded the state from the category of service lines in the Summary by Population table (Appendix Table C.2) and from the rebalancing population percentage calculations (Appendix Tables C.35-C.38). 3. The state did not report section 1915(c) waiver program HCBS expenditures for FY 2017 or 2018. 4. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures. <p>MFP:</p> <ol style="list-style-type: none"> 1. Massachusetts reported a combination of both actual and projected MFP expenditures for 2017 and projected expenditures for 2018.

State	Notes
Michigan	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program number 1126 operates under a concurrent section 1915(b) authority, and waiver services are provided through MCOs. 2. Waiver program number 0233 is a concurrent section 1915(c) waiver program and MLTSS program (MI Choice). Michigan appears to be reporting managed care PAHP expenditures in the Schedule A waiver report for waiver program number 0233. The state also reported MLTSS expenditures for this MLTSS program in the state-reported MLTSS expenditure data. By including expenditures from the Schedule A waiver report for waiver program number 0233 and the state-reported MLTSS expenditures for MI Choice, there may be overlap in some of the managed care expenditures included in the total expenditure calculations in this report. 3. We corrected waiver program ID numbers to allow linkage across sources. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Section 1915(c) waiver program Other HCBS expenditures include adaptive medical equipment and supplies, private duty nursing/respiratory care, private duty nursing, chore services, adult day program, fiscal intermediary services, assistive technology, home delivered meals, specialized medical equipment and supplies, environmental accessibility adaptations, community transition services, goods and services, counseling services, training, and supports coordination. 2. Non-section 1915(c) Other HCBS expenditures include nonemergency medical transportation and community transportation. 3. The state categorizes expenditures for respite care (in home and out of home), non-medical transportation, and personal emergency response systems as both section 1915(c) and non-section 1915(c) Other HCBS expenditures. 4. MI Health Link expenditures were calculated using total capitation payments and then allocated by category according to the rate setting process. 5. Expenditures for the Managed Specialty Services and Supports program are not included in the report. 6. Expenditures for the MI Choice program do not include institutional expenditures, section 1915(c) waiver program expenditures for rehabilitative services, and non-section 1915(c) waiver program expenditures for personal care, home health, rehabilitative services, and targeted case management. 7. Expenditures for MI Health Link do not include expenditures for ICF/IID, mental health facilities, non-section 1915(c) home health and targeted case management, and section 1915(c) rehabilitative services. 8. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures. <p>MFP:</p> <ol style="list-style-type: none"> 1. Michigan reported a combination of both actual and projected MFP expenditures for 2018.
Minnesota	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Minnesota appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Reported expenditures for Minnesota correspond to estimated capitation payments attributable to LTSS. 2. Expenditures do not include carved-out services that are provided through FFS including PCA for SNBC, ICF/IDD, disability waiver services and nursing facility per diems (except for certain MSHO, MSC+, and SNBC members).

State	Notes
	<ol style="list-style-type: none"> 3. Reported MLTSS expenditures include Medicare spending for integrated programs; the state does was not able to differentiate Medicaid spending from Medicare spending for managed encounters. 4. Other Institutional expenditures primarily include expenditures for inpatient mental health facilities for patients ages 21 to 64, but in FY 2017, Other Institutional expenditures were based on a single inpatient stay for a patient older than age 65.
Mississippi	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Mississippi had an approved section 1915(i) State Plan program in FY 2017 and 2018 but did not report any expenditures in FY 2017 or 2018.
Missouri	No data notes to report.
Montana	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program number 1037 was terminated in October 2015. 2. Montana reported section 1915(i) expenditures in FY 2017 but did not have an approved section 1915(i) State Plan program.
Nebraska	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 40199.
Nevada	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Nevada reported section 1915(i) expenditures in FY 2017 and 2018 but did not have an approved section 1915(i) State Plan program in these years.
New Hampshire	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. New Hampshire categorized most of its section 1915(c) waiver program expenditures under 1115 demonstration payments for the section 1915(c) waiver programs. There were also prior period adjustments reported under the section 1915(c) waiver programs. The section 1915(c) waiver programs in New Hampshire are not authorized under a concurrent section 1115 authority. Because of how the state categorized expenditures, we used total expenditures from line 19A from the FMR Net Services report for New Hampshire instead of Schedule A waiver totals for their section 1915(c) waiver programs. New Hampshire's section 1915(c) waiver program expenditure totals are reported in total section 1915(c) waiver program expenditures for FY 2017 and 2018, but the waiver program-level expenditures for each waiver are not reported for FY 2017 and 2018. 2. New Hampshire had an approved section 1915(i) State Plan program in FY 2018 but did not report any expenditures in FY 2018.
New Jersey	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Expenditures for New Jersey waiver program 0031 declined substantially in FY 2018 compared with FY 2017 and prior years. The waiver program was terminated on November 1, 2017. 2. New Jersey reported section 1915(i) expenditures in FY 2017 but did not have an approved section 1915(i) State Plan program. 3. New Jersey appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Expenditures for personal care and home health services also include expenditures for self-directed services. 2. Other HCBS expenditures include expenditures for home and community-based waiver, hospice, therapies, medical day care, private duty nursing, and other LTSS services. 3. The state reported all HCBS expenditures as Other HCBS, as the standard HCBS categories used for this report do not match New Jersey's state plan service categories.

State	Notes
New Mexico	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program 0449 was terminated in January 2014. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Expenditures for nursing facility services were allocated based on the capitation rates for the NF State and NF Private categories of service during FY 2017 in the Centennial Care 1.0 program. 2. Institutional expenditures do not include expenditures for ICF/IID or mental health facilities. 3. Expenditures for personal care were allocated based on the capitation rates for the Personal Care Services category of service during FY 2017 in the Centennial Care 1.0 program. 4. Expenditures for home health were allocated based on the capitation rates for the Home Health category of service during FY 2017 in the Centennial Care 1.0 program. 5. New Mexico was unable to break out expenditures for rehabilitative services, so these expenditures are not included in HCBS expenditures. 6. HCBS expenditures do not include expenditures for targeted case management. 7. Expenditures for other HCBS were allocated based on the capitation rates for the HCBS category of service during FY 2017 in the Centennial Care 1.0 program. 8. LTSS expenditures for PACE were allocated using available financial reports for FY 2017 from the eligible PACE Organization. 9. To calculate reported expenditures, the state used developed capitation rates to identify what proportion of expenditures were attributed to each LTSS service category. 10. Other HCBS expenditures include expenditures for respite, adult day health, assisted living, environmental modifications, private duty nursing, and emergency response systems. 11. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
New York	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program number 0034 was terminated in May 2016. 2. No expenditures were reported in the FY 2017 CMS-64 waiver report for waiver program number 40163. The waiver program was terminated January 2017. 3. New York reported a \$1.2 billion prior period adjustment for case management services in FY 2018 that results in a -470 percent change from the FY 2017 expenditures in Appendix Table C.22. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. New York was unable to report usable expenditure data for its MLTSS programs.
North Carolina	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver program number 0423. The waiver program is authorized under a concurrent section 1915(b) authority, and waiver program services are provided through PIHPs. 2. Waiver program number 0662 was terminated in April 2013. 3. North Carolina reported expenditures for an uncategorized waiver program in FY 2018 waiver report. 4. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 1326 (effective date 5/1/2018). <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. North Carolina was unable to report expenditures for HCBS and institutional break outs but did provide total LTSS expenditures. 2. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.

State	Notes
North Dakota	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver program number 0834. Waiver program number 0468 was terminated in August 2015.
Ohio	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Waiver program number 0440 was terminated in June 2015. Ohio reported expenditures for an uncategorized waiver program in the FY 2018 CMS-64 waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> Ohio was unable to break out expenditures for mental health facilities and targeted case management, so these expenditures are not included in institutional and HCBS expenditures, respectively. Other HCBS expenditures include expenditures for home delivered meals, assisted living, adult day care, nursing services, waiver transportation personal emergency response systems, assistive equipment or home modification, and other waiver services. Ohio's fiscal year deviates from the federal fiscal year; therefore, reported expenditures for PACE for FY 2017 correspond to July 2016 through June 2017 and expenditures for FY 2018 correspond to July 2017 through June 2018. Reported expenditures do not include expenditures for the following categories: ICF/IID; mental health facilities; other institutional services; non-section 1915(c) waiver program personal care, rehabilitative services, targeted case management and other HCBS; and section 1915(c) waiver program home health, rehabilitative services, and targeted case management. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
Oklahoma	No data notes to report.
Oregon	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Oregon appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report.
Pennsylvania	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Waiver program number 0192 was terminated in 2015. Waiver program number 1486 had an effective date of 1/1/2018, so there are no FY 2016 or 2017 expenditures. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> The Community HealthChoices program was implemented in January 2018, so expenditures included for this program do not cover the entire FY 2018. Pennsylvania did not provide HCBS category of service breakouts for FY 2018. As a result, we excluded the state from the category of service lines in the Summary by Population table (Appendix Table C.2) and from the rebalancing population percentage calculations (Appendix Tables C.35 to C.38) for FY 2018. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
Rhode Island	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> Rhode Island did not operate any section 1915(c) waiver programs in FY 2017 or 2018 because it provides similar services to HCBS-eligible populations under a section 1115 demonstration. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> The Rhody Health Options I program ended in September 2018, so expenditures included for this program do not cover the entire FY 2018.

State	Notes
	<ol style="list-style-type: none"> 2. Reported expenditures for nursing facility services include only custodial days. 3. Reported expenditures for personal care are defined as non-skilled personal care services. 4. Reported expenditures for home health are defined as skill nursing services. 5. Reported expenditures for rehabilitative services are defined as rehabilitative services in a nursing home. 6. Other HCBS expenditures include expenditures for adult day care, meals on wheels, durable medical equipment, and other services. 7. Institutional expenditures do not include expenditures for ICF/IID, mental health facilities, and other institutional services. 8. HCBS expenditures do not include expenditures for non-section 1915(c) waiver program home health and rehabilitative services. 9. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.
South Carolina	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. We corrected waiver program ID numbers to allow linkage across sources. 2. South Carolina appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. South Carolina was unable to report expenditures for its Financial Alignment Initiative demonstration program.
South Dakota	No data notes to report.
Tennessee	<p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Home health services are part of Tennessee’s managed care program but not an LTSS benefit, so the state did not report these expenditures. 2. Personal care expenditures include expenditures for personal care and supportive home care (which involves the provision of in-home services and supports by a paid caregiver who does not live in the family home to an individual living with his or her family that directly assists the individual with daily activities and personal needs to meet their daily living needs and to ensure adequate functioning in their home). 3. Institutional expenditures do not include expenditures for ICF/IID as that is carved out of the managed care program. 4. The Employment and Community First CHOICES program was implemented in July 2016. 5. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures. <p>Data anomalies or notable state trends:</p> <ol style="list-style-type: none"> 1. Between FY 2017 and 2018, non-section 1915(c) waiver program expenditures increased by 284 percent. The state reported that this increase was because of enrollment growth.
Texas	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Waiver program 0266 was terminated in October 2014. 2. Texas appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. The STAR Kids program was implemented in November 2016, so expenditures included for this program do not cover the entire FY 2017. 2. Institutional expenditures do not include expenditures for ICF/IID, mental health facilities, and other institutional services.

State	Notes
	<ol style="list-style-type: none"> 3. Texas did not provide HCBS category of service breakouts for FY 2017 and FY 2018. As a result, we excluded the state from the category of service lines in the Summary by Population table (Appendix Table C.2) and from the rebalancing population percentage calculations (Appendix Tables C.35 to C.38). 4. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures. 5. A combination of state-submitted MLTSS Community First Choice data and FFS CMS-64 FMR Net Services report data was used to calculate Community First Choice expenditures for Texas.
Utah	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. We corrected waiver program ID numbers to allow linkage across sources.
Vermont	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. Vermont did not operate any section 1915(c) waiver programs in FY 2017 or 2018 because it provides similar services to HCBS-eligible populations under a section 1115 demonstration. The FMR Net Services report for FY 2017 and 2018 includes non-zero expenditures under line 19A, but the Schedule A waiver report does not have any expenditures reported for section 1915(c) waiver programs; the expenditures captured under line 19A are categorized under section 1115 demonstration payments. <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Vermont’s section 1115 global LTSS program structure meets the statutory definition of managed care in that it involves capitated payments from one state department to the state Medicaid agency, but there is no financial risk involved and the state Medicaid program reimburses providers on a FFS basis. 2. Vermont’s program design does not lend itself to the standard categories of service used for this report, so we excluded the state from the category of service lines in the Summary by Population table (Appendix Table C.2) and from the rebalancing population percentage calculations (Appendix Tables C.35 to C.38).
Virginia	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. We corrected waiver program ID numbers to allow linkage across sources. 2. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 40206 (terminated June 2018). <p>State-reported MLTSS expenditures:</p> <ol style="list-style-type: none"> 1. Virginia was unable to report expenditures for its MLTSS and Financial Alignment Initiative programs.
Washington	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. We corrected waiver program ID numbers to allow linkage across sources. 2. Washington appears to be capturing other services provided under its FY 2018 section 1915(c) waiver program totals from the Schedule A waiver report.
West Virginia	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. We corrected waiver program ID numbers to allow linkage across sources.
Wisconsin	<p>CMS-64 expenditures:</p> <ol style="list-style-type: none"> 1. No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver program number 0367. The waiver program is authorized under a concurrent 1915(b) and 1932(a) authority, and waiver program services are provided through PIHPs. 2. Waiver program numbers 0413 and 0415 were terminated in March 2017. 3. Waiver program number 0485 was terminated in January 2015. 4. Waiver program number 0368 was terminated in January 2015. 5. Wisconsin reported section 1915(i) expenditures in FY 2017 and 2018 but did not have an approved section 1915(i) State Plan program in these years.

State	Notes
	<p>6. Wisconsin appears to be capturing other services provided under its FY 2017 and 2018 section 1915(c) waiver program totals from the Schedule A waiver report.</p> <p>7. Wisconsin indicated that they reported PACE expenditures within line 18A (Medicaid managed care premiums) in the FMR Net Services data instead of in line 22 (PACE). We believe this is inconsistent with how other states are reporting PACE expenditures within the CMS-64. Note that Wisconsin's Medicaid managed care premiums in Appendix D will include PACE expenditures.</p> <p>State-reported MLTSS expenditures:</p> <p>1. Wisconsin did not report expenditures for the Family Care program for FY 2016; however, this program is included for FY 2017 and 2018 expenditures.</p> <p>2. To report expenditures, the state used encounter data to estimate the percentage of capitation rate attributed to each service category.</p> <p>3. State-reported MLTSS PACE expenditures were used instead of FMR Net Services PACE expenditures.</p>
Wyoming	<p>CMS-64 expenditures:</p> <p>1. No expenditures were reported in the FY 2017 or 2018 CMS-64 waiver report for waiver program number 0451. The waiver program is authorized under a concurrent 1915(b) authority, and waiver services are provided through PAHPs.</p> <p>2. Waiver program number 0253 was terminated in June 2015.</p> <p>3. No expenditures were reported in the FY 2018 CMS-64 waiver report for waiver program number 0369 because it was terminated in June 2017.</p>

Note: Section 1915(c) waiver program data for FY 2016 obtained from unpublished expenditure data obtained from CMS in fall 2019.

A&D = Aged and Disabled; CMS = Centers for Medicare & Medicaid Services; FFS = fee for service; FMR = Financial Management Report; FY = fiscal year; HCBS = home and community-based services; ICF/IID = Intermediate Care Facilities for Individuals with Intellectual Disabilities; MCO = managed care organization; MFP = Money Follows the Person; MLTSS = Managed Long-Term Services and Supports; MSC+ = Minnesota Senior Care Plus; MSHO = Minnesota Senior Health Options; PACE = Program of All-Inclusive Care for the Elderly; PAHP = prepaid ambulatory health plan; PCA = Personal Care Assistance; PIHP = prepaid inpatient health plan; SNBC = Special Needs BasicCare.

Appendix C. Summary tables

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Table C.1. National Medicaid LTSS expenditures: FY 2016–2018

Service category	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Total institutional LTSS	\$73,156,699,212	\$53,984,899,253	-26.2	\$55,049,387,032	2.0
Nursing facilities	\$56,998,761,090	\$42,205,343,282	-26.0	\$43,043,302,176	2.0
ICF/IID	\$10,410,876,074	\$7,020,514,574	-32.6	\$7,073,038,247	0.7
Mental health facilities	\$2,675,832,230	\$1,599,085,664	-40.2	\$1,873,862,959	17.2
Mental health facilities: DSH	\$2,992,227,722	\$2,245,810,796	-24.9	\$2,187,583,913	-2.6
Institutional MLTSS: other	\$79,002,096	\$412,843,056	422.6	\$370,630,137	-10.2
Total HCBS	\$96,849,120,001	\$67,097,512,297	-30.7	\$70,396,100,687	4.9
Section 1915(c) waiver program	\$48,237,266,312	\$33,247,500,722	-31.1	\$35,745,742,892	7.5
Personal care	\$13,890,907,333	\$7,509,052,993	-45.9	\$7,778,429,236	3.6
1915(k) / Community First Choice	\$11,774,044,922	\$5,026,376,123	-57.3	\$5,250,365,172	4.5
HCBS MLTSS: other	\$6,908,689,198	\$4,993,374,975	-27.7	\$5,403,946,195	8.2
Home health	\$4,761,773,663	\$3,810,677,824	-20.0	\$3,728,759,150	-2.1
Rehabilitative services (non-school-based)	\$3,656,755,916	\$3,470,030,352	-5.1	\$3,171,587,603	-8.6
Case management	\$2,786,034,412	\$1,791,501,067	-35.7	\$1,893,887,326	5.7
PACE	\$1,943,151,567	\$915,996,745	-52.9	\$939,947,498	2.6
Private duty nursing	\$731,878,352	\$583,311,555	-20.3	\$567,873,461	-2.6
Health homes	\$761,351,656	\$259,061,923	-66.0	\$392,276,640	51.4
1915(i) / state plan HCBS	\$821,484,791	\$238,693,041	-70.9	-\$607,748,021	-354.6
1915(j) / self-directed personal assistance	\$153,942,408	\$246,042,559	59.8	\$342,620,890	39.3
MFP demonstration	\$421,839,471	\$365,014,096	-13.5	\$318,859,268	-12.6
Total LTSS	\$170,005,819,213	\$123,716,771,330	-27.2	\$128,766,166,201	4.1
Total Medicaid	\$549,284,347,616	\$389,419,981,174	-29.1	\$400,267,806,358	2.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, New York, and Virginia. Includes data for all other states, the District of Columbia, and the U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands). Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; DSH = Disproportionate Share Hospital; FY = fiscal year; HCBS = home and community-based services; ICF/IID = Intermediate Care Facility for Individuals with Intellectual Disabilities; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; PACE = Program of All-Inclusive Care.

Table C.2. National Medicaid LTSS expenditures by LTSS targeted population subgroups: FY 2016–2018

Population	FY 2016 expenditures	FY 2016 % total LTSS	FY 2017 expenditures	FY 2017 % change	FY 2017 % total LTSS	FY 2018 expenditures	FY 2018 % change	FY 2018 % total LTSS
Older adults and people with physical or other disabilities	\$106,294,447,357	62.5	\$56,135,287,547	-47.2	55.8	\$50,816,771,423	-9.5	55.0
Nursing facilities	\$56,998,761,090	33.5	\$37,218,578,554	-34.7	37.0	\$34,132,165,725	-8.3	36.9
Personal care	\$13,890,907,333	8.2	\$5,372,383,332	-61.3	5.3	\$5,574,040,239	3.8	6.0
Section 1915(c) waiver program: Older adults, PD, or OD	\$12,506,626,669	7.4	\$8,896,784,114	-28.9	8.8	\$6,594,457,305	-25.9	7.1
Home health	\$4,761,773,663	2.8	\$3,088,468,232	-35.1	3.1	\$3,126,465,049	1.2	3.4
PACE	\$1,943,151,567	1.1	\$757,415,736	-61.0	0.8	\$486,357,426	-35.8	0.5
Private duty nursing	\$731,878,352	0.4	\$574,597,115	-21.5	0.6	\$557,668,741	-2.9	0.6
1915(j) / self-directed personal assistance	\$153,942,408	0.1	\$230,705,537	49.9	0.2	\$342,495,482	48.5	0.4
1915(i) / state plan HCBS: Older adults, PD, or OD	\$3,858,353	0.0	-\$3,645,073	-194.5	0.0	\$3,121,456	185.6	0.0
1915(k) / Community First Choice	\$11,774,044,922	6.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
HCBS - unspecified - AD	\$3,529,503,000	2.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
People with autism spectrum disorder, intellectual or developmental disabilities	\$47,058,440,550	27.7	\$25,924,268,233	-44.9	25.8	\$23,214,691,828	-10.5	25.1
ICF/IID	\$10,410,876,074	6.1	\$5,826,183,574	-44.0	5.8	\$4,956,885,277	-14.9	5.4
Section 1915(c) waiver program: ASD, ID, or DD	\$34,677,600,489	20.4	\$20,090,183,269	-42.1	20.0	\$18,257,806,551	-9.1	19.8
1915(i) / state plan HCBS: ASD, ID, or DD	\$695,590,987	0.4	\$7,901,390	-98.9	0.0	\$0	-100.0	0.0
HCBS - unspecified - DD	\$1,274,373,000	0.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
People with behavioral health conditions	\$9,924,857,141	5.8	\$6,649,705,493	-33.0	6.6	\$6,280,210,012	-5.6	6.8
Mental health facilities	\$2,675,832,230	1.6	\$1,409,076,721	-47.3	1.4	\$1,574,826,179	11.8	1.7
Mental health facilities: DSH	\$2,992,227,722	1.8	\$1,936,983,483	-35.3	1.9	\$1,570,990,571	-18.9	1.7
Rehabilitative services (non-school-based)	\$3,656,755,916	2.2	\$3,038,202,011	-16.9	3.0	\$2,715,958,246	-10.6	2.9
Section 1915(c) waiver program: Mental health services or SED	\$332,648,757	0.2	\$70,647,678	-78.8	0.1	\$83,048,978	17.6	0.1
1915(i) / state plan HCBS: BHC	\$122,035,451	0.1	\$68,813,320	-43.6	0.1	\$60,066,839	-12.7	0.1

Population	FY 2016 expenditures	FY 2016 % total LTSS	FY 2017 expenditures	FY 2017 % change	FY 2017 % total LTSS	FY 2018 expenditures	FY 2018 % change	FY 2018 % total LTSS
Health homes: BHC	\$145,357,065	0.1	\$125,982,279	-13.3	0.1	\$275,319,199	118.5	0.3
Multiple populations	\$6,728,074,967	4.0	\$11,946,528,624	77.6	11.9	\$12,111,270,842	1.4	13.1
1915(k) / Community First Choice	n.a.	n.a.	\$3,717,550,078	-68.4	3.7	\$4,016,268,622	8.0	4.3
HCBS MLTSS: other	n.a.	n.a.	\$4,621,403,496	n.a.	4.6	\$5,004,641,798	8.3	5.4
Case management	\$2,786,034,412	1.6	\$1,580,238,339	-43.3	1.6	\$1,650,710,014	4.5	1.8
Section 1915(c) waiver program: other	\$720,390,397	0.4	\$1,010,677,184	40.3	1.0	\$1,351,878,245	33.8	1.5
1915(i) / state plan HCBS: other	n.a.	n.a.	\$165,393,659	n.a.	0.2	-\$672,098,147	-506.4	-0.7
Institutional MLTSS: other	\$79,002,096	0.0	\$412,843,056	422.6	0.4	\$370,630,137	-10.2	0.4
MFP demonstration	\$421,839,471	0.2	\$304,781,050	-27.7	0.3	\$272,246,995	-10.7	0.3
Health homes: other	\$615,994,591	0.4	\$133,641,762	-78.3	0.1	\$116,993,177	-12.5	0.1
HCBS - unspecified - other	\$2,104,814,000	1.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total LTSS population expenditures	\$170,005,819,213	100.0	\$100,655,789,897	-40.8	100.0	\$92,422,944,104	-8.2	100.0

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, CMS 372 data, state-submitted MLTSS data, and MFP worksheets for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, Kansas, Massachusetts, North Carolina, New York, Texas, Virginia, and Vermont. Excludes FY 2018 data for Pennsylvania. Includes data for all other states, the District of Columbia, and the U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands). Community First Choice expenditures are categorized under different a LTSS targeted population subgroup in FY 2016 than in FY 2017 and 2018. The HCBS MLTSS: other category reported in FY 2017 and 2018 replaces the HCBS – unspecified categories reported in FY 2016. The HCBS – unspecified categories used different LTSS targeted population labels than those reported for other categories. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

AD = older adults and people with physical disabilities; ASD, ID, or DD = autism spectrum disorder, intellectual or developmental disabilities; BHC = behavioral health conditions; CMS = Centers for Medicare & Medicaid Services; DD = developmental disabilities; DSH = Disproportionate Share Hospital; FY = fiscal year; HCBS = home and community-based services; ICF/IID = Intermediate Care Facility for Individuals with Intellectual Disabilities; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; n.a. = not applicable; OD = people with other disabilities; PACE = Program of All-Inclusive Care; PD = people with physical disabilities.

Table C.3. State summary: Medicaid LTSS expenditures, FY 2017 and 2018

State	FY 2017 expenditures:	FY 2017 expenditures:	FY 2017 expenditures:	FY 2017 expenditures:	FY 2018 expenditures:	FY 2018 expenditures:	FY 2018 expenditures:	FY 2018 expenditures:
	Total institutional	Total HCBS	Total LTSS	Total Medicaid	Total institutional	Total HCBS	Total LTSS	Total Medicaid
Alabama	\$1,001,693,879	\$770,633,504	\$1,772,327,383	\$5,562,217,922	\$1,019,064,970	\$763,599,382	\$1,782,664,352	\$5,546,416,592
Alaska	\$208,115,329	\$343,323,802	\$551,439,131	\$1,961,572,200	\$200,195,418	\$330,211,733	\$530,407,151	\$2,033,389,399
Arizona	\$541,963,326	\$1,510,473,045	\$2,052,436,371	\$11,823,748,029	\$552,306,118	\$1,674,390,340	\$2,226,696,458	\$12,132,120,126
Arkansas	\$1,014,917,292	\$1,100,014,547	\$2,114,931,839	\$6,363,923,522	\$979,225,237	\$1,058,511,880	\$2,037,737,117	\$6,308,079,740
California	NA	NA	NA	NA	NA	NA	NA	NA
Colorado	\$834,562,410	\$1,365,097,218	\$2,199,659,628	\$7,805,267,931	\$829,110,824	\$1,023,901,892	\$1,853,012,716	\$8,925,796,867
Connecticut	\$1,652,589,464	\$1,973,180,197	\$3,625,769,661	\$7,401,263,576	\$1,620,446,209	\$2,024,197,792	\$3,644,644,001	\$8,175,809,143
Delaware	\$358,438,443	\$259,618,357	\$618,056,800	\$2,133,796,292	\$317,005,377	\$286,464,793	\$603,470,170	\$2,237,920,184
District of Columbia	\$341,775,473	\$516,000,451	\$857,775,924	\$2,783,205,645	\$356,225,529	\$570,874,564	\$927,100,093	\$2,804,976,949
Florida	\$4,099,956,572	\$2,308,961,352	\$6,408,917,924	\$23,169,178,008	\$4,284,466,306	\$2,527,561,499	\$6,812,027,805	\$22,893,250,365
Georgia	\$1,433,405,637	\$1,337,175,948	\$2,770,581,585	\$10,105,996,059	\$1,513,915,646	\$1,425,141,877	\$2,939,057,523	\$10,839,404,783
Hawaii	\$301,868,470	\$239,006,095	\$540,874,565	\$2,338,436,723	\$314,013,399	\$262,032,777	\$576,046,176	\$2,213,115,909
Idaho	\$309,696,043	\$398,305,048	\$708,001,091	\$1,822,302,321	\$295,976,962	\$444,333,232	\$740,310,194	\$1,901,290,685
Illinois	NA	NA	NA	NA	NA	NA	NA	NA
Indiana	\$2,762,068,970	\$1,334,564,963	\$4,096,633,933	\$11,106,189,855	\$2,742,139,873	\$1,460,617,858	\$4,202,757,731	\$11,241,808,216
Iowa	\$737,744,315	\$881,534,520	\$1,619,278,835	\$4,065,931,964	\$1,169,261,329	\$831,040,620	\$2,000,301,949	\$4,828,425,247
Kansas	\$545,864,561	\$1,106,368,036	\$1,652,232,597	\$3,214,420,668	\$574,088,480	\$1,165,043,830	\$1,739,132,310	\$3,437,703,549
Kentucky	\$1,182,054,859	\$864,920,039	\$2,046,974,898	\$9,527,255,650	\$1,195,979,858	\$893,184,594	\$2,089,164,452	\$9,801,380,491
Louisiana	\$1,487,892,453	\$795,759,420	\$2,283,651,873	\$10,913,541,197	\$1,498,031,092	\$778,837,583	\$2,276,868,675	\$10,835,742,015
Maine	\$480,616,040	\$608,307,104	\$1,088,923,144	\$2,565,081,585	\$498,142,912	\$675,403,024	\$1,173,545,936	\$2,686,772,711
Maryland	\$1,388,933,922	\$2,020,815,174	\$3,409,749,096	\$11,161,406,671	\$1,395,419,231	\$2,170,224,781	\$3,565,644,012	\$11,417,338,026
Massachusetts	\$2,074,254,168	\$4,938,164,478	\$7,012,418,646	\$17,120,855,005	\$2,020,407,726	\$4,961,126,108	\$6,981,533,833	\$17,655,414,020
Michigan	\$2,151,247,102	\$1,623,680,691	\$3,774,927,793	\$16,711,203,272	\$2,257,174,215	\$1,683,366,612	\$3,940,540,827	\$16,286,594,101
Minnesota	\$1,321,188,686	\$4,431,157,586	\$5,752,346,273	\$11,351,993,115	\$1,394,240,901	\$4,788,018,243	\$6,182,259,145	\$12,324,543,789
Mississippi	\$1,113,650,841	\$511,564,295	\$1,625,215,136	\$5,462,308,168	\$1,075,738,957	\$520,083,298	\$1,595,822,255	\$5,278,728,403

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	FY 2017	FY 2017	FY 2017	FY 2017	FY 2018	FY 2018	FY 2018	FY 2018
	expenditures: Total institutional	expenditures: Total HCBS	expenditures: Total LTSS	expenditures: Total Medicaid	expenditures: Total institutional	expenditures: Total HCBS	expenditures: Total LTSS	expenditures: Total Medicaid
Missouri	\$1,482,607,607	\$2,239,801,355	\$3,722,408,962	\$10,095,843,109	\$1,362,250,459	\$2,059,908,465	\$3,422,158,924	\$10,296,294,908
Montana	\$195,618,803	\$306,091,940	\$501,710,743	\$1,772,437,233	\$219,781,491	\$280,722,511	\$500,504,002	\$1,830,172,657
Nebraska	\$420,830,258	\$417,548,372	\$838,378,630	\$2,041,523,592	\$449,072,461	\$500,853,938	\$949,926,399	\$2,126,639,801
Nevada	\$311,343,687	\$492,059,782	\$803,403,469	\$3,530,342,184	\$334,778,444	\$531,362,114	\$866,140,558	\$3,922,474,284
New Hampshire	\$385,097,151	\$363,158,305	\$748,255,456	\$2,055,479,922	\$436,748,735	\$381,237,322	\$817,986,057	\$2,150,375,296
New Jersey	\$2,765,793,570	\$1,837,489,698	\$4,603,283,268	\$14,743,851,829	\$2,666,195,326	\$1,397,142,673	\$4,063,338,000	\$14,843,185,053
New Mexico	\$246,828,997	\$811,087,968	\$1,057,916,965	\$4,804,465,265	\$253,321,921	\$790,483,300	\$1,043,805,221	\$5,112,309,656
New York	NA	NA	NA	NA	NA	NA	NA	NA
North Carolina	NA	NA	\$2,634,359,780	\$13,336,810,348	NA	NA	\$3,320,678,481	\$13,339,097,405
North Dakota	\$376,633,913	\$262,559,301	\$639,193,214	\$1,216,183,814	\$371,517,517	\$265,702,176	\$637,219,693	\$1,222,239,306
Ohio	\$3,772,583,058	\$5,171,315,209	\$8,943,898,267	\$23,055,842,742	\$3,795,136,109	\$5,171,021,716	\$8,966,157,825	\$21,743,887,373
Oklahoma	\$683,063,377	\$654,972,564	\$1,338,035,941	\$4,630,014,393	\$685,384,120	\$631,764,138	\$1,317,148,258	\$4,433,479,661
Oregon	\$451,105,562	\$2,163,856,860	\$2,614,962,422	\$8,312,733,407	\$479,197,055	\$2,403,110,664	\$2,882,307,719	\$8,877,365,993
Pennsylvania	\$5,101,247,394	\$5,664,817,951	\$10,766,065,345	\$28,081,163,760	\$4,929,569,424	\$7,005,659,926	\$11,935,229,350	\$29,863,557,849
Rhode Island	\$318,371,176	\$147,958,934	\$466,330,110	\$2,623,111,291	\$357,956,860	\$153,298,588	\$511,255,449	\$2,620,033,271
South Carolina	\$835,365,350	\$736,205,789	\$1,571,571,139	\$5,963,952,005	\$855,597,936	\$764,393,347	\$1,619,991,283	\$6,006,492,924
South Dakota	\$184,723,646	\$169,556,191	\$354,279,837	\$851,154,180	\$184,590,530	\$183,389,984	\$367,980,514	\$865,504,172
Tennessee	\$1,189,263,090	\$1,124,891,237	\$2,314,154,326	\$9,088,319,089	\$1,199,544,951	\$1,303,527,961	\$2,503,072,912	\$9,680,798,504
Texas	\$4,265,260,923	\$6,845,171,164	\$11,110,432,088	\$35,644,874,349	\$4,621,519,362	\$7,069,764,665	\$11,691,284,027	\$37,585,413,327
Utah	\$372,866,736	\$346,335,301	\$719,202,037	\$2,451,642,619	\$364,499,845	\$385,678,031	\$750,177,876	\$2,421,929,601
Vermont	\$295,854,213	\$355,684,111	\$651,538,323	\$1,600,236,799	\$298,304,152	\$377,059,943	\$675,364,094	\$1,595,969,592
Virginia	NA	NA	NA	NA	NA	NA	NA	NA
Washington	\$1,030,221,524	\$2,338,726,145	\$3,368,947,669	\$11,892,840,575	\$1,069,395,139	\$2,491,317,328	\$3,560,712,467	\$12,093,602,904
West Virginia	\$783,678,903	\$591,548,542	\$1,375,227,445	\$4,000,838,793	\$809,361,895	\$572,611,261	\$1,381,973,156	\$3,854,175,868
Wisconsin	\$1,021,346,559	\$2,670,279,598	\$3,691,626,157	\$8,049,889,736	\$1,051,426,070	\$3,201,813,764	\$4,253,239,834	\$8,768,743,868
Wyoming	\$149,946,924	\$145,542,844	\$295,489,768	\$591,622,270	\$151,117,809	\$152,738,169	\$303,855,978	\$595,439,375

State	FY 2017				FY 2018			
	expenditures: Total institutional	FY 2017 expenditures: Total HCBS	FY 2017 expenditures: Total LTSS	FY 2017 expenditures: Total Medicaid	expenditures: Total institutional	FY 2018 expenditures: Total HCBS	FY 2018 expenditures: Total LTSS	FY 2018 expenditures: Total Medicaid
US Territories	\$748,577	\$2,227,267	\$2,975,844	\$2,513,712,492	\$542,852	\$3,370,391	\$3,913,243	\$2,612,602,400
United States	\$53,984,899,253	\$67,097,512,297	\$123,716,771,330	\$389,419,981,174	\$55,049,387,032	\$70,396,100,687	\$128,766,166,201	\$400,267,806,358

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, New York, and Virginia. Includes data for all other states, the District of Columbia, and the U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands). Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; NA. = not available.

Table C.4. State summary: Percentage of Medicaid expenditures for LTSS, FY 2017 and 2018

State	FY 2017 total LTSS: % HCBS	FY 2017 total LTSS: % institutional	FY 2017 total Medicaid: % LTSS	FY 2018 total LTSS: % HCBS	FY 2018 total LTSS: % institutional	FY 2018 total Medicaid: % LTSS
Alabama	43.5	56.5	31.9	42.8	57.2	32.1
Alaska	62.3	37.7	28.1	62.3	37.7	26.1
Arizona	73.6	26.4	17.4	75.2	24.8	18.4
Arkansas	52.0	48.0	33.2	51.9	48.1	32.3
California	NA	NA	NA	NA	NA	NA
Colorado	62.1	37.9	28.2	55.3	44.7	20.8
Connecticut	54.4	45.6	49.0	55.5	44.5	44.6
Delaware	42.0	58.0	29.0	47.5	52.5	27.0
District of Columbia	60.2	39.8	30.8	61.6	38.4	33.1
Florida	36.0	64.0	27.7	37.1	62.9	29.8
Georgia	48.3	51.7	27.4	48.5	51.5	27.1
Hawaii	44.2	55.8	23.1	45.5	54.5	26.0
Idaho	56.3	43.7	38.9	60.0	40.0	38.9
Illinois	NA	NA	NA	NA	NA	NA
Indiana	32.6	67.4	36.9	34.8	65.2	37.4
Iowa	54.4	45.6	39.8	41.5	58.5	41.4
Kansas	67.0	33.0	51.4	67.0	33.0	50.6
Kentucky	42.3	57.7	21.5	42.8	57.2	21.3
Louisiana	34.8	65.2	20.9	34.2	65.8	21.0
Maine	55.9	44.1	42.5	57.6	42.4	43.7
Maryland	59.3	40.7	30.5	60.9	39.1	31.2
Massachusetts	70.4	29.6	41.0	71.1	28.9	39.5
Michigan	43.0	57.0	22.6	42.7	57.3	24.2
Minnesota	77.0	23.0	50.7	77.4	22.6	50.2
Mississippi	31.5	68.5	29.8	32.6	67.4	30.2
Missouri	60.2	39.8	36.9	60.2	39.8	33.2
Montana	61.0	39.0	28.3	56.1	43.9	27.3
Nebraska	49.8	50.2	41.1	52.7	47.3	44.7
Nevada	61.2	38.8	22.8	61.3	38.7	22.1
New Hampshire	48.5	51.5	36.4	46.6	53.4	38.0
New Jersey	39.9	60.1	31.2	34.4	65.6	27.4
New Mexico	76.7	23.3	22.0	75.7	24.3	20.4
New York	NA	NA	NA	NA	NA	NA
North Carolina	NA	NA	19.8	NA	NA	24.9
North Dakota	41.1	58.9	52.6	41.7	58.3	52.1
Ohio	57.8	42.2	38.8	57.7	42.3	41.2
Oklahoma	49.0	51.0	28.9	48.0	52.0	29.7
Oregon	82.7	17.3	31.5	83.4	16.6	32.5
Pennsylvania	52.6	47.4	38.3	58.7	41.3	40.0
Rhode Island	31.7	68.3	17.8	30.0	70.0	19.5
South Carolina	46.8	53.2	26.4	47.2	52.8	27.0
South Dakota	47.9	52.1	41.6	49.8	50.2	42.5

State	FY 2017 total LTSS: % HCBS	FY 2017 total LTSS: % institutional	FY 2017 total Medicaid: % LTSS	FY 2018 total LTSS: % HCBS	FY 2018 total LTSS: % institutional	FY 2018 total Medicaid: % LTSS
Tennessee	48.6	51.4	25.5	52.1	47.9	25.9
Texas	61.6	38.4	31.2	60.5	39.5	31.1
Utah	48.2	51.8	29.3	51.4	48.6	31.0
Vermont	54.6	45.4	40.7	55.8	44.2	42.3
Virginia	NA	NA	NA	NA	NA	NA
Washington	69.4	30.6	28.3	70.0	30.0	29.4
West Virginia	43.0	57.0	34.4	41.4	58.6	35.9
Wisconsin	72.3	27.7	45.9	75.3	24.7	48.5
Wyoming	49.3	50.7	49.9	50.3	49.7	51.0
US Territories	74.8	25.2	0.1	86.1	13.9	0.1
United States	54.2	43.6	31.8	54.7	42.8	32.2

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, New York, and Virginia. Includes data for all other states, the District of Columbia, and the U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands). Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; NA. = not available.

Medicaid LTSS expenditures by state, FY 2016 to FY 2018

Table C.5. Total Medicaid expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2017 rank	FY 2018 rank	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$1,141.09	\$1,134.77	39	39	\$5,503,531,041	\$5,562,217,922	1.1	\$5,546,416,592	-0.3
Alaska	\$2,651.85	\$2,765.99	2	2	\$1,789,624,888	\$1,961,572,200	9.6	\$2,033,389,399	3.7
Arizona	\$1,678.55	\$1,694.90	21	21	\$11,227,239,448	\$11,823,748,029	5.3	\$12,132,120,126	2.6
Arkansas	\$2,120.36	\$2,095.89	12	15	\$6,060,292,412	\$6,363,923,522	5.0	\$6,308,079,740	-0.9
California	NA	NA	NA	NA	\$84,557,675,357	NA	NA	NA	NA
Colorado	\$1,390.85	\$1,568.33	30	29	\$7,785,861,510	\$7,805,267,931	0.2	\$8,925,796,867	14.4
Connecticut	\$2,071.27	\$2,289.17	13	10	\$7,858,235,931	\$7,401,263,576	-5.8	\$8,175,809,143	10.5
Delaware	\$2,230.08	\$2,317.94	8	9	\$1,640,718,926	\$2,133,796,292	30.1	\$2,237,920,184	4.9
District of Columbia	\$4,005.15	\$3,998.27	1	1	\$2,765,783,956	\$2,783,205,645	0.6	\$2,804,976,949	0.8
Florida	\$1,105.21	\$1,077.62	40	43	\$21,918,389,122	\$23,169,178,008	5.7	\$22,893,250,365	-1.2
Georgia	\$970.77	\$1,031.23	46	44	\$9,930,122,137	\$10,105,996,059	1.8	\$10,839,404,783	7.3
Hawaii	\$1,641.71	\$1,557.88	26	30	\$2,255,333,709	\$2,338,436,723	3.7	\$2,213,115,909	-5.4
Idaho	\$1,060.89	\$1,086.12	43	42	\$1,793,748,152	\$1,822,302,321	1.6	\$1,901,290,685	4.3
Illinois	NA	NA	NA	NA	\$18,502,092,108	NA	NA	NA	NA
Indiana	\$1,668.08	\$1,679.01	23	23	\$10,023,912,435	\$11,106,189,855	10.8	\$11,241,808,216	1.2
Iowa	\$1,294.24	\$1,533.51	34	31	\$4,803,783,109	\$4,065,931,964	-15.4	\$4,828,425,247	18.8
Kansas	\$1,105.10	\$1,180.79	41	38	\$3,279,100,804	\$3,214,420,668	-2.0	\$3,437,703,549	6.9
Kentucky	\$2,139.87	\$2,197.05	11	12	\$9,575,771,413	\$9,527,255,650	-0.5	\$9,801,380,491	2.9
Louisiana	\$2,336.67	\$2,325.42	6	8	\$8,148,247,024	\$10,913,541,197	33.9	\$10,835,742,015	-0.7
Maine	\$1,921.97	\$2,006.47	17	16	\$2,566,240,577	\$2,565,081,585	0.0	\$2,686,772,711	4.7
Maryland	\$1,852.86	\$1,891.60	18	17	\$10,524,911,953	\$11,161,406,671	6.0	\$11,417,338,026	2.3
Massachusetts	\$2,495.83	\$2,565.21	4	3	\$17,682,330,483	\$17,120,855,005	-3.2	\$17,655,414,020	3.1
Michigan	\$1,675.63	\$1,631.26	22	25	\$16,761,000,381	\$16,711,203,272	-0.3	\$16,286,594,101	-2.5
Minnesota	\$2,039.44	\$2,198.36	14	11	\$11,127,375,392	\$11,351,993,115	2.0	\$12,324,543,789	8.6
Mississippi	\$1,827.77	\$1,770.78	19	19	\$5,360,409,892	\$5,462,308,168	1.9	\$5,278,728,403	-3.4

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2017 rank	FY 2018 rank	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Missouri	\$1,653.25	\$1,681.96	25	22	\$9,631,551,230	\$10,095,843,109	4.8	\$10,296,294,908	2.0
Montana	\$1,684.05	\$1,725.50	20	20	\$1,383,239,908	\$1,772,437,233	28.1	\$1,830,172,657	3.3
Nebraska	\$1,065.54	\$1,104.40	42	41	\$2,003,711,572	\$2,041,523,592	1.9	\$2,126,639,801	4.2
Nevada	\$1,188.71	\$1,295.68	36	35	\$3,363,125,366	\$3,530,342,184	5.0	\$3,922,474,284	11.1
New Hampshire	\$1,523.95	\$1,588.79	29	28	\$1,911,398,897	\$2,055,479,922	7.5	\$2,150,375,296	4.6
New Jersey	\$1,659.31	\$1,670.40	24	24	\$14,272,295,460	\$14,743,851,829	3.3	\$14,843,185,053	0.7
New Mexico	\$2,296.83	\$2,442.88	7	6	\$5,250,238,373	\$4,804,465,265	-8.5	\$5,112,309,656	6.4
New York	NA	NA	NA	NA	\$62,753,964,858	NA	NA	NA	NA
North Carolina	\$1,298.84	\$1,284.88	33	36	\$12,174,326,500	\$13,336,810,348	9.5	\$13,339,097,405	0.0
North Dakota	\$1,610.96	\$1,612.28	27	26	\$1,127,869,220	\$1,216,183,814	7.8	\$1,222,239,306	0.5
Ohio	\$1,977.40	\$1,862.22	16	18	\$21,352,397,408	\$23,055,842,742	8.0	\$21,743,887,373	-5.7
Oklahoma	\$1,177.73	\$1,125.18	38	40	\$4,850,873,033	\$4,630,014,393	-4.6	\$4,433,479,661	-4.2
Oregon	\$2,006.15	\$2,122.81	15	14	\$8,218,739,620	\$8,312,733,407	1.1	\$8,877,365,993	6.8
Pennsylvania	\$2,195.96	\$2,332.92	10	7	\$27,226,669,332	\$28,081,163,760	3.1	\$29,863,557,849	6.3
Rhode Island	\$2,484.78	\$2,475.73	5	5	\$2,584,155,233	\$2,623,111,291	1.5	\$2,620,033,271	-0.1
South Carolina	\$1,187.74	\$1,181.41	37	37	\$6,203,500,049	\$5,963,952,005	-3.9	\$6,006,492,924	0.7
South Dakota	\$975.12	\$984.98	45	46	\$831,664,925	\$851,154,180	2.3	\$865,504,172	1.7
Tennessee	\$1,354.69	\$1,429.61	32	33	\$9,758,220,495	\$9,088,319,089	-6.9	\$9,680,798,504	6.5
Texas	\$1,259.75	\$1,312.86	35	34	\$36,328,747,617	\$35,644,874,349	-1.9	\$37,585,413,327	5.4
Utah	\$790.59	\$768.00	47	47	\$2,130,960,436	\$2,451,642,619	15.0	\$2,421,929,601	-1.2
Vermont	\$2,563.07	\$2,556.18	3	4	\$1,676,454,522	\$1,600,236,799	-4.5	\$1,595,969,592	-0.3
Virginia	NA	NA	NA	NA	\$8,672,171,771	NA	NA	NA	NA
Washington	\$1,602.08	\$1,607.36	28	27	\$11,867,192,098	\$11,892,840,575	0.2	\$12,093,602,904	1.7
West Virginia	\$2,201.89	\$2,136.12	9	13	\$3,860,255,369	\$4,000,838,793	3.6	\$3,854,175,868	-3.7
Wisconsin	\$1,390.26	\$1,509.92	31	32	\$5,823,434,497	\$8,049,889,736	38.2	\$8,768,743,868	8.9
Wyoming	\$1,021.92	\$1,030.88	44	45	\$585,457,667	\$591,622,270	1.1	\$595,439,375	0.6
US Territories	NA	NA	NA	NA	NA	\$2,513,712,492	NA	\$2,612,602,400	3.9

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2017 rank	FY 2018 rank	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$1,590.80	\$1,623.99			\$549,284,347,616	\$389,419,981,174	-29.1	\$400,267,806,358	2.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, New York, and Virginia. Includes data for all other states, the District of Columbia, and the U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands). Because U.S. Census Bureau data are not available for the U.S. territories, we cannot calculate the per state resident expenditures for the U.S. territories. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; NA. = not available.

Table C.6. Total LTSS expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$363.59	\$364.73	\$1,810,038,230	\$1,772,327,383	-2.1	\$1,782,664,352	0.6
Alaska	\$745.49	\$721.51	\$542,298,596	\$551,439,131	1.7	\$530,407,151	-3.8
Arizona	\$291.37	\$311.08	\$1,743,172,268	\$2,052,436,371	17.7	\$2,226,696,458	8.5
Arkansas	\$704.66	\$677.05	\$2,088,564,778	\$2,114,931,839	1.3	\$2,037,737,117	-3.6
California	NA	NA	\$17,552,040,833	NA	NA	NA	NA
Colorado	\$391.96	\$325.59	\$2,341,962,764	\$2,199,659,628	-6.1	\$1,853,012,716	-15.8
Connecticut	\$1,014.68	\$1,020.47	\$3,460,877,033	\$3,625,769,661	4.8	\$3,644,644,001	0.5
Delaware	\$645.95	\$625.05	\$581,663,664	\$618,056,800	6.3	\$603,470,170	-2.4
District of Columbia	\$1,234.38	\$1,321.51	\$816,085,638	\$857,775,924	5.1	\$927,100,093	8.1
Florida	\$305.72	\$320.65	\$6,158,334,590	\$6,408,917,924	4.1	\$6,812,027,805	6.3
Georgia	\$266.14	\$279.61	\$2,603,088,426	\$2,770,581,585	6.4	\$2,939,057,523	6.1
Hawaii	\$379.72	\$405.50	\$522,682,124	\$540,874,565	3.5	\$576,046,176	6.5
Idaho	\$412.18	\$422.90	\$656,276,316	\$708,001,091	7.9	\$740,310,194	4.6
Illinois	NA	NA	\$4,242,590,058	NA	NA	NA	NA
Indiana	\$615.29	\$627.70	\$3,856,993,850	\$4,096,633,933	6.2	\$4,202,757,731	2.6
Iowa	\$515.44	\$635.30	\$2,128,680,207	\$1,619,278,835	-23.9	\$2,000,301,949	23.5
Kansas	\$568.03	\$597.36	\$1,172,547,645	\$1,652,232,597	40.9	\$1,739,132,310	5.3
Kentucky	\$459.76	\$468.30	\$2,006,904,275	\$2,046,974,898	2.0	\$2,089,164,452	2.1
Louisiana	\$488.95	\$488.63	\$2,254,674,191	\$2,283,651,873	1.3	\$2,276,868,675	-0.3
Maine	\$815.91	\$876.40	\$1,031,716,752	\$1,088,923,144	5.5	\$1,173,545,936	7.8
Maryland	\$566.04	\$590.75	\$3,131,254,827	\$3,409,749,096	8.9	\$3,565,644,012	4.6
Massachusetts	\$1,022.25	\$1,014.37	\$6,964,750,446	\$7,012,418,646	0.7	\$6,981,533,833	-0.4
Michigan	\$378.51	\$394.68	\$3,152,020,135	\$3,774,927,793	19.8	\$3,940,540,827	4.4
Minnesota	\$1,033.44	\$1,102.74	\$4,835,482,558	\$5,752,346,273	19.0	\$6,182,259,145	7.5
Mississippi	\$543.82	\$535.33	\$1,472,412,696	\$1,625,215,136	10.4	\$1,595,822,255	-1.8
Missouri	\$609.56	\$559.03	\$3,510,347,241	\$3,722,408,962	6.0	\$3,422,158,924	-8.1

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$476.69	\$471.88	\$481,022,146	\$501,710,743	4.3	\$500,504,002	-0.2
Nebraska	\$437.58	\$493.31	\$867,715,205	\$838,378,630	-3.4	\$949,926,399	13.3
Nevada	\$270.51	\$286.11	\$703,870,270	\$803,403,469	14.1	\$866,140,558	7.8
New Hampshire	\$554.76	\$604.36	\$680,756,227	\$748,255,456	9.9	\$817,986,057	9.3
New Jersey	\$518.07	\$457.27	\$4,214,199,511	\$4,603,283,268	9.2	\$4,063,338,000	-11.7
New Mexico	\$505.75	\$498.77	\$1,412,304,588	\$1,057,916,965	-25.1	\$1,043,805,221	-1.3
New York	NA	NA	\$27,220,534,582	NA	NA	NA	NA
North Carolina	\$256.55	\$319.86	\$3,683,054,387	\$2,634,359,780	-28.5	\$3,320,678,481	26.1
North Dakota	\$846.68	\$840.57	\$594,943,951	\$639,193,214	7.4	\$637,219,693	-0.3
Ohio	\$767.08	\$767.89	\$7,641,768,236	\$8,943,898,267	17.0	\$8,966,157,825	0.2
Oklahoma	\$340.35	\$334.28	\$1,368,309,835	\$1,338,035,941	-2.2	\$1,317,148,258	-1.6
Oregon	\$631.08	\$689.24	\$2,326,559,688	\$2,614,962,422	12.4	\$2,882,307,719	10.2
Pennsylvania	\$841.91	\$932.37	\$9,780,735,824	\$10,766,065,345	10.1	\$11,935,229,350	10.9
Rhode Island	\$441.74	\$483.10	\$854,262,546	\$466,330,110	-45.4	\$511,255,449	9.6
South Carolina	\$312.98	\$318.64	\$1,616,161,190	\$1,571,571,139	-2.8	\$1,619,991,283	3.1
South Dakota	\$405.88	\$418.78	\$337,635,286	\$354,279,837	4.9	\$367,980,514	3.9
Tennessee	\$344.94	\$369.64	\$2,468,581,689	\$2,314,154,326	-6.3	\$2,503,072,912	8.2
Texas	\$392.66	\$408.38	\$10,823,241,646	\$11,110,432,088	2.7	\$11,691,284,027	5.2
Utah	\$231.92	\$237.88	\$582,589,808	\$719,202,037	23.4	\$750,177,876	4.3
Vermont	\$1,043.56	\$1,081.69	\$417,120,049	\$651,538,323	56.2	\$675,364,094	3.7
Virginia	NA	NA	\$3,210,720,684	NA	NA	NA	NA
Washington	\$453.83	\$473.26	\$3,156,146,426	\$3,368,947,669	6.7	\$3,560,712,467	5.7
West Virginia	\$756.87	\$765.94	\$1,397,967,740	\$1,375,227,445	-1.6	\$1,381,973,156	0.5
Wisconsin	\$637.57	\$732.38	\$3,243,200,019	\$3,691,626,157	13.8	\$4,253,239,834	15.2
Wyoming	\$510.41	\$526.07	\$284,957,539	\$295,489,768	3.7	\$303,855,978	2.8

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$505.39	\$522.44	\$170,005,819,213	\$123,716,771,330	-27.2	\$128,766,166,201	4.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, MFP budget worksheet for proposed budget data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: **Total LTSS expenditures include expenditures from Tables C.7 and C.15.** Excludes FY 2017 and 2018 data for California, Illinois, New York, and Virginia. Includes data for all other states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) are included in the United States total but not reported separately. Data for North Carolina includes MLTSS expenditures not able to be reported in Tables C7 and C15. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; NA. = not available.

Table C.7. Total institutional expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$205.50	\$208.50	\$1,032,698,377	\$1,001,693,879	-3.0	\$1,019,064,970	1.7
Alaska	\$281.35	\$272.32	\$194,186,949	\$208,115,329	7.2	\$200,195,418	-3.8
Arizona	\$76.94	\$77.16	\$517,309,613	\$541,963,326	4.8	\$552,306,118	1.9
Arkansas	\$338.15	\$325.35	\$1,000,356,410	\$1,014,917,292	1.5	\$979,225,237	-3.5
California	NA	NA	\$4,055,962,923	NA	NA	NA	NA
Colorado	\$148.71	\$145.68	\$787,778,589	\$834,562,410	5.9	\$829,110,824	-0.7
Connecticut	\$462.48	\$453.71	\$1,624,578,550	\$1,652,589,464	1.7	\$1,620,446,209	-1.9
Delaware	\$374.61	\$328.34	\$313,950,919	\$358,438,443	14.2	\$317,005,377	-11.6
District of Columbia	\$491.83	\$507.77	\$358,264,940	\$341,775,473	-4.6	\$356,225,529	4.2
Florida	\$195.57	\$201.68	\$4,096,640,292	\$4,099,956,572	0.1	\$4,284,466,306	4.5
Georgia	\$137.69	\$144.03	\$1,379,036,317	\$1,433,405,637	3.9	\$1,513,915,646	5.6
Hawaii	\$211.93	\$221.04	\$305,748,050	\$301,868,470	-1.3	\$314,013,399	4.0
Idaho	\$180.30	\$169.08	\$292,379,956	\$309,696,043	5.9	\$295,976,962	-4.4
Illinois	NA	NA	\$2,152,429,085	NA	NA	NA	NA
Indiana	\$414.84	\$409.55	\$2,620,248,932	\$2,762,068,970	5.4	\$2,742,139,873	-0.7
Iowa	\$234.83	\$371.36	\$1,055,801,962	\$737,744,315	-30.1	\$1,169,261,329	58.5
Kansas	\$187.66	\$197.19	\$508,585,384	\$545,864,561	7.3	\$574,088,480	5.2
Kentucky	\$265.49	\$268.09	\$1,133,779,553	\$1,182,054,859	4.3	\$1,195,979,858	1.2
Louisiana	\$318.57	\$321.49	\$1,458,401,123	\$1,487,892,453	2.0	\$1,498,031,092	0.7
Maine	\$360.12	\$372.01	\$478,402,883	\$480,616,040	0.5	\$498,142,912	3.6
Maryland	\$230.57	\$231.19	\$1,382,501,137	\$1,388,933,922	0.5	\$1,395,419,231	0.5
Massachusetts	\$302.38	\$293.55	\$1,984,052,752	\$2,074,254,168	4.5	\$2,020,407,726	-2.6
Michigan	\$215.70	\$226.08	\$1,899,602,245	\$2,151,247,102	13.2	\$2,257,174,215	4.9
Minnesota	\$237.36	\$248.69	\$1,174,292,620	\$1,321,188,686	12.5	\$1,394,240,901	5.5
Mississippi	\$372.64	\$360.86	\$1,074,196,903	\$1,113,650,841	3.7	\$1,075,738,957	-3.4
Missouri	\$242.78	\$222.53	\$1,459,600,494	\$1,482,607,607	1.6	\$1,362,250,459	-8.1

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$185.86	\$207.21	\$201,023,845	\$195,618,803	-2.7	\$219,781,491	12.4
Nebraska	\$219.65	\$233.21	\$420,782,542	\$420,830,258	0.0	\$449,072,461	6.7
Nevada	\$104.83	\$110.58	\$303,583,384	\$311,343,687	2.6	\$334,778,444	7.5
New Hampshire	\$285.51	\$322.69	\$390,911,538	\$385,097,151	-1.5	\$436,748,735	13.4
New Jersey	\$311.27	\$300.04	\$2,579,515,430	\$2,765,793,570	7.2	\$2,666,195,326	-3.6
New Mexico	\$118.00	\$121.05	\$303,264,597	\$246,828,997	-18.6	\$253,321,921	2.6
New York	NA	NA	\$10,604,413,895	NA	NA	NA	NA
North Carolina	NA	NA	\$2,024,094,000	NA	NA	NA	NA
North Dakota	\$498.89	\$490.08	\$344,492,933	\$376,633,913	9.3	\$371,517,517	-1.4
Ohio	\$323.56	\$325.03	\$3,616,877,932	\$3,772,583,058	4.3	\$3,795,136,109	0.6
Oklahoma	\$173.75	\$173.94	\$722,499,168	\$683,063,377	-5.5	\$685,384,120	0.3
Oregon	\$108.87	\$114.59	\$432,911,166	\$451,105,562	4.2	\$479,197,055	6.2
Pennsylvania	\$398.92	\$385.09	\$5,070,307,997	\$5,101,247,394	0.6	\$4,929,569,424	-3.4
Rhode Island	\$301.58	\$338.24	\$380,642,890	\$318,371,176	-16.4	\$357,956,860	12.4
South Carolina	\$166.37	\$168.29	\$822,604,890	\$835,365,350	1.6	\$855,597,936	2.4
South Dakota	\$211.63	\$210.07	\$176,604,177	\$184,723,646	4.6	\$184,590,530	-0.1
Tennessee	\$177.27	\$177.14	\$1,148,159,286	\$1,189,263,090	3.6	\$1,199,544,951	0.9
Texas	\$150.74	\$161.43	\$4,542,802,385	\$4,265,260,923	-6.1	\$4,621,519,362	8.4
Utah	\$120.24	\$115.58	\$277,380,571	\$372,866,736	34.4	\$364,499,845	-2.2
Vermont	\$473.86	\$477.78	\$123,753,591	\$295,854,213	139.1	\$298,304,152	0.8
Virginia	NA	NA	\$1,369,474,121	NA	NA	NA	NA
Washington	\$138.78	\$142.13	\$994,983,116	\$1,030,221,524	3.5	\$1,069,395,139	3.8
West Virginia	\$431.30	\$448.58	\$773,924,858	\$783,678,903	1.3	\$809,361,895	3.3
Wisconsin	\$176.39	\$181.05	\$1,047,214,586	\$1,021,346,559	-2.5	\$1,051,426,070	2.9
Wyoming	\$259.01	\$261.63	\$143,689,355	\$149,946,924	4.4	\$151,117,809	0.8

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$230.19	\$233.17	\$73,156,699,212	\$53,984,899,253	-26.2	\$55,049,387,032	2.0

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: **Total institutional expenditures include expenditures from Tables C.8, C.9, C.12, C.13, and C.14.** Excludes FY 2017 and 2018 data for California, Illinois, North Carolina, New York, and Virginia. Includes data for all other states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) are included in the United States total but not reported separately. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and support; MLTSS = managed long-term services and supports; NA. = not available.

Table C.8. Nursing facility expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$188.67	\$190.28	\$952,331,168	\$919,669,775	-3.4	\$930,026,899	1.1
Alaska	\$230.52	\$224.36	\$154,253,437	\$170,517,380	10.5	\$164,932,121	-3.3
Arizona	\$47.72	\$53.62	\$454,948,916	\$336,134,751	-26.1	\$383,784,622	14.2
Arkansas	\$236.45	\$231.42	\$705,847,997	\$709,660,573	0.5	\$696,503,430	-1.9
California	\$72.59	\$62.08	\$2,820,842,472	\$2,856,846,228	1.3	\$2,449,859,404	-14.2
Colorado	\$137.02	\$141.14	\$738,595,588	\$768,948,983	4.1	\$803,244,072	4.5
Connecticut	\$329.14	\$330.41	\$1,214,232,226	\$1,176,115,402	-3.1	\$1,180,066,259	0.3
Delaware	\$276.61	\$275.54	\$261,526,720	\$264,665,418	1.2	\$266,027,736	0.5
District of Columbia	\$353.76	\$358.56	\$252,675,111	\$245,832,643	-2.7	\$251,543,952	2.3
Florida	\$163.07	\$160.99	\$3,612,402,206	\$3,418,584,985	-5.4	\$3,420,057,932	0.0
Georgia	\$132.51	\$140.01	\$1,323,911,950	\$1,379,510,863	4.2	\$1,471,704,816	6.7
Hawaii	\$178.01	\$186.36	\$296,185,760	\$253,561,463	-14.4	\$264,735,445	4.4
Idaho	\$150.95	\$141.03	\$241,299,856	\$259,291,349	7.5	\$246,878,619	-4.8
Illinois	\$83.84	\$68.77	\$1,262,342,623	\$1,071,352,718	-15.1	\$874,908,728	-18.3
Indiana	\$366.28	\$361.29	\$2,299,561,172	\$2,438,743,246	6.1	\$2,419,026,918	-0.8
Iowa	\$148.17	\$267.84	\$680,736,964	\$465,490,123	-31.6	\$843,323,510	81.2
Kansas	\$163.02	\$165.73	\$433,531,478	\$474,172,127	9.4	\$482,493,349	1.8
Kentucky	\$224.45	\$224.54	\$961,739,193	\$999,322,552	3.9	\$1,001,722,975	0.2
Louisiana	\$223.96	\$225.23	\$998,319,577	\$1,046,036,326	4.8	\$1,049,495,568	0.3
Maine	\$227.99	\$231.18	\$306,868,589	\$304,276,619	-0.8	\$309,568,202	1.7
Maryland	\$198.62	\$199.70	\$1,204,218,601	\$1,196,443,340	-0.6	\$1,205,338,358	0.7
Massachusetts	\$209.03	\$199.89	\$1,729,976,351	\$1,433,920,660	-17.1	\$1,375,743,042	-4.1
Michigan	\$191.12	\$207.51	\$1,753,245,857	\$1,906,081,926	8.7	\$2,071,757,066	8.7
Minnesota	\$188.90	\$197.65	\$913,647,308	\$1,051,459,953	15.1	\$1,108,066,951	5.4
Mississippi	\$267.86	\$260.90	\$756,836,230	\$800,498,405	5.8	\$777,755,437	-2.8
Missouri	\$187.62	\$168.72	\$1,122,595,474	\$1,145,750,512	2.1	\$1,032,852,053	-9.9

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$160.66	\$173.07	\$166,196,104	\$169,091,938	1.7	\$183,571,275	8.6
Nebraska	\$179.93	\$193.78	\$345,919,881	\$344,738,985	-0.3	\$373,145,660	8.2
Nevada	\$83.73	\$91.58	\$232,985,238	\$248,666,035	6.7	\$277,252,882	11.5
New Hampshire	\$253.41	\$292.00	\$344,107,198	\$341,799,086	-0.7	\$395,206,756	15.6
New Jersey	\$203.91	\$197.44	\$1,690,882,050	\$1,811,844,704	7.2	\$1,754,460,475	-3.2
New Mexico	\$103.68	\$105.97	\$273,604,347	\$216,882,559	-20.7	\$221,760,688	2.2
New York	\$334.09	\$281.14	\$8,349,922,164	\$6,544,584,872	-21.6	\$5,490,686,444	-16.1
North Carolina	\$104.34	\$125.63	\$1,406,786,638	\$1,071,354,525	-23.8	\$1,304,243,089	21.7
North Dakota	\$332.87	\$337.44	\$235,384,769	\$251,296,543	6.8	\$255,805,607	1.8
Ohio	\$258.29	\$258.15	\$2,830,043,314	\$3,011,584,997	6.4	\$3,014,217,545	0.1
Oklahoma	\$138.42	\$140.12	\$556,457,033	\$544,157,636	-2.2	\$552,114,540	1.5
Oregon	\$102.40	\$108.65	\$406,536,766	\$424,289,607	4.4	\$454,364,014	7.1
Pennsylvania	\$314.60	\$305.24	\$4,068,296,066	\$4,023,034,456	-1.1	\$3,907,309,426	-2.9
Rhode Island	\$288.85	\$327.20	\$365,053,912	\$304,930,404	-16.5	\$346,273,174	13.6
South Carolina	\$120.91	\$125.69	\$606,367,267	\$607,108,657	0.1	\$639,048,004	5.3
South Dakota	\$170.95	\$169.56	\$142,648,798	\$149,217,807	4.6	\$148,992,810	-0.2
Tennessee	\$141.10	\$143.15	\$906,811,062	\$946,631,793	4.4	\$969,385,277	2.4
Texas	\$104.39	\$105.53	\$3,050,601,417	\$2,953,849,358	-3.2	\$3,021,254,809	2.3
Utah	\$92.45	\$87.60	\$190,228,058	\$286,677,554	50.7	\$276,236,782	-3.6
Vermont	\$199.93	\$199.14	\$122,692,426	\$124,822,583	1.7	\$124,335,825	-0.4
Virginia	\$96.72	\$30.05	\$971,613,578	\$818,635,407	-15.7	\$255,478,995	-68.8
Washington	\$86.82	\$88.80	\$633,515,605	\$644,460,499	1.7	\$668,139,168	3.7
West Virginia	\$353.09	\$377.13	\$635,469,033	\$641,565,149	1.0	\$680,459,641	6.1
Wisconsin	\$151.49	\$154.80	\$898,570,428	\$877,166,257	-2.4	\$898,986,422	2.5
Wyoming	\$200.52	\$214.32	\$115,395,113	\$116,088,724	0.6	\$123,789,211	6.6

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$167.91	\$163.52	\$56,998,761,090	\$54,568,117,032	-4.3	\$53,418,478,836	-2.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) are included in the United States total but not reported separately. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.9. Total ICF/IID expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0.39	\$0.42	\$2,055,858	\$1,887,446	-8.2	\$2,033,302	7.7
Alaska	\$3.84	\$3.62	\$2,831,980	\$2,840,955	0.3	\$2,664,089	-6.2
Arizona	\$0	\$0	\$31,022,504	\$0	-100.0	\$0	0.0
Arkansas	\$63.85	\$56.93	\$178,966,959	\$191,631,554	7.1	\$171,344,670	-10.6
California	\$15.58	\$18.84	\$709,216,457	\$613,390,265	-13.5	\$743,481,449	21.2
Colorado	\$10.55	\$3.32	\$42,081,575	\$59,226,741	40.7	\$18,867,061	-68.1
Connecticut	\$78.28	\$71.46	\$238,259,887	\$279,701,192	17.4	\$255,226,524	-8.8
Delaware	\$75.71	\$33.90	\$46,511,960	\$72,444,093	55.8	\$32,730,278	-54.8
District of Columbia	\$117.15	\$131.39	\$92,699,937	\$81,410,055	-12.2	\$92,177,822	13.2
Florida	\$15.98	\$15.88	\$333,760,079	\$334,904,104	0.3	\$337,426,972	0.8
Georgia	\$3.85	\$3.20	\$42,488,373	\$40,118,442	-5.6	\$33,587,180	-16.3
Hawaii	\$6.41	\$5.72	\$9,562,290	\$9,128,492	-4.5	\$8,129,210	-10.9
Idaho	\$28.10	\$26.88	\$48,863,534	\$48,267,781	-1.2	\$47,055,641	-2.5
Illinois	\$54.27	\$59.76	\$724,570,598	\$693,470,327	-4.3	\$760,275,582	9.6
Indiana	\$40.86	\$40.92	\$269,911,281	\$272,075,444	0.8	\$273,961,017	0.7
Iowa	\$77.51	\$92.99	\$277,199,203	\$243,501,089	-12.2	\$292,784,099	20.2
Kansas	\$20.14	\$21.35	\$60,327,190	\$58,576,496	-2.9	\$62,164,961	6.1
Kentucky	\$32.29	\$34.90	\$133,323,123	\$143,775,480	7.8	\$155,706,387	8.3
Louisiana	\$80.33	\$77.99	\$384,108,189	\$375,179,291	-2.3	\$363,414,915	-3.1
Maine	\$58.36	\$59.45	\$77,368,296	\$77,883,194	0.7	\$79,606,659	2.2
Maryland	\$2.43	\$2.51	\$16,916,969	\$14,662,969	-13.3	\$15,129,746	3.2
Massachusetts	\$19.02	\$16.31	\$128,167,011	\$130,444,636	1.8	\$112,230,260	-14.0
Michigan	\$0	\$0	-\$33	\$115	448.5	\$0	-100.0
Minnesota	\$27.86	\$25.07	\$164,470,488	\$155,088,734	-5.7	\$140,557,848	-9.4
Mississippi	\$83.37	\$79.82	\$259,355,353	\$249,160,085	-3.9	\$237,952,589	-4.5
Missouri	\$17.37	\$15.83	\$106,563,964	\$106,046,935	-0.5	\$96,881,620	-8.6

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$3.88	\$10.17	\$9,564,365	\$4,081,109	-57.3	\$10,787,905	164.3
Nebraska	\$38.77	\$38.49	\$73,051,324	\$74,279,933	1.7	\$74,115,464	-0.2
Nevada	\$6.11	\$5.15	\$18,593,272	\$18,142,549	-2.4	\$15,587,077	-14.1
New Hampshire	\$2.85	\$2.65	\$3,756,988	\$3,847,042	2.4	\$3,587,926	-6.7
New Jersey	\$56.40	\$49.10	\$433,114,183	\$501,149,571	15.7	\$436,313,735	-12.9
New Mexico	\$12.90	\$13.69	\$27,296,566	\$26,981,266	-1.2	\$28,645,918	6.2
New York	\$49.50	\$51.82	\$1,207,062,576	\$969,636,954	-19.7	\$1,012,006,061	4.4
North Carolina	\$0.15	\$0.17	\$457,579,724	\$1,559,046	-99.7	\$1,807,292	15.9
North Dakota	\$135.65	\$119.23	\$91,737,620	\$102,409,291	11.6	\$90,386,966	-11.7
Ohio	\$57.25	\$58.87	\$693,379,180	\$667,466,954	-3.7	\$687,417,315	3.0
Oklahoma	\$18.77	\$18.31	\$89,602,603	\$73,790,853	-17.6	\$72,127,501	-2.3
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$54.98	\$49.87	\$621,070,021	\$703,127,677	13.2	\$638,419,012	-9.2
Rhode Island	\$8.41	\$7.45	\$10,146,055	\$8,882,509	-12.5	\$7,889,001	-11.2
South Carolina	\$32.09	\$28.96	\$146,297,662	\$161,144,786	10.1	\$147,257,493	-8.6
South Dakota	\$35.59	\$36.20	\$30,821,560	\$31,064,977	0.8	\$31,807,132	2.4
Tennessee	\$29.53	\$27.83	\$196,639,417	\$198,114,078	0.7	\$188,422,508	-4.9
Texas	\$35.53	\$45.53	\$1,193,630,467	\$1,005,309,868	-15.8	\$1,303,338,737	29.6
Utah	\$22.23	\$22.85	\$70,025,343	\$68,939,848	-1.6	\$72,057,917	4.5
Vermont	\$0	\$0	\$1,059,250	\$0	-100.0	\$0	0.0
Virginia	\$23.38	\$24.20	\$243,049,588	\$197,896,918	-18.6	\$205,733,421	4.0
Washington	\$28.79	\$28.98	\$196,893,832	\$213,726,214	8.5	\$218,028,742	2.0
West Virginia	\$37.92	\$38.23	\$68,403,117	\$68,899,448	0.7	\$68,975,907	0.1
Wisconsin	\$21.17	\$22.69	\$130,999,540	\$122,604,661	-6.4	\$131,774,818	7.5
Wyoming	\$32.12	\$25.04	\$16,498,796	\$18,596,616	12.7	\$14,464,323	-22.2

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$29.22	\$29.99	\$10,410,876,074	\$9,496,468,084	-8.8	\$9,796,342,052	3.2

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Total ICF/IID expenditures include expenditures for both public and private providers; breakouts for public and private expenditures are presented in Tables C.10 and C.11. Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any ICF/IID expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; ICF/IID = Intermediate Care Facility for Individuals with Intellectual Disabilities; MLTSS = managed long-term services and supports.

Table C.10. ICF/IID expenditures for public providers by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$31,022,504	\$0	-100.0	\$0	0.0
Arkansas	\$54.62	\$48.16	\$150,485,520	\$163,936,080	8.9	\$144,943,934	-11.6
California	\$6.83	\$8.63	\$336,587,674	\$268,673,739	-20.2	\$340,522,351	26.7
Colorado	\$10.25	\$3.32	\$38,322,111	\$57,526,016	50.1	\$18,867,061	-67.2
Connecticut	\$60.19	\$53.08	\$170,297,506	\$215,059,594	26.3	\$189,562,361	-11.9
Delaware	\$64.07	\$21.31	\$35,752,607	\$61,307,194	71.5	\$20,577,819	-66.4
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$3.84	\$3.53	\$85,123,217	\$80,541,753	-5.4	\$75,059,849	-6.8
Georgia	\$3.10	\$2.48	\$35,592,231	\$32,231,052	-9.4	\$26,102,387	-19.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$4.93	\$4.06	\$11,229,803	\$8,464,922	-24.6	\$7,105,292	-16.1
Illinois	\$30.57	\$32.31	\$396,016,540	\$390,604,076	-1.4	\$411,133,268	5.3
Indiana	\$0	\$0	\$0	\$1	100.0	\$0	-100.0
Iowa	\$0.79	\$0.68	\$180,576,245	\$2,477,890	-98.6	\$2,131,658	-14.0
Kansas	\$15.61	\$16.41	\$60,220,530	\$45,398,309	-24.6	\$47,777,318	5.2
Kentucky	\$24.81	\$26.73	\$100,706,897	\$110,477,761	9.7	\$119,258,244	7.9
Louisiana	\$27.68	\$26.85	\$128,113,986	\$129,269,686	0.9	\$125,094,292	-3.2
Maine	\$1.17	\$1.16	\$1,562,851	\$1,564,976	0.1	\$1,551,808	-0.8
Maryland	\$2.43	\$2.51	\$16,916,969	\$14,662,969	-13.3	\$15,129,746	3.2
Massachusetts	\$19.02	\$16.31	\$128,167,011	\$130,444,636	1.8	\$112,230,260	-14.0
Michigan	\$0	\$0	-\$33	\$115	448.5	\$0	-100.0
Minnesota	\$1.22	\$0.33	\$8,734,998	\$6,791,778	-22.2	\$1,869,108	-72.5
Mississippi	\$66.11	\$62.33	\$208,841,812	\$197,567,409	-5.4	\$185,810,540	-6.0
Missouri	\$16.29	\$14.84	\$99,834,337	\$99,480,374	-0.4	\$90,855,318	-8.7

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$3.51	\$9.72	\$7,833,230	\$3,694,703	-52.8	\$10,312,980	179.1
Nebraska	\$21.26	\$20.29	\$42,309,611	\$40,726,548	-3.7	\$39,064,339	-4.1
Nevada	\$3.61	\$2.74	\$11,674,173	\$10,707,116	-8.3	\$8,281,101	-22.7
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$55.19	\$47.87	\$422,642,211	\$490,367,646	16.0	\$425,358,902	-13.3
New Mexico	\$0.17	\$0.07	\$1,001,253	\$353,487	-64.7	\$146,317	-58.6
New York	-\$2.06	\$7.33	\$244,057,515	-\$40,437,747	-116.6	\$143,185,517	454.1
North Carolina	\$0	\$0	\$455,407,496	\$0	-100.0	\$37,606	100.0
North Dakota	\$45.79	\$34.38	\$15,604,945	\$34,566,260	121.5	\$26,060,729	-24.6
Ohio	\$12.04	\$17.25	\$156,152,673	\$140,399,006	-10.1	\$201,457,797	43.5
Oklahoma	\$3.30	\$2.48	\$29,056,252	\$12,989,638	-55.3	\$9,770,684	-24.8
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$25.28	\$24.94	\$327,877,618	\$323,297,035	-1.4	\$319,219,212	-1.3
Rhode Island	\$2.50	\$1.25	\$4,278,982	\$2,637,441	-38.4	\$1,320,653	-49.9
South Carolina	\$25.09	\$35.88	\$146,297,662	\$125,973,026	-13.9	\$182,429,253	44.8
South Dakota	\$35.59	\$36.20	\$30,821,560	\$31,064,977	0.8	\$31,807,132	2.4
Tennessee	\$11.16	\$8.73	\$80,795,757	\$74,841,334	-7.4	\$59,118,867	-21.0
Texas	\$28.68	\$36.38	\$925,502,659	\$811,477,814	-12.3	\$1,041,588,264	28.4
Utah	\$11.44	\$10.60	\$35,480,042	\$35,466,269	0.0	\$33,437,913	-5.7
Vermont	\$0	\$0	\$1,059,250	\$0	-100.0	\$0	0.0
Virginia	\$10.48	\$10.55	\$134,805,184	\$88,720,488	-34.2	\$89,655,348	1.1
Washington	\$27.98	\$28.23	\$190,380,616	\$207,689,851	9.1	\$212,432,562	2.3
West Virginia	\$0.02	\$0	\$35,495	\$35,495	0.0	\$0	-100.0
Wisconsin	\$19.49	\$20.69	\$130,423,541	\$112,858,154	-13.5	\$120,150,692	6.5
Wyoming	\$32.12	\$25.04	\$16,498,796	\$18,596,616	12.7	\$14,464,323	-22.2

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$13.98	\$15.01	\$5,634,101,837	\$4,542,505,487	-19.4	\$4,904,882,805	8.0

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, CMS-64 Supplemental Feeder Form (4C) data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any ICF/IID expenditures. CMS-64 Supplemental Feeder Form (4C) data were used to assign supplemental ICF/IID expenditures by provider type. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; ICF/IID = Intermediate Care Facility for Individuals with Intellectual Disabilities.

Table C.11. ICF/IID expenditures for private providers by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0.39	\$0.42	\$2,055,858	\$1,887,446	-8.2	\$2,033,302	7.7
Alaska	\$3.84	\$3.62	\$2,831,980	\$2,840,955	0.3	\$2,664,089	-6.2
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$9.23	\$8.77	\$28,481,439	\$27,695,474	-2.8	\$26,400,736	-4.7
California	\$8.76	\$10.21	\$372,628,783	\$344,716,526	-7.5	\$402,959,098	16.9
Colorado	\$0.30	\$0	\$3,759,464	\$1,700,725	-54.8	\$0	-100.0
Connecticut	\$18.09	\$18.39	\$67,962,381	\$64,641,598	-4.9	\$65,664,163	1.6
Delaware	\$11.64	\$12.59	\$10,759,353	\$11,136,899	3.5	\$12,152,459	9.1
District of Columbia	\$117.15	\$131.39	\$92,699,937	\$81,410,055	-12.2	\$92,177,822	13.2
Florida	\$12.13	\$12.35	\$248,636,862	\$254,362,351	2.3	\$262,367,123	3.1
Georgia	\$0.76	\$0.71	\$6,896,142	\$7,887,390	14.4	\$7,484,793	-5.1
Hawaii	\$6.41	\$5.72	\$9,562,290	\$9,128,492	-4.5	\$8,129,210	-10.9
Idaho	\$23.13	\$22.76	\$37,633,731	\$39,728,475	5.6	\$39,842,328	0.3
Illinois	\$23.70	\$27.44	\$328,554,058	\$302,866,251	-7.8	\$349,142,314	15.3
Indiana	\$40.86	\$40.92	\$269,911,281	\$272,075,443	0.8	\$273,961,017	0.7
Iowa	\$1.59	\$3.36	\$96,622,958	\$4,990,877	-94.8	\$10,569,161	111.8
Kansas	\$0.01	-\$0.02	\$106,660	\$32,588	-69.4	-\$63,806	-295.8
Kentucky	\$7.48	\$8.17	\$32,616,226	\$33,297,719	2.1	\$36,448,143	9.5
Louisiana	\$52.65	\$51.15	\$255,994,203	\$245,909,605	-3.9	\$238,320,623	-3.1
Maine	\$57.18	\$58.29	\$75,805,445	\$76,318,218	0.7	\$78,054,851	2.3
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$26.64	\$24.74	\$155,735,490	\$148,296,956	-4.8	\$138,688,740	-6.5
Mississippi	\$17.26	\$17.49	\$50,513,541	\$51,592,676	2.1	\$52,142,049	1.1
Missouri	\$1.08	\$0.98	\$6,729,627	\$6,566,561	-2.4	\$6,026,302	-8.2

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0.37	\$0.45	\$1,731,135	\$386,406	-77.7	\$474,925	22.9
Nebraska	\$17.51	\$18.20	\$30,741,713	\$33,553,385	9.1	\$35,051,125	4.5
Nevada	\$2.50	\$2.41	\$6,919,099	\$7,435,433	7.5	\$7,305,976	-1.7
New Hampshire	\$2.85	\$2.65	\$3,756,988	\$3,847,042	2.4	\$3,587,926	-6.7
New Jersey	\$1.21	\$1.23	\$10,471,972	\$10,781,925	3.0	\$10,954,833	1.6
New Mexico	\$12.73	\$13.62	\$26,295,313	\$26,627,779	1.3	\$28,499,601	7.0
New York	\$51.56	\$44.49	\$963,005,061	\$1,010,074,701	4.9	\$868,820,544	-14.0
North Carolina	\$0.15	\$0.17	\$2,172,228	\$1,559,046	-28.2	\$1,769,686	13.5
North Dakota	\$89.87	\$84.85	\$76,132,675	\$67,843,031	-10.9	\$64,326,237	-5.2
Ohio	\$45.20	\$41.62	\$537,226,507	\$527,067,948	-1.9	\$485,959,518	-7.8
Oklahoma	\$15.47	\$15.83	\$60,546,351	\$60,801,215	0.4	\$62,356,817	2.6
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$29.70	\$24.94	\$293,192,403	\$379,830,642	29.5	\$319,199,800	-16.0
Rhode Island	\$5.92	\$6.21	\$5,867,073	\$6,245,068	6.4	\$6,568,348	5.2
South Carolina	\$7.00	-\$6.92	\$0	\$35,171,760	100.0	-\$35,171,760	-200.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$18.37	\$19.09	\$115,843,660	\$123,272,744	6.4	\$129,303,641	4.9
Texas	\$6.85	\$9.14	\$268,127,808	\$193,832,054	-27.7	\$261,750,473	35.0
Utah	\$10.79	\$12.25	\$34,545,301	\$33,473,579	-3.1	\$38,620,004	15.4
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$12.90	\$13.65	\$108,244,404	\$109,176,430	0.9	\$116,078,073	6.3
Washington	\$0.81	\$0.74	\$6,513,216	\$6,036,363	-7.3	\$5,596,180	-7.3
West Virginia	\$37.90	\$38.23	\$68,367,622	\$68,863,953	0.7	\$68,975,907	0.2
Wisconsin	\$0.09	\$0.09	\$575,999	\$528,904	-8.2	\$529,854	0.2
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$14.45	\$14.04	\$4,776,774,237	\$4,695,492,688	-1.7	\$4,585,722,225	-2.3

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, CMS-64 Supplemental Feeder Form (4C) data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any ICF/IID expenditures. CMS-64 Supplemental Feeder Form (4C) data were used to assign supplemental ICF/IID expenditures by provide type. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; ICF/IID = Intermediate Care Facility for Individuals with Intellectual Disabilities.

Table C.12. Mental health facility expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$16.44	\$17.64	\$78,311,351	\$80,136,658	2.3	\$86,201,019	7.6
Alaska	\$27.04	\$23.79	\$18,849,046	\$20,000,244	6.1	\$17,488,296	-12.6
Arizona	\$0.51	\$0.71	\$2,863,293	\$3,614,570	26.2	\$5,093,236	40.9
Arkansas	\$37.59	\$36.74	\$114,722,103	\$112,805,814	-1.7	\$110,571,314	-2.0
California	\$13.75	\$17.14	\$525,773,216	\$541,345,562	3.0	\$676,201,616	24.9
Colorado	\$1.14	\$1.23	\$7,101,426	\$6,386,686	-10.1	\$6,999,691	9.6
Connecticut	\$25.52	\$22.28	\$66,512,711	\$91,199,144	37.1	\$79,579,701	-12.7
Delaware	\$9.79	\$13.04	-\$9,388	\$9,362,932	99,833.0	\$12,586,825	34.4
District of Columbia	\$11.80	\$8.49	\$6,291,245	\$8,198,773	30.3	\$5,958,619	-27.3
Florida	\$1.50	\$10.31	\$32,251,895	\$31,435,386	-2.5	\$219,013,117	596.7
Georgia	\$1.32	\$0.82	\$12,635,994	\$13,776,332	9.0	\$8,623,650	-37.4
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$1.24	\$1.17	\$2,216,566	\$2,136,912	-3.6	\$2,042,702	-4.4
Illinois	\$4.21	\$7.79	\$76,125,335	\$53,793,206	-29.3	\$99,080,550	84.2
Indiana	\$7.70	\$7.34	\$50,775,729	\$51,250,280	0.9	\$49,151,938	-4.1
Iowa	\$9.15	\$10.53	\$18,864,449	\$28,753,103	52.4	\$33,153,720	15.3
Kansas	\$0.05	\$0.02	\$123,016	\$157,601	28.1	\$62,901	-60.1
Kentucky	\$0.20	\$0.25	\$1,274,164	\$875,031	-31.3	\$1,107,423	26.6
Louisiana	\$1.51	\$1.61	\$6,635,973	\$7,047,211	6.2	\$7,507,311	6.5
Maine	\$42.23	\$48.93	\$51,833,357	\$56,356,679	8.7	\$65,522,721	16.3
Maryland	\$18.29	\$20.09	\$106,673,132	\$110,191,984	3.3	\$121,258,464	10.0
Massachusetts	\$26.18	\$29.85	\$125,909,390	\$179,618,621	42.7	\$205,433,150	14.4
Michigan	\$4.70	\$4.53	\$42,943,174	\$46,854,884	9.1	\$45,229,290	-3.5
Minnesota	\$18.04	\$25.31	\$86,053,486	\$100,424,775	16.7	\$141,918,665	41.3
Mississippi	\$21.41	\$20.14	\$58,005,320	\$63,992,351	10.3	\$60,030,931	-6.2
Missouri	\$3.92	\$4.07	\$23,206,438	\$23,938,819	3.2	\$24,918,893	4.1

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$21.33	\$23.97	\$25,263,376	\$22,445,756	-11.2	\$25,422,311	13.3
Nebraska	\$0	\$0	\$0	\$3	100.0	\$0	-100.0
Nevada	\$15.00	\$13.85	\$52,004,874	\$44,535,103	-14.4	\$41,938,485	-5.8
New Hampshire	\$1.31	\$1.05	\$1,788,486	\$1,761,597	-1.5	\$1,418,697	-19.5
New Jersey	\$10.74	\$13.28	\$98,148,737	\$95,428,836	-2.8	\$118,050,657	23.7
New Mexico	\$1.42	\$1.39	\$2,363,684	\$2,965,172	25.4	\$2,915,315	-1.7
New York	\$24.28	\$20.40	\$442,429,155	\$475,603,679	7.5	\$398,513,702	-16.2
North Carolina	-\$32.70	\$0.46	\$7,711	-\$335,780,892	-4,354,670.0	\$4,761,173	101.4
North Dakota	\$29.06	\$32.43	\$16,382,066	\$21,939,601	33.9	\$24,583,584	12.1
Ohio	\$0.01	\$0.01	\$22,680	\$98,349	333.6	\$68,491	-30.4
Oklahoma	\$15.73	\$14.69	\$72,638,420	\$61,841,640	-14.9	\$57,868,831	-6.4
Oregon	\$1.65	\$1.16	\$6,399,308	\$6,840,866	6.9	\$4,857,953	-29.0
Pennsylvania	\$6.09	\$6.96	\$89,178,605	\$77,882,407	-12.7	\$89,082,112	14.4
Rhode Island	\$4.32	\$3.59	\$5,442,923	\$4,558,263	-16.3	\$3,794,685	-16.8
South Carolina	\$1.24	\$1.65	\$9,036,910	\$6,208,856	-31.3	\$8,389,388	35.1
South Dakota	\$4.23	\$3.46	\$2,382,520	\$3,689,563	54.9	\$3,039,289	-17.6
Tennessee	\$6.64	\$6.16	\$44,708,807	\$44,517,219	-0.4	\$41,737,166	-6.2
Texas	\$0.36	\$0.16	\$15,287,076	\$10,232,721	-33.1	\$4,458,617	-56.4
Utah	\$5.26	\$5.14	\$16,192,584	\$16,314,748	0.8	\$16,205,146	-0.7
Vermont	\$0	\$0	\$1,915	\$0	-100.0	\$0	0.0
Virginia	\$15.91	\$13.69	\$147,726,963	\$134,682,365	-8.8	\$116,387,622	-13.6
Washington	\$5.14	\$6.11	\$31,877,281	\$38,144,145	19.7	\$45,988,109	20.6
West Virginia	\$29.90	\$22.76	\$51,165,664	\$54,328,805	6.2	\$41,061,442	-24.4
Wisconsin	\$3.73	\$3.56	\$17,644,618	\$21,575,640	22.3	\$20,664,830	-4.2
Wyoming	\$26.36	\$22.27	\$11,795,446	\$15,261,584	29.4	\$12,864,275	-15.7

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$7.60	\$9.70	\$2,675,832,230	\$2,468,729,584	-7.7	\$3,168,807,622	28.4

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any mental health facility expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.13. Mental health facility DSH payments by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0.16	\$0	\$0	0.0	\$803,750	100.0
Alaska	\$19.95	\$20.56	\$18,252,486	\$14,756,750	-19.2	\$15,110,912	2.4
Arizona	\$4.04	\$3.98	\$28,474,900	\$28,474,900	0.0	\$28,474,900	0.0
Arkansas	\$0.27	\$0.27	\$819,351	\$819,351	0.0	\$805,823	-1.7
California	-\$0.01	\$0	\$130,778	-\$229,724	-275.7	-\$1,237	99.5
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$29.55	\$29.56	\$105,573,726	\$105,573,726	0.0	\$105,573,725	0.0
Delaware	\$12.51	\$5.86	\$5,921,627	\$11,966,000	102.1	\$5,660,538	-52.7
District of Columbia	\$9.11	\$9.33	\$6,598,647	\$6,334,002	-4.0	\$6,545,136	3.3
Florida	\$5.66	\$5.51	\$118,226,112	\$118,567,327	0.3	\$117,127,905	-1.2
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$6.97	\$7.02	\$89,390,529	\$89,041,250	-0.4	\$89,298,594	0.3
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$4.45	\$10.09	\$14,603,700	\$12,958,337	-11.3	\$29,367,269	126.6
Kentucky	\$8.55	\$8.39	\$37,443,073	\$38,081,796	1.7	\$37,443,073	-1.7
Louisiana	\$12.77	\$16.66	\$69,337,384	\$59,629,625	-14.0	\$77,613,298	30.2
Maine	\$31.54	\$32.44	\$42,332,641	\$42,099,548	-0.6	\$43,445,330	3.2
Maryland	\$11.23	\$8.90	\$54,692,435	\$67,635,629	23.7	\$53,692,663	-20.6
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$19.88	\$14.04	\$103,413,247	\$198,310,177	91.8	\$140,187,859	-29.3
Minnesota	\$1.93	\$0	\$10,121,338	\$10,754,559	6.3	\$9,785	-99.9
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$33.88	\$33.91	\$207,234,618	\$206,871,341	-0.2	\$207,597,893	0.4

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0.95	\$0.94	\$1,811,337	\$1,811,337	0.0	\$1,811,337	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$27.94	\$26.99	\$41,258,866	\$37,689,426	-8.7	\$36,535,356	-3.1
New Jersey	\$40.22	\$40.22	\$357,370,460	\$357,370,459	0.0	\$357,370,459	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$26.24	\$27.53	\$605,000,000	\$514,000,000	-15.0	\$537,750,000	4.6
North Carolina	\$15.56	\$15.59	\$159,719,927	\$159,770,729	0.0	\$161,840,524	1.3
North Dakota	\$1.31	\$0.98	\$988,478	\$988,478	0.0	\$741,360	-25.0
Ohio	\$8.01	\$8.00	\$93,432,758	\$93,432,758	0.0	\$93,432,758	0.0
Oklahoma	\$0.83	\$0.83	\$3,801,112	\$3,273,248	-13.9	\$3,273,248	0.0
Oregon	\$4.82	\$4.78	\$19,975,092	\$19,975,089	0.0	\$19,975,088	0.0
Pennsylvania	\$23.24	\$23.03	\$291,763,305	\$297,202,854	1.9	\$294,758,874	-0.8
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$12.13	\$11.98	\$60,903,051	\$60,903,051	0.0	\$60,903,051	0.0
South Dakota	\$0.86	\$0.86	\$751,299	\$751,299	0.0	\$751,299	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$10.46	\$10.22	\$283,283,425	\$295,868,976	4.4	\$292,467,199	-1.1
Utah	\$0.30	\$0	\$934,586	\$934,586	0.0	\$0	-100.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$1.15	\$0.85	\$7,083,992	\$9,715,497	37.1	\$7,262,564	-25.2
Washington	\$18.04	\$18.24	\$132,696,398	\$133,890,666	0.9	\$137,239,120	2.5
West Virginia	\$10.39	\$10.46	\$18,887,044	\$18,885,501	0.0	\$18,864,905	-0.1
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$9.29	\$9.13	\$2,992,227,722	\$3,018,108,548	0.9	\$2,983,734,358	-1.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any mental health facility DSH payments. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; DSH = Disproportionate Share Hospital; FY = fiscal year.

Table C.14. Institutional MLTSS other expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$24.66	\$18.85	\$0	\$173,739,105	100.0	\$134,953,360	-22.3
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	NA	NA	\$0	NA	NA	NA	NA
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$9.37	\$8.98	\$0	\$196,464,770	100.0	\$190,840,380	-2.9
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$27.51	\$28.97	\$0	\$39,178,515	100.0	\$41,148,744	5.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	NA	NA	\$0	NA	NA	NA	NA
Indiana	\$0	\$0	\$750	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$79,001,346	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0.62	\$0.66	\$0	\$3,460,666	100.0	\$3,687,653	6.6
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	NA	NA	\$0	NA	NA	NA	NA
North Carolina	NA	NA	\$0	NA	NA	NA	NA
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	NA	NA	\$0	NA	NA	NA	NA
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	NA	NA	\$0	NA	NA	NA	NA
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$1.27	\$1.13	\$79,002,096	\$412,843,056	422.6	\$370,630,137	-10.2

Sources: Mathematica’s analysis of FY 2017 and 2018 state-submitted MLTSS data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Note: Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; MLTSS = managed long-term services and supports; NA = not available.

Table C.15. Total HCBS expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$158.10	\$156.23	\$777,339,853	\$770,633,504	-0.9	\$763,599,382	-0.9
Alaska	\$464.14	\$449.18	\$348,111,647	\$343,323,802	-1.4	\$330,211,733	-3.8
Arizona	\$214.43	\$233.92	\$1,225,862,655	\$1,510,473,045	23.2	\$1,674,390,340	10.9
Arkansas	\$366.51	\$351.70	\$1,088,208,368	\$1,100,014,547	1.1	\$1,058,511,880	-3.8
California	NA	NA	\$13,496,077,910	NA	NA	NA	NA
Colorado	\$243.25	\$179.91	\$1,554,184,175	\$1,365,097,218	-12.2	\$1,023,901,892	-25.0
Connecticut	\$552.20	\$566.76	\$1,836,298,483	\$1,973,180,197	7.5	\$2,024,197,792	2.6
Delaware	\$271.33	\$296.71	\$267,712,745	\$259,618,357	-3.0	\$286,464,793	10.3
District of Columbia	\$742.55	\$813.74	\$457,820,698	\$516,000,451	12.7	\$570,874,564	10.6
Florida	\$110.14	\$118.98	\$2,061,694,298	\$2,308,961,352	12.0	\$2,527,561,499	9.5
Georgia	\$128.45	\$135.58	\$1,224,052,109	\$1,337,175,948	9.2	\$1,425,141,877	6.6
Hawaii	\$167.80	\$184.45	\$216,934,074	\$239,006,095	10.2	\$262,032,777	9.6
Idaho	\$231.88	\$253.83	\$363,896,360	\$398,305,048	9.5	\$444,333,232	11.6
Illinois	NA	NA	\$2,090,160,973	NA	NA	NA	NA
Indiana	\$200.44	\$218.15	\$1,236,744,918	\$1,334,564,963	7.9	\$1,460,617,858	9.4
Iowa	\$280.60	\$263.94	\$1,072,878,245	\$881,534,520	-17.8	\$831,040,620	-5.7
Kansas	\$380.36	\$400.17	\$663,962,261	\$1,106,368,036	66.6	\$1,165,043,830	5.3
Kentucky	\$194.27	\$200.21	\$873,124,722	\$864,920,039	-0.9	\$893,184,594	3.3
Louisiana	\$170.38	\$167.14	\$796,273,068	\$795,759,420	-0.1	\$778,837,583	-2.1
Maine	\$455.79	\$504.39	\$553,313,869	\$608,307,104	9.9	\$675,403,024	11.0
Maryland	\$335.47	\$359.56	\$1,748,753,690	\$2,020,815,174	15.6	\$2,170,224,781	7.4
Massachusetts	\$719.87	\$720.82	\$4,980,697,694	\$4,938,164,478	-0.9	\$4,961,126,108	0.5
Michigan	\$162.81	\$168.61	\$1,252,417,890	\$1,623,680,691	29.6	\$1,683,366,612	3.7
Minnesota	\$796.08	\$854.05	\$3,661,189,938	\$4,431,157,586	21.0	\$4,788,018,243	8.1
Mississippi	\$171.18	\$174.46	\$398,215,793	\$511,564,295	28.5	\$520,083,298	1.7
Missouri	\$366.78	\$336.50	\$2,050,746,747	\$2,239,801,355	9.2	\$2,059,908,465	-8.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$290.83	\$264.67	\$279,998,301	\$306,091,940	9.3	\$280,722,511	-8.3
Nebraska	\$217.93	\$260.10	\$446,932,663	\$417,548,372	-6.6	\$500,853,938	20.0
Nevada	\$165.68	\$175.52	\$400,286,886	\$492,059,782	22.9	\$531,362,114	8.0
New Hampshire	\$269.25	\$281.68	\$289,844,689	\$363,158,305	25.3	\$381,237,322	5.0
New Jersey	\$206.80	\$157.23	\$1,634,684,081	\$1,837,489,698	12.4	\$1,397,142,673	-24.0
New Mexico	\$387.75	\$377.73	\$1,109,039,991	\$811,087,968	-26.9	\$790,483,300	-2.5
New York	NA	NA	\$16,616,120,687	NA	NA	NA	NA
North Carolina	NA	NA	\$1,658,960,387	NA	NA	NA	NA
North Dakota	\$347.79	\$350.49	\$250,451,018	\$262,559,301	4.8	\$265,702,176	1.2
Ohio	\$443.52	\$442.86	\$4,024,890,304	\$5,171,315,209	28.5	\$5,171,021,716	0.0
Oklahoma	\$166.60	\$160.34	\$645,810,667	\$654,972,564	1.4	\$631,764,138	-3.5
Oregon	\$522.21	\$574.65	\$1,893,648,522	\$2,163,856,860	14.3	\$2,403,110,664	11.1
Pennsylvania	\$442.99	\$547.28	\$4,710,427,827	\$5,664,817,951	20.3	\$7,005,659,926	23.7
Rhode Island	\$140.16	\$144.86	\$473,619,656	\$147,958,934	-68.8	\$153,298,588	3.6
South Carolina	\$146.62	\$150.35	\$793,556,300	\$736,205,789	-7.2	\$764,393,347	3.8
South Dakota	\$194.25	\$208.71	\$161,031,109	\$169,556,191	5.3	\$183,389,984	8.2
Tennessee	\$167.67	\$192.50	\$1,320,422,403	\$1,124,891,237	-14.8	\$1,303,527,961	15.9
Texas	\$241.92	\$246.95	\$6,280,439,261	\$6,845,171,164	9.0	\$7,069,764,665	3.3
Utah	\$111.68	\$122.30	\$305,209,237	\$346,335,301	13.5	\$385,678,031	11.4
Vermont	\$569.69	\$603.92	\$293,366,458	\$355,684,111	21.2	\$377,059,943	6.0
Virginia	NA	NA	\$1,841,246,563	NA	NA	NA	NA
Washington	\$315.05	\$331.12	\$2,161,163,310	\$2,338,726,145	8.2	\$2,491,317,328	6.5
West Virginia	\$325.56	\$317.36	\$624,042,882	\$591,548,542	-5.2	\$572,611,261	-3.2
Wisconsin	\$461.17	\$551.33	\$2,195,985,433	\$2,670,279,598	21.6	\$3,201,813,764	19.9
Wyoming	\$251.40	\$264.44	\$141,268,184	\$145,542,844	3.0	\$152,738,169	4.9

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$286.10	\$298.18	\$96,849,120,001	\$67,097,512,297	-30.7	\$70,396,100,687	4.9

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, MFP budget worksheet for proposed budget data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: **Total HCBS expenditures include expenditures from Tables C.16 to C.25, C.28, C.33, and C.34.** Excludes FY 2017 and 2018 data for California, Illinois, North Carolina, New York, and Virginia. Includes data for all other states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) are included in the United States total but not reported separately. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person; MLTSS = managed long-term services and supports; NA. = not available.

Table C.16. Total section 1915(c) waiver program expenditures across all LTSS targeted population subgroups by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$87.99	\$88.46	\$423,274,597	\$428,899,292	1.3	\$432,371,658	0.8
Alaska	\$368.89	\$364.25	\$272,716,730	\$272,865,149	0.1	\$267,774,405	-1.9
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$123.19	\$127.80	\$343,146,129	\$369,722,397	7.7	\$384,630,979	4.0
California	\$89.69	\$97.22	\$4,199,085,815	\$3,529,985,760	-15.9	\$3,836,292,300	8.7
Colorado	\$108.65	\$207.48	\$843,319,653	\$609,712,692	-27.7	\$1,180,817,501	93.7
Connecticut	\$430.64	\$438.28	\$1,403,389,466	\$1,538,814,315	9.6	\$1,565,308,402	1.7
Delaware	\$136.87	\$144.58	\$108,502,459	\$130,964,420	20.7	\$139,590,524	6.6
District of Columbia	\$420.39	\$478.95	\$249,350,445	\$292,132,593	17.2	\$336,003,542	15.0
Florida	\$50.04	\$51.54	\$1,713,754,892	\$1,048,964,487	-38.8	\$1,094,985,299	4.4
Georgia	\$107.84	\$115.09	\$1,026,467,046	\$1,122,609,981	9.4	\$1,209,710,319	7.8
Hawaii	\$78.71	\$91.41	\$110,320,905	\$112,117,659	1.6	\$129,861,581	15.8
Idaho	\$179.43	\$184.29	\$295,302,391	\$308,214,111	4.4	\$322,598,281	4.7
Illinois	\$105.71	\$128.63	\$1,887,571,684	\$1,350,909,956	-28.4	\$1,636,542,230	21.1
Indiana	\$150.73	\$166.78	\$917,023,980	\$1,003,557,620	9.4	\$1,116,658,351	11.3
Iowa	\$9.45	\$16.45	\$630,574,299	\$29,674,358	-95.3	\$51,782,598	74.5
Kansas	\$0.03	\$0.02	\$598,913,477	\$83,072	-100.0	\$65,304	-21.4
Kentucky	\$179.10	\$185.86	\$808,665,588	\$797,413,618	-1.4	\$829,130,972	4.0
Louisiana	\$123.81	\$123.98	\$577,436,128	\$578,278,991	0.1	\$577,718,591	-0.1
Maine	\$302.73	\$329.46	\$375,948,010	\$404,032,054	7.5	\$441,168,253	9.2
Maryland	\$175.57	\$185.87	\$902,106,968	\$1,057,607,284	17.2	\$1,121,895,064	6.1
Massachusetts	\$240.00	\$257.05	\$1,514,953,659	\$1,646,332,328	8.7	\$1,769,165,407	7.5
Michigan	\$78.81	\$79.58	\$802,613,898	\$786,004,549	-2.1	\$794,571,401	1.1
Minnesota	\$451.12	\$488.17	\$2,367,999,483	\$2,511,018,510	6.0	\$2,736,794,651	9.0
Mississippi	\$144.82	\$148.31	\$326,123,665	\$432,794,733	32.7	\$442,101,686	2.2
Missouri	\$161.20	\$168.20	\$858,356,786	\$984,406,132	14.7	\$1,029,659,023	4.6

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$148.10	\$143.83	\$145,622,083	\$155,873,452	7.0	\$152,558,035	-2.1
Nebraska	\$181.88	\$228.65	\$377,398,107	\$348,476,479	-7.7	\$440,293,294	26.3
Nevada	\$43.00	\$38.75	\$104,863,414	\$127,707,847	21.8	\$117,297,344	-8.2
New Hampshire	\$231.38	\$239.20	\$234,629,813	\$312,088,666	33.0	\$323,753,981	3.7
New Jersey	\$124.12	\$62.13	\$1,152,000,337	\$1,102,914,021	-4.3	\$552,118,529	-49.9
New Mexico	\$175.59	\$182.68	\$353,058,998	\$367,306,445	4.0	\$382,297,123	4.1
New York	\$312.36	\$329.52	\$6,041,131,951	\$6,119,079,996	1.3	\$6,435,556,153	5.2
North Carolina	\$32.35	\$28.74	\$996,240,689	\$332,193,617	-66.7	\$298,351,384	-10.2
North Dakota	\$272.79	\$270.44	\$208,725,354	\$205,938,520	-1.3	\$205,016,312	-0.4
Ohio	\$281.34	\$291.75	\$2,692,266,393	\$3,280,347,209	21.8	\$3,406,536,818	3.8
Oklahoma	\$129.94	\$120.47	\$514,885,585	\$510,835,430	-0.8	\$474,663,438	-7.1
Oregon	\$21.06	\$38.98	\$70,558,290	\$87,268,887	23.7	\$163,012,680	86.8
Pennsylvania	\$410.22	\$476.63	\$4,332,803,642	\$5,245,699,061	21.1	\$6,101,336,133	16.3
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$117.41	\$124.35	\$583,664,451	\$589,569,564	1.0	\$632,198,184	7.2
South Dakota	\$160.05	\$166.85	\$133,797,646	\$139,704,745	4.4	\$146,612,603	4.9
Tennessee	\$101.36	\$100.96	\$670,783,079	\$679,980,602	1.4	\$683,684,442	0.5
Texas	\$54.17	\$55.47	\$1,371,352,281	\$1,532,793,077	11.8	\$1,587,984,969	3.6
Utah	\$98.51	\$106.26	\$268,270,709	\$305,487,098	13.9	\$335,101,399	9.7
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$195.34	\$202.64	\$1,556,992,960	\$1,653,298,688	6.2	\$1,722,740,902	4.2
Washington	\$89.19	\$84.76	\$598,341,035	\$662,062,749	10.6	\$637,698,482	-3.7
West Virginia	\$226.97	\$225.74	\$428,511,683	\$412,400,520	-3.8	\$407,301,847	-1.2
Wisconsin	\$102.13	\$152.45	\$1,726,583,376	\$591,370,852	-65.7	\$885,367,152	49.7
Wyoming	\$213.25	\$236.40	\$117,866,283	\$123,455,153	4.7	\$136,546,335	10.6

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$146.19	\$156.29	\$48,237,266,312	\$46,232,968,739	-4.2	\$49,675,225,861	7.4

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(c) waiver program expenditures. All states in this table use the CMS-64 Schedule A waiver data, except for New Hampshire, which is based on the FMR Net Services report data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports.

Table C.17. Personal care expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$94.01	\$82.86	\$74,568,848	\$69,541,410	-6.7	\$60,914,271	-12.4
Arizona	\$30.12	\$33.77	\$772,462	\$212,137,136	27,362.5	\$241,748,765	14.0
Arkansas	\$32.08	\$31.52	\$105,318,837	\$96,285,610	-8.6	\$94,851,894	-1.5
California	\$39.60	\$68.00	\$1,886,543,866	\$1,558,483,307	-17.4	\$2,683,574,116	72.2
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$41.62	\$47.02	\$26,806,050	\$39,824,001	48.6	\$45,401,006	14.0
District of Columbia	\$290.55	\$298.96	\$180,114,885	\$201,905,321	12.1	\$209,730,998	3.9
Florida	\$11.42	\$13.81	\$69,753,131	\$239,422,761	243.2	\$293,312,775	22.5
Georgia	\$0	\$0	\$0	\$0	0.0	-\$329	-100.0
Hawaii	\$44.82	\$47.27	\$0	\$63,843,901	100.0	\$67,145,878	5.2
Idaho	\$32.96	\$38.44	\$53,806,140	\$56,621,056	5.2	\$67,288,946	18.8
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$16.11	\$14.54	\$0	\$50,611,853	100.0	\$45,772,241	-9.6
Kansas	\$62.89	\$67.70	\$0	\$182,928,053	100.0	\$197,088,318	7.7
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$35.77	\$33.17	\$167,175,052	\$167,047,388	-0.1	\$154,573,701	-7.5
Maine	\$56.11	\$65.82	\$71,482,794	\$74,882,503	4.8	\$88,132,620	17.7
Maryland	\$0.91	\$1.33	\$5,610,002	\$5,507,173	-1.8	\$8,036,479	45.9
Massachusetts	\$180.34	\$178.55	\$1,152,837,045	\$1,237,082,677	7.3	\$1,228,882,829	-0.7
Michigan	\$57.41	\$59.28	\$313,054,736	\$572,573,381	82.9	\$591,864,678	3.4
Minnesota	\$177.33	\$190.30	\$805,739,980	\$987,041,114	22.5	\$1,066,875,827	8.1
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$121.05	\$116.36	\$669,855,431	\$739,203,645	10.4	\$712,309,215	-3.6

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$4.23	\$3.20	\$8,116,761	\$4,449,729	-45.2	\$3,393,025	-23.7
Nebraska	\$9.89	\$8.15	\$19,534,849	\$18,948,004	-3.0	\$15,698,887	-17.1
Nevada	\$35.31	\$38.00	\$99,843,226	\$104,868,887	5.0	\$115,037,262	9.7
New Hampshire	\$0.26	\$0.27	\$1,680,490	\$348,552	-79.3	\$370,220	6.2
New Jersey	\$37.70	\$45.47	\$60,780,119	\$334,940,138	451.1	\$404,031,533	20.6
New Mexico	\$190.76	\$169.45	\$0	\$399,018,664	100.0	\$354,624,472	-11.1
New York	\$22.39	\$26.38	\$5,542,446,084	\$438,567,804	-92.1	\$515,157,156	17.5
North Carolina	\$40.45	\$44.97	\$442,571,153	\$415,345,937	-6.2	\$466,846,514	12.4
North Dakota	\$34.70	\$37.17	\$22,423,531	\$26,198,978	16.8	\$28,177,616	7.6
Ohio	\$36.50	\$37.18	\$0	\$425,568,437	100.0	\$434,101,266	2.0
Oklahoma	\$2.94	\$2.58	\$10,741,550	\$11,552,770	7.6	\$10,178,266	-11.9
Oregon	\$8.36	\$7.93	\$34,547,634	\$34,632,702	0.2	\$33,171,740	-4.2
Pennsylvania	\$0.21	\$0.19	\$0	\$2,715,863	100.0	\$2,419,548	-10.9
Rhode Island	\$25.45	\$21.73	\$0	\$26,861,811	100.0	\$22,996,170	-14.4
South Carolina	\$3.08	\$3.54	\$13,210,137	\$15,446,459	16.9	\$17,996,252	16.5
South Dakota	\$2.59	\$8.28	\$1,112,001	\$2,263,144	103.5	\$7,276,846	221.5
Tennessee	\$2.21	\$2.31	\$0	\$14,821,960	100.0	\$15,652,760	5.6
Texas	\$25.33	\$27.11	\$1,565,153,199	\$716,646,525	-54.2	\$775,998,302	8.3
Utah	\$0.80	\$0.96	\$2,200,075	\$2,492,952	13.3	\$3,037,770	21.9
Vermont	\$0.02	\$0	\$25,684,252	\$12,406	-100.0	\$0	-100.0
Virginia	\$0	-\$0.01	\$41,022,774	\$0	-100.0	-\$69,209	-100.0
Washington	\$3.00	\$4.42	\$25,019,891	\$22,282,071	-10.9	\$33,258,902	49.3
West Virginia	\$40.30	\$37.94	\$74,699,464	\$73,226,753	-2.0	\$68,452,857	-6.5
Wisconsin	\$47.55	\$44.53	\$316,680,884	\$275,297,204	-13.1	\$258,625,429	-6.1
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$30.53	\$35.03	\$13,890,907,333	\$9,921,450,041	-28.6	\$11,443,937,813	15.3

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any personal care expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.18. Community First Choice 1915(k) expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$133.14	\$154.70	\$5,054,457,130	\$5,240,086,684	3.7	\$6,104,701,903	16.5
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$19.98	\$26.38	\$49,421,872	\$71,402,703	44.5	\$94,217,016	32.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$45.95	\$50.31	\$230,444,849	\$276,798,146	20.1	\$303,656,641	9.7
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$43.65	\$42.70	\$39,834,428	\$45,945,813	15.3	\$45,286,323	-1.4
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$249.66	\$308.35	\$2,363,531,473	\$4,890,727,328	106.9	\$6,022,205,290	23.1
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$423.18	\$442.92	\$1,543,337,827	\$1,753,505,554	13.6	\$1,852,246,588	5.6
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$46.26	\$43.11	\$1,050,363,038	\$1,308,826,045	24.6	\$1,234,096,550	-5.7
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$211.48	\$228.72	\$1,442,654,305	\$1,569,897,862	8.8	\$1,720,862,054	9.6
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$46.64	\$53.19	\$11,774,044,922	\$15,157,190,135	28.7	\$17,377,272,365	14.6

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any Community First Choice expenditures. All states in this table use the CMS-64 FMR Net Services report data, except for Texas, which uses a combination of state-submitted MLTSS Community First Choice data and FFS CMS-64 FMR Net Services report data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FFS = fee for service; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.19. HCBS MLTSS other expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$158.62	\$177.75	\$1,197,057,706	\$1,117,300,050	-6.7	\$1,272,349,594	13.9
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	NA	NA	\$92,911,424	NA	NA	NA	NA
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$33.03	\$47.38	\$67,133,342	\$31,599,420	-52.9	\$45,746,748	44.8
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$18.13	\$19.33	\$0	\$380,151,858	100.0	\$410,602,649	8.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$42.56	\$44.16	\$100,448,960	\$60,617,145	-39.7	\$62,737,174	3.5
Idaho	\$1.85	\$2.93	\$0	\$3,169,219	100.0	\$5,120,323	61.6
Illinois	NA	NA	\$0	NA	NA	NA	NA
Indiana	\$0	\$0	\$330	\$0	0.0	\$0	0.0
Iowa	\$229.80	\$209.03	\$204,661,622	\$721,931,133	252.7	\$658,144,266	-8.8
Kansas	\$127.88	\$135.56	\$0	\$371,971,480	100.0	\$394,659,501	6.1
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	-\$613,365	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$662,156,800	\$0	0.0	\$0	0.0
Michigan	\$11.26	\$12.06	\$0	\$112,287,010	100.0	\$120,430,780	7.3
Minnesota	\$27.63	\$29.36	\$0	\$153,790,705	100.0	\$164,614,672	7.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$30.43	\$35.80	\$299,172,497	\$270,370,720	-9.6	\$318,143,854	17.7
New Mexico	\$7.10	\$10.92	\$724,388,435	\$14,856,817	-97.9	\$22,845,513	53.8
New York	NA	NA	\$924,573,856	NA	NA	NA	NA
North Carolina	NA	NA	\$0	NA	NA	NA	NA
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$15.27	\$16.02	\$0	\$178,094,562	100.0	\$187,097,221	5.1
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0.30	\$0.36	\$5,557,019	\$3,853,634	-30.7	\$4,644,895	20.5
Rhode Island	\$7.17	\$4.60	\$351,000,000	\$7,569,040	-97.8	\$4,864,620	-35.7
South Carolina	NA	NA	\$0	NA	NA	NA	NA
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$38.58	\$41.93	\$252,087,970	\$258,809,249	2.7	\$283,960,000	9.7
Texas	\$0	\$0	\$1,775,092,518	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$253,060,084	\$0	0.0	\$0	0.0
Virginia	NA	NA	\$0	NA	NA	NA	NA
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$225.73	\$249.33	\$0	\$1,307,002,933	100.0	\$1,447,984,384	10.8
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$15.36	\$16.54	\$6,908,689,198	\$4,993,374,975	-27.7	\$5,403,946,195	8.2

Sources: Mathematica’s analysis of FY 2017 and 2018 state-submitted MLTSS data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Note: Further details about the data sources, methods, and data limitations are available in Appendices A and B.

FY = fiscal year; MLTSS = managed long-term services and supports; NA = not available.

Table C.20. Home health expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$14.55	\$14.92	\$75,194,657	\$70,923,344	-5.7	\$72,925,042	2.8
Alaska	\$1.24	\$2.07	\$826,069	\$917,243	11.0	\$1,523,057	66.0
Arizona	\$1.62	\$1.89	\$17,229,500	\$11,390,735	-33.9	\$13,563,643	19.1
Arkansas	\$25.43	\$23.91	\$74,884,946	\$76,330,429	1.9	\$71,977,207	-5.7
California	\$4.58	\$4.48	\$221,073,509	\$180,223,703	-18.5	\$176,788,424	-1.9
Colorado	\$93.61	\$94.46	\$534,393,634	\$525,345,015	-1.7	\$537,599,490	2.3
Connecticut	\$67.54	\$64.33	\$284,723,446	\$241,324,652	-15.2	\$229,749,382	-4.8
Delaware	\$8.54	\$9.41	\$35,910,161	\$8,171,966	-77.2	\$9,082,675	11.1
District of Columbia	\$17.15	\$11.83	\$19,820,122	\$11,915,752	-39.9	\$8,297,893	-30.4
Florida	\$17.10	\$20.16	\$38,868,844	\$358,564,984	822.5	\$428,254,285	19.4
Georgia	\$5.12	\$5.80	\$52,058,652	\$53,320,120	2.4	\$61,006,390	14.4
Hawaii	\$0	\$0	\$3,565,330	\$119	-100.0	\$0	-100.0
Idaho	\$6.92	\$8.06	\$4,606,309	\$11,887,109	158.1	\$14,108,688	18.7
Illinois	\$0.26	\$0.27	\$4,018,796	\$3,319,938	-17.4	\$3,412,412	2.8
Indiana	\$46.39	\$46.97	\$294,732,322	\$308,858,504	4.8	\$314,495,654	1.8
Iowa	\$5.61	\$7.10	\$118,246,906	\$17,637,147	-85.1	\$22,352,205	26.7
Kansas	\$9.80	\$11.57	\$16,784,697	\$28,509,903	69.9	\$33,691,177	18.2
Kentucky	\$8.46	\$8.39	\$38,989,797	\$37,664,868	-3.4	\$37,425,576	-0.6
Louisiana	\$3.87	\$3.17	\$20,979,543	\$18,058,182	-13.9	\$14,750,253	-18.3
Maine	\$4.19	\$4.57	\$5,888,703	\$5,597,697	-4.9	\$6,125,656	9.4
Maryland	\$1.01	\$2.60	\$3,190,155	\$6,107,341	91.4	\$15,700,105	157.1
Massachusetts	\$78.23	\$58.15	\$699,344,218	\$536,616,622	-23.3	\$400,245,452	-25.4
Michigan	\$1.76	\$1.86	\$45,692,922	\$17,531,999	-61.6	\$18,601,736	6.1
Minnesota	\$65.08	\$67.66	\$122,441,677	\$362,242,639	195.8	\$379,323,384	4.7
Mississippi	\$0.39	\$0.44	\$1,255,374	\$1,164,890	-7.2	\$1,311,354	12.6
Missouri	\$0.79	\$0.73	\$5,423,358	\$4,832,886	-10.9	\$4,464,645	-7.6

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$23.46	\$21.85	\$17,354,132	\$24,692,752	42.3	\$23,173,204	-6.2
Nebraska	\$3.01	\$0.07	\$12,198,857	\$5,767,588	-52.7	\$142,189	-97.5
Nevada	\$0.66	\$0.36	\$2,167,087	\$1,970,836	-9.1	\$1,104,242	-44.0
New Hampshire	\$1.04	\$1.02	\$2,493,339	\$1,398,059	-43.9	\$1,386,806	-0.8
New Jersey	\$0.08	\$0.08	\$915,005	\$746,298	-18.4	\$707,912	-5.1
New Mexico	\$11.90	\$12.59	\$18,783,020	\$24,896,278	32.5	\$26,344,208	5.8
New York	\$7.96	\$3.83	\$699,817,605	\$155,956,884	-77.7	\$74,761,360	-52.1
North Carolina	\$3.34	\$2.95	\$37,724,520	\$34,261,297	-9.2	\$30,632,346	-10.6
North Dakota	\$10.85	\$10.21	\$5,452,705	\$8,187,914	50.2	\$7,743,195	-5.4
Ohio	\$30.00	\$28.11	\$422,633,468	\$349,810,837	-17.2	\$328,275,642	-6.2
Oklahoma	\$3.86	\$5.00	\$16,363,399	\$15,187,450	-7.2	\$19,715,360	29.8
Oregon	\$0.10	\$0.08	\$471,252	\$394,291	-16.3	\$329,881	-16.3
Pennsylvania	\$4.77	\$4.47	\$62,862,212	\$61,040,567	-2.9	\$57,190,177	-6.3
Rhode Island	\$1.22	\$0.47	\$950,904	\$1,284,449	35.1	\$499,193	-61.1
South Carolina	\$3.31	\$3.34	\$15,701,293	\$16,617,882	5.8	\$16,979,456	2.2
South Dakota	\$16.21	\$17.69	\$13,101,431	\$14,147,559	8.0	\$15,542,269	9.9
Tennessee	\$0	\$0	\$215,304,497	\$0	-100.0	\$0	0.0
Texas	\$5.54	\$3.88	\$315,115,849	\$156,749,131	-50.3	\$111,167,295	-29.1
Utah	\$4.13	\$4.49	\$10,642,757	\$12,805,667	20.3	\$14,156,358	10.5
Vermont	\$0.53	\$0	\$7,726,645	\$333,936	-95.7	\$0	-100.0
Virginia	\$0.26	\$0.17	\$2,328,793	\$2,218,589	-4.7	\$1,467,794	-33.8
Washington	\$2.87	\$2.53	\$19,019,399	\$21,279,246	11.9	\$19,054,870	-10.5
West Virginia	\$16.67	\$13.76	\$39,907,003	\$30,281,615	-24.1	\$24,824,096	-18.0
Wisconsin	\$57.09	\$60.41	\$65,770,633	\$330,590,450	402.6	\$350,835,150	6.1
Wyoming	\$26.52	\$16.69	\$16,824,211	\$15,353,606	-8.7	\$9,642,306	-37.2

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$12.88	\$12.29	\$4,761,773,663	\$4,186,658,235	-12.1	\$4,015,821,486	-4.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) are included in the United States total but not reported separately. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.21. Rehabilitative services (non-school based) expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$35.77	\$35.27	\$173,198,641	\$174,346,012	0.7	\$172,386,702	-1.1
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$8.84	\$4.31	\$10,802,987	\$62,299,018	476.7	\$30,832,563	-50.5
Arkansas	\$158.30	\$140.13	\$499,430,000	\$475,103,396	-4.9	\$421,746,557	-11.2
California	\$0.21	\$0.21	\$9,289,725	\$8,127,632	-12.5	\$8,310,572	2.3
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$28.73	\$22.79	\$13,272,628	\$27,494,172	107.1	\$22,002,844	-20.0
District of Columbia	\$5.48	\$5.46	\$3,315,625	\$3,811,108	14.9	\$3,828,248	0.4
Florida	\$1.06	\$1.18	\$0	\$22,322,818	100.0	\$25,017,864	12.1
Georgia	\$14.43	\$13.67	\$136,185,842	\$150,206,211	10.3	\$143,639,007	-4.4
Hawaii	\$0	\$0	\$39,887	\$920	-97.7	\$558	-39.3
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$11.75	\$11.29	\$142,024,372	\$150,117,622	5.7	\$143,700,462	-4.3
Indiana	\$0.65	\$0.61	\$4,449,388	\$4,357,671	-2.1	\$4,110,368	-5.7
Iowa	\$0.81	\$0.72	\$10,847,794	\$2,529,792	-76.7	\$2,267,439	-10.4
Kansas	\$1.26	\$1.21	\$1,491,142	\$3,676,096	146.5	\$3,531,644	-3.9
Kentucky	\$0.41	\$0.42	\$844,111	\$1,814,682	115.0	\$1,878,634	3.5
Louisiana	\$0.03	\$0.04	\$258,655	\$151,897	-41.3	\$193,886	27.6
Maine	\$8.40	\$8.40	\$8,704,352	\$11,212,292	28.8	\$11,245,120	0.3
Maryland	\$80.12	\$87.34	\$437,679,409	\$482,623,739	10.3	\$527,194,288	9.2
Massachusetts	\$56.99	\$60.13	\$526,317,120	\$390,963,866	-25.7	\$413,818,859	5.8
Michigan	\$0.10	\$0.11	\$132,548	\$993,578	649.6	\$1,056,584	6.3
Minnesota	\$3.00	\$3.21	\$5,647,662	\$16,702,180	195.7	\$18,007,759	7.8
Mississippi	\$14.06	\$13.69	\$38,857,455	\$42,013,373	8.1	\$40,823,903	-2.8
Missouri	\$53.14	\$24.06	\$331,701,682	\$324,522,367	-2.2	\$147,260,249	-54.6

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$29.79	\$27.58	\$26,648,013	\$31,354,035	17.7	\$29,252,690	-6.7
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$56.86	\$67.06	\$117,865,869	\$168,857,428	43.3	\$203,009,863	20.2
New Hampshire	\$24.04	\$27.68	\$32,733,433	\$32,431,552	-0.9	\$37,470,258	15.5
New Jersey	\$2.47	\$2.70	\$17,946,311	\$21,933,041	22.2	\$23,979,035	9.3
New Mexico	\$0.01	\$0	\$7,312	\$10,793	47.6	\$2,139	-80.2
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0.96	\$0.91	\$9,119,996	\$9,839,329	7.9	\$9,449,783	-4.0
North Dakota	\$10.83	\$11.73	\$2,606,560	\$8,177,582	213.7	\$8,888,711	8.7
Ohio	\$59.06	\$47.63	\$672,533,157	\$688,565,430	2.4	\$556,168,338	-19.2
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$8.61	\$10.33	\$29,364,533	\$35,669,550	21.5	\$43,181,332	21.1
Pennsylvania	\$0.49	\$0.52	\$1,613,872	\$6,236,198	286.4	\$6,718,616	7.7
Rhode Island	\$73.78	\$82.96	\$112,188,021	\$77,889,812	-30.6	\$87,794,716	12.7
South Carolina	\$12.16	\$8.22	\$126,986,783	\$61,050,705	-51.9	\$41,786,155	-31.6
South Dakota	\$9.25	\$9.26	\$7,930,496	\$8,077,552	1.9	\$8,138,084	0.7
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$1.31	\$1.10	\$48,695,825	\$37,174,804	-23.7	\$31,560,238	-15.1
Utah	\$7.56	\$9.78	\$21,868,036	\$23,445,243	7.2	\$30,832,976	31.5
Vermont	\$0.02	\$0	\$440,881	\$13,574	-96.9	\$0	-100.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$34.98	\$34.35	\$69,169,457	\$63,551,641	-8.1	\$61,973,369	-2.5
Wisconsin	\$1.46	\$1.72	\$4,546,336	\$8,446,224	85.8	\$9,988,007	18.3
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$11.19	\$10.20	\$3,656,755,916	\$3,638,114,935	-0.5	\$3,333,048,420	-8.4

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any rehabilitative services expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.22. Case management expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$10.83	\$11.56	\$54,119,107	\$52,807,104	-2.4	\$56,514,245	7.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$15.24	\$16.19	\$0	\$107,345,444	100.0	\$115,896,157	8.0
Arkansas	\$1.20	\$1.37	\$3,382,942	\$3,607,587	6.6	\$4,109,187	13.9
California	\$17.99	\$17.79	\$645,031,023	\$708,238,436	9.8	\$701,989,883	-0.9
Colorado	\$3.75	\$5.18	\$27,219,419	\$21,040,358	-22.7	\$29,485,710	40.1
Connecticut	\$15.63	\$14.27	\$62,379,031	\$55,866,754	-10.4	\$50,958,999	-8.8
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$3.22	\$3.23	\$66,891,955	\$67,489,195	0.9	\$68,516,965	1.5
Georgia	\$0.24	\$0.24	\$4,614,474	\$2,473,684	-46.4	\$2,561,874	3.6
Hawaii	\$0.98	\$0.96	\$1,480,275	\$1,396,786	-5.6	\$1,367,887	-2.1
Idaho	\$4.17	\$4.05	\$6,817,956	\$7,158,399	5.0	\$7,095,152	-0.9
Illinois	\$1.07	\$3.69	\$25,330,848	\$13,633,550	-46.2	\$46,885,841	243.9
Indiana	\$0	\$0	\$13,039	\$5,531	-57.6	\$16,854	204.7
Iowa	\$9.95	\$4.25	\$26,437,003	\$31,243,671	18.2	\$13,367,095	-57.2
Kansas	\$0.89	\$0.94	\$2,572,925	\$2,588,298	0.6	\$2,746,311	6.1
Kentucky	\$5.08	\$4.32	\$20,603,815	\$22,616,768	9.8	\$19,256,518	-14.9
Louisiana	\$1.41	\$1.50	\$6,426,571	\$6,581,146	2.4	\$6,980,044	6.1
Maine	\$28.75	\$27.44	\$43,801,881	\$38,365,076	-12.4	\$36,750,085	-4.2
Maryland	\$9.64	\$10.91	\$45,952,479	\$58,080,922	26.4	\$65,822,561	13.3
Massachusetts	\$17.72	\$15.98	\$224,066,353	\$121,528,983	-45.8	\$109,980,801	-9.5
Michigan	\$1.73	\$2.80	\$493,460	\$17,276,201	3,401.0	\$27,962,828	61.9
Minnesota	\$46.60	\$50.13	\$229,350,630	\$259,361,314	13.1	\$281,049,645	8.4
Mississippi	\$7.21	\$7.13	\$17,957,169	\$21,541,742	20.0	\$21,241,430	-1.4
Missouri	\$13.49	\$13.96	\$76,008,852	\$82,403,656	8.4	\$85,454,295	3.7

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$36.88	\$22.17	\$36,081,409	\$38,816,524	7.6	\$23,518,119	-39.4
Nebraska	\$18.47	\$17.93	\$30,577,663	\$35,391,342	15.7	\$34,532,832	-2.4
Nevada	\$18.10	\$17.60	\$48,969,844	\$53,748,488	9.8	\$53,272,117	-0.9
New Hampshire	\$10.28	\$11.63	\$14,647,630	\$13,867,232	-5.3	\$15,743,477	13.5
New Jersey	\$4.33	\$2.71	\$31,832,532	\$38,455,305	20.8	\$24,073,835	-37.4
New Mexico	\$0	\$0	\$9,491	\$5,654	-40.4	\$3,573	-36.8
New York	\$16.71	-\$62.10	\$287,021,101	\$327,437,216	14.1	-\$1,212,740,290	-470.4
North Carolina	\$1.30	\$1.25	\$13,324,560	\$13,323,335	0.0	\$13,022,558	-2.3
North Dakota	\$3.63	\$4.45	\$1,934,800	\$2,739,583	41.6	\$3,371,246	23.1
Ohio	\$7.02	\$8.64	\$73,725,582	\$81,866,283	11.0	\$100,878,434	23.2
Oklahoma	\$15.41	\$15.38	\$64,214,060	\$60,565,999	-5.7	\$60,611,155	0.1
Oregon	\$28.91	\$42.10	\$86,282,804	\$119,789,935	38.8	\$176,051,257	47.0
Pennsylvania	\$3.32	\$3.59	\$37,957,939	\$42,509,381	12.0	\$45,957,923	8.1
Rhode Island	\$23.33	\$25.07	\$6,300,041	\$24,624,956	290.9	\$26,530,486	7.7
South Carolina	\$4.70	\$4.94	\$24,559,231	\$23,615,138	-3.8	\$25,110,673	6.3
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$22.11	\$23.30	\$151,345,790	\$148,324,393	-2.0	\$157,750,842	6.4
Texas	\$3.02	\$2.95	\$87,272,722	\$85,485,603	-2.0	\$84,492,277	-1.2
Utah	\$0.01	\$0.09	\$6,702	\$20,944	212.5	\$295,316	1,310.0
Vermont	\$2.66	\$0	\$3,442,738	\$1,659,844	-51.8	\$0	-100.0
Virginia	\$17.57	\$13.72	\$150,487,035	\$148,667,286	-1.2	\$116,639,430	-21.5
Washington	\$1.82	\$2.82	\$13,723,026	\$13,479,180	-1.8	\$21,239,369	57.6
West Virginia	\$1.47	\$1.37	\$2,558,792	\$2,670,365	4.4	\$2,467,468	-7.6
Wisconsin	\$3.43	\$4.81	\$25,297,444	\$19,844,095	-21.6	\$27,919,981	40.7
Wyoming	\$5.60	\$5.08	\$3,510,269	\$3,242,203	-7.6	\$2,932,304	-9.6

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$9.24	\$4.77	\$2,786,034,412	\$3,002,800,890	7.8	\$1,559,684,748	-48.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any case management expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term services and supports.

Table C.23. PACE expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$1.40	\$1.38	\$6,750,497	\$6,838,400	1.3	\$6,759,561	-1.2
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$2.94	\$3.59	\$7,284,256	\$8,818,783	21.1	\$10,803,069	22.5
California	\$7.20	\$13.94	\$653,590,446	\$283,357,702	-56.6	\$549,920,769	94.1
Colorado	\$10.88	\$0	\$144,599,059	\$61,081,385	-57.8	\$0	-100.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$13.99	\$16.38	\$10,997,932	\$13,385,029	21.7	\$15,812,923	18.1
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$2.21	\$2.44	\$37,522,139	\$46,282,374	23.3	\$51,763,876	11.8
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0.66	\$1.42	\$1,273,608	\$4,362,744	242.5	\$9,519,271	118.2
Iowa	\$5.37	\$6.36	\$11,699,521	\$16,875,236	44.2	\$20,012,019	18.6
Kansas	\$6.11	\$6.39	\$14,514,063	\$17,767,080	22.4	\$18,594,823	4.7
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$3.17	\$3.35	\$13,022,413	\$14,786,384	13.5	\$15,619,860	5.6
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$1.01	\$0.99	\$6,021,448	\$6,103,802	1.4	\$5,979,478	-2.0
Massachusetts	\$15.26	\$15.19	\$162,174,359	\$104,692,031	-35.4	\$104,543,457	-0.1
Michigan	\$7.93	\$9.78	\$60,297,033	\$79,134,167	31.2	\$97,603,141	23.3
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$4,729,672	\$0	-100.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$4.08	\$4.75	\$6,185,565	\$7,811,577	26.3	\$9,141,089	17.0
Nevada	\$0.47	-\$0.46	\$0	\$1,393,755	100.0	-\$1,393,755	-200.0
New Hampshire	\$0	\$0.01	\$0	\$0	0.0	\$9,131	100.0
New Jersey	\$5.36	\$5.94	\$47,084,697	\$47,644,327	1.2	\$52,739,143	10.7
New Mexico	\$1.81	\$1.95	\$12,271,182	\$3,790,758	-69.1	\$4,089,342	7.9
New York	\$11.08	\$13.23	\$204,233,154	\$217,101,311	6.3	\$258,324,056	19.0
North Carolina	\$7.36	\$7.56	\$61,620,373	\$75,623,650	22.7	\$78,535,310	3.9
North Dakota	\$11.47	\$13.46	\$7,604,273	\$8,655,923	13.8	\$10,206,999	17.9
Ohio	\$0.67	\$0.79	\$10,186,723	\$7,817,267	-23.3	\$9,248,327	18.3
Oklahoma	\$3.32	\$3.80	\$9,577,369	\$13,055,340	36.3	\$14,989,659	14.8
Oregon	\$13.87	\$16.18	\$51,838,565	\$57,476,224	10.9	\$67,648,455	17.7
Pennsylvania	\$21.14	\$22.76	\$249,168,119	\$270,349,934	8.5	\$291,395,156	7.8
Rhode Island	\$8.03	\$8.92	\$0	\$8,474,300	100.0	\$9,438,109	11.4
South Carolina	\$2.82	\$2.80	\$13,189,220	\$14,157,566	7.3	\$14,213,458	0.4
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$2.03	\$2.11	\$17,458,238	\$13,637,973	-21.9	\$14,266,921	4.6
Texas	\$1.28	\$1.36	\$39,315,294	\$36,121,898	-8.1	\$39,056,635	8.1
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$7.41	\$7.87	\$60,356,369	\$62,694,506	3.9	\$66,899,608	6.7
Washington	\$2.58	\$2.90	\$15,518,559	\$19,125,317	23.2	\$21,828,940	14.1
West Virginia	\$0	\$0.01	\$0	\$0	0.0	\$14,499	0.0
Wisconsin	\$3.95	\$3.86	\$0	\$22,865,289	100.0	\$22,426,688	-1.9
Wyoming	\$6.03	\$6.26	\$3,067,421	\$3,491,882	13.8	\$3,617,224	3.6

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$4.78	\$5.80	\$1,943,151,567	\$1,554,773,915	-20.0	\$1,893,627,241	21.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data, state-submitted MLTSS data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any PACE expenditures. All states in this table use the CMS-64 FMR Net Services report data, except for Florida, Kansas, Massachusetts, Michigan, North Carolina, New Mexico, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, and Wisconsin, which are based on state-submitted MLTSS data. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term series and supports; PACE = Program of All-Inclusive Care for the Elderly.

Table C.24. Private duty nursing expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$1.24	\$1.29	\$6,000,249	\$6,056,607	0.9	\$6,287,986	3.8
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$4.44	\$4.91	\$12,141,276	\$13,330,067	9.8	\$14,790,069	11.0
California	\$0	\$0	\$0	-\$36,790	-100.0	\$0	100.0
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$5.26	\$5.80	\$2,134,612	\$5,029,706	135.6	\$5,599,184	11.3
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$2.59	\$2.38	\$59,450,960	\$54,247,220	-8.8	\$50,481,604	-6.9
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0.41	\$0.22	\$17,891,007	\$5,195,154	-71.0	\$2,781,395	-46.5
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0.05	\$0	\$94,085	\$161,006	71.1	\$11,973	-92.6
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$1.13	\$1.18	\$2,453,951	\$5,033,547	105.1	\$5,251,711	4.3
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$17.47	\$20.16	\$21,043,563	\$23,320,473	10.8	\$26,994,670	15.8
Maryland	\$18.05	\$16.99	\$103,096,897	\$108,755,275	5.5	\$102,556,446	-5.7
Massachusetts	\$1.27	\$1.48	\$8,945,111	\$8,714,440	-2.6	\$10,204,720	17.1
Michigan	\$2.97	\$2.88	\$28,961,252	\$29,651,810	2.4	\$28,768,387	-3.0
Minnesota	\$21.47	\$21.84	\$122,182,344	\$119,507,447	-2.2	\$122,418,778	2.4
Mississippi	\$3.41	\$4.07	\$8,919,573	\$10,183,340	14.2	\$12,126,831	19.1
Missouri	\$9.57	\$8.27	\$59,137,296	\$58,444,150	-1.2	\$50,614,705	-13.4

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$2.72	\$2.96	\$3,899,119	\$2,860,531	-26.6	\$3,138,717	9.7
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$6.70	\$7.68	\$15,859,134	\$19,903,484	25.5	\$23,236,315	16.7
New Hampshire	\$2.05	\$1.81	\$3,065,214	\$2,759,342	-10.0	\$2,452,285	-11.1
New Jersey	\$0.06	\$0.11	\$1,001,720	\$552,782	-44.8	\$993,945	79.8
New Mexico	\$0	\$0	\$5,518	\$8,530	54.6	\$8,885	4.2
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$13.25	\$18.30	\$91,327,314	\$136,085,664	49.0	\$189,984,304	39.6
North Dakota	\$1.00	\$1.12	\$184,086	\$753,031	309.1	\$851,468	13.1
Ohio	\$4.46	\$3.77	\$59,820,505	\$51,970,089	-13.1	\$43,985,832	-15.4
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$3.05	\$3.02	\$15,974,742	\$15,329,604	-4.0	\$15,368,826	0.3
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0.67	\$0.71	\$2,220,958	\$2,083,397	-6.2	\$2,254,212	8.2
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$2.41	\$0.84	\$20,373,192	\$20,405,330	0.2	\$7,157,642	-64.9
Washington	-\$0.01	\$0	\$17,518,609	-\$55,453	-100.3	\$0	100.0
West Virginia	\$3.81	\$2.21	\$7,839,228	\$6,928,245	-11.6	\$3,991,142	-42.4
Wisconsin	\$6.53	\$6.11	\$40,336,837	\$37,782,885	-6.3	\$35,484,770	-6.1
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$2.29	\$2.35	\$731,878,352	\$744,960,913	1.8	\$767,796,802	3.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any private duty nursing expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; MLTSS = managed long-term series and supports.

Table C.25. Total Health Homes expenditures across all LTSS targeted population subgroups by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$5.14	\$0	\$36,474,649	\$25,075,110	-31.3	\$0	-100.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$7.56	\$14.06	\$0	\$27,031,824	100.0	\$50,220,760	85.8
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$9.38	\$9.61	\$1,505,883	\$6,514,757	332.6	\$6,740,470	3.5
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$508,059	\$0	-100.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0.24	\$0.40	\$23,121,386	\$751,129	-96.8	\$1,249,124	66.3
Kansas	-\$0.19	-\$0.01	\$21,666,156	-\$562,118	-102.6	-\$35,736	93.6
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$37.40	\$48.16	\$25,517,513	\$49,917,924	95.6	\$64,488,786	29.2
Maryland	\$0.92	\$1.00	\$2,727,775	\$5,551,947	103.5	\$6,032,389	8.7
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0.11	\$0.23	\$1,172,041	\$1,079,767	-7.9	\$2,248,833	108.3
Minnesota	\$2.54	\$1.02	\$2,856,880	\$14,150,286	395.3	\$5,743,442	-59.4
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$6.34	\$4.05	\$35,610,513	\$38,704,878	8.7	\$24,785,544	-36.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0.14	\$0.07	\$1,265,830	\$1,237,030	-2.3	\$626,475	-49.4
New Mexico	\$0.57	\$0.13	\$516,035	\$1,194,029	131.4	\$268,045	-77.6
New York	\$34.45	\$28.85	\$533,952,717	\$674,890,363	26.4	\$563,384,045	-16.5
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$2.86	\$2.07	\$34,440,573	\$33,370,325	-3.1	\$24,165,981	-27.6
Oklahoma	\$11.05	\$12.98	\$27,870,660	\$43,446,838	55.9	\$51,158,937	17.8
Oregon	\$0	\$0	\$0	-\$1,717	-100.0	-\$138	92.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$1,740,716	\$0	-100.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$3.97	\$4.21	\$3,625,311	\$3,467,687	-4.3	\$3,703,383	6.8
Tennessee	\$0	\$20.25	\$0	\$0	0.0	\$137,103,170	100.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0.99	\$1.61	\$6,101,078	\$7,366,745	20.7	\$12,119,896	64.5
West Virginia	\$0.17	\$0.68	\$214,039	\$307,912	43.9	\$1,223,859	297.5
Wisconsin	\$0.08	\$0.07	\$463,842	\$457,570	-1.4	\$433,420	-5.3
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$2.87	\$2.93	\$761,351,656	\$933,952,286	22.7	\$955,660,685	2.3

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Total Health Homes expenditures across all LTSS targeted population subgroups include expenditures for each population group presented in Tables C.26 and C.27. Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any Health Homes expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports.

Table C.26. Health Homes expenditures for people with behavioral health conditions by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$7.56	\$14.06	\$0	\$27,031,824	100.0	\$50,220,760	85.8
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$1,505,883	\$0	-100.0	\$0	0.0
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$21,952,643	\$0	-100.0	\$0	0.0
Kansas	-\$0.19	-\$0.01	\$21,666,156	-\$562,118	-102.6	-\$35,736	93.6
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$6,249,563	\$0	-100.0	\$0	0.0
Maryland	\$0.92	\$1.00	\$2,727,775	\$5,551,947	103.5	\$6,032,389	8.7
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$1,172,041	\$0	-100.0	\$0	0.0
Minnesota	\$2.54	\$1.02	\$2,856,880	\$14,150,286	395.3	\$5,743,442	-59.4
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$20,714,429	\$0	-100.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0.14	\$0.07	\$1,265,830	\$1,237,030	-2.3	\$626,475	-49.4
New Mexico	\$0.57	\$0.13	\$516,035	\$1,194,029	131.4	\$268,045	-77.6
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$2.86	\$2.07	\$34,440,573	\$33,370,325	-3.1	\$24,165,981	-27.6
Oklahoma	\$11.05	\$12.98	\$27,870,660	\$43,446,838	55.9	\$51,158,937	17.8
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$1,740,716	\$0	-100.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$20.25	\$0	\$0	0.0	\$137,103,170	100.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$214,039	\$0	-100.0	\$0	0.0
Wisconsin	\$0	\$0	\$463,842	\$0	-100.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$0.39	\$0.84	\$145,357,065	\$125,420,161	-13.7	\$275,283,463	119.5

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any Health Homes expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports.

Table C.27. Health Homes expenditures for multiple populations by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$5.14	\$0	\$36,474,649	\$25,075,110	-31.3	\$0	-100.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$9.38	\$9.61	\$0	\$6,514,757	100.0	\$6,740,470	3.5
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$508,059	\$0	-100.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0.24	\$0.40	\$1,168,743	\$751,129	-35.7	\$1,249,124	66.3
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$37.40	\$48.16	\$19,267,950	\$49,917,924	159.1	\$64,488,786	29.2
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0.11	\$0.23	\$0	\$1,079,767		\$2,248,833	108.3
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$6.34	\$4.05	\$14,896,084	\$38,704,878	159.8	\$24,785,544	-36.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$34.45	\$28.85	\$533,952,717	\$674,890,363	26.4	\$563,384,045	-16.5
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	-\$1,717	-100.0	-\$138	92.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$3.97	\$4.21	\$3,625,311	\$3,467,687	-4.3	\$3,703,383	6.8
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0.99	\$1.61	\$6,101,078	\$7,366,745	20.7	\$12,119,896	64.5
West Virginia	\$0.17	\$0.68	\$0	\$307,912	100.0	\$1,223,859	297.5
Wisconsin	\$0.08	\$0.07	\$0	\$457,570	100.0	\$433,420	-5.3
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$2.49	\$2.08	\$615,994,591	\$808,532,125	31.3	\$680,377,222	-15.9

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any Health Homes expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports.

Table C.28. Total section 1915(j) State Plan HCBS expenditures across all LTSS targeted population subgroups by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$11.11	\$13.20	\$695,590,987	\$437,198,710	-37.1	\$521,073,285	19.2
Colorado	\$25.71	-\$128.41	\$2,244,617	\$144,304,441	6,328.9	-\$730,812,375	-606.4
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0.21	\$0.30	\$0	\$205,643	100.0	\$284,889	38.5
District of Columbia	-\$5.25	\$4.45	\$1,613,736	-\$3,645,073	-325.9	\$3,121,456	185.6
Florida	\$0	\$0	\$2,850	\$0	-100.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$4.60	\$14.82	\$0	\$7,901,390	100.0	\$25,950,249	228.4
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$1.53	\$1.63	\$9,691,593	\$10,204,235	5.3	\$10,908,017	6.9
Iowa	\$0.91	\$2.73	\$34,457,800	\$2,852,327	-91.7	\$8,597,441	201.4
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0.01	\$0	\$0	0.0	\$33,192	100.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0.10	\$0	\$65,770	\$108,098	64.4	\$0	-100.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$3.97	\$6.14	\$9,281,404	\$11,783,219	27.0	\$18,592,013	57.8
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0.02	\$0	\$0	\$170,975	100.0	\$0	-100.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0.07	\$0.05	\$0	\$856,661	100.0	\$584,686	-31.7
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$14.14	\$11.75	\$61,267,166	\$58,609,085	-4.3	\$49,125,630	-16.2
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0.01	\$0.04	\$0	\$229,745	100.0	\$1,161,831	405.7
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0.88	\$0.81	\$7,268,868	\$5,112,295	-29.7	\$4,704,950	-8.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$2.08	-\$0.27	\$821,484,791	\$675,891,751	-17.7	-\$86,674,736	-112.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Total section 1915(i) expenditures across all LTSS targeted population subgroups include expenditures for each population group presented in Tables C.29, C.30, C.31, and C.32. Includes data for all 50 states and the District of Columbia; U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(i) expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports.

Table C.29. Section 1915(i) State Plan HCBS expenditures for older adults and people with physical or other disabilities by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Colorado	\$0	\$0	\$2,244,617	\$0	-100.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	-\$5.25	\$4.45	\$1,613,736	-\$3,645,073	-325.9	\$3,121,456	185.6
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	-\$0.01	\$0.01	\$3,858,353	-\$3,645,073	-194.5	\$3,121,456	185.6

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(i) expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports.

Table C.30. Section 1915(i) State Plan HCBS expenditures for people with autism spectrum disorder, intellectual or developmental disabilities by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$11.11	\$13.20	\$695,590,987	\$437,198,710	-37.1	\$521,073,285	19.2
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$4.60	\$0	\$0	\$7,901,390	100.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$1.37	\$1.60	\$695,590,987	\$445,100,100	-36.0	\$521,073,285	17.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(i) expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports.

Table C.31. Section 1915(i) State Plan HCBS expenditures for people with behavioral health conditions by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
California	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$1.53	\$1.63	\$0	\$10,204,235	100.0	\$10,908,017	6.9
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0.01	\$0	\$0	0.0	\$33,192	100.0
Massachusetts	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nebraska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Jersey	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$14.14	\$11.75	\$0	\$58,609,085	100.0	\$49,125,630	-16.2
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0.01	\$0.04	\$0	\$229,745	100.0	\$1,161,831	405.7
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$0.21	\$0.19	\$0	\$69,043,065	0.0	\$61,228,670	-11.3

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(i) expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports.

Table C.32. Section 1915(i) State Plan HCBS expenditures for multiple populations by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Alaska	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Arkansas	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
California	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Colorado	\$25.71	-\$128.41	n.a.	\$144,304,441	NA	-\$730,812,375	-606.4
Connecticut	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Delaware	\$0.21	\$0.30	n.a.	\$205,643	NA	\$284,889	38.5
District of Columbia	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Florida	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Georgia	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Idaho	\$0	\$14.82	n.a.	\$0	NA	\$25,950,249	100.0
Illinois	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Iowa	\$0.91	\$2.73	n.a.	\$2,852,327	NA	\$8,597,441	201.4
Kansas	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Maine	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Massachusetts	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Michigan	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Minnesota	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	n.a.	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$0.10	\$0	n.a.	\$108,098	NA	\$0	-100.0
Nebraska	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Nevada	\$3.97	\$6.14	n.a.	\$11,783,219	NA	\$18,592,013	57.8
New Hampshire	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
New Jersey	\$0.02	\$0	n.a.	\$170,975	NA	\$0	-100.0
New Mexico	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
New York	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
North Carolina	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Ohio	\$0.07	\$0.05	n.a.	\$856,661	NA	\$584,686	-31.7
Oklahoma	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Oregon	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Pennsylvania	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Texas	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Utah	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Washington	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
West Virginia	\$0	\$0	n.a.	\$0	0.0	\$0	0.0
Wisconsin	\$0.88	\$0.81	n.a.	\$5,112,295	NA	\$4,704,950	-8.0
Wyoming	\$0	\$0	n.a.	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$0.51	-\$2.06	n.a.	\$165,393,659	NA	-\$672,098,147	-506.4

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(i) expenditures. Further details about the population assignment, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; LTSS = long-term services and supports; NA = not available; n.a. = not applicable.

Table C.33. Section 1915(j) Self-Directed Personal Assistance Services expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0.83	\$2.77	\$298,706	\$4,035,150	1,250.9	\$13,556,171	236.0
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$662	100.0	-\$382	-157.7
Arkansas	\$17.01	\$16.71	\$35,314,229	\$51,057,286	44.6	\$50,291,193	-1.5
California	\$1.94	\$2.41	\$18,659,698	\$76,346,989	309.2	\$95,092,027	24.6
Colorado	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Connecticut	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Delaware	\$0	\$0	\$0	\$0	0.0	\$0	0.0
District of Columbia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Florida	\$4.37	\$4.92	\$75,449,527	\$91,515,656	21.3	\$104,626,182	14.3
Georgia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Hawaii	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Idaho	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Illinois	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Indiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Iowa	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kansas	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Kentucky	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Louisiana	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maine	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Maryland	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Massachusetts	\$2.24	\$0.02	\$0	\$15,337,022	100.0	\$125,408	-99.2
Michigan	\$0	\$0	\$0	\$128	100.0	\$0	-100.0
Minnesota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Mississippi	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Missouri	\$0	\$0	\$0	\$0	0.0	\$0	0.0

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State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	-\$0.13	\$0	\$0	-\$140,854	-100.0	\$0	100.0
Nebraska	-\$0.02	\$0	\$0	-\$47,167	-100.0	-\$1,112	97.6
Nevada	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New Hampshire	\$0.01	\$0	\$0	\$19,056	100.0	\$0	-100.0
New Jersey	\$0.49	\$0.64	\$2,150,335	\$4,351,929	102.4	\$5,657,276	30.0
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$0	\$0	\$0	\$0	0.0	\$87,773	100.0
North Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
North Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Ohio	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oklahoma	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Oregon	\$3.99	\$4.39	\$15,980,451	\$16,512,349	3.3	\$18,343,239	11.1
Pennsylvania	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Rhode Island	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Carolina	\$0	\$0	\$0	\$0	0.0	\$0	0.0
South Dakota	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Tennessee	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Texas	\$0	\$0	\$6,089,462	\$0	-100.0	\$0	0.0
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Washington	\$0	\$0	\$0	-\$23	-100.0	\$20,155	87,730.4
West Virginia	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Wisconsin	\$10.95	\$25.83	\$0	\$63,401,365	100.0	\$150,002,760	136.6
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$0.99	\$1.34	\$153,942,408	\$322,389,548	109.4	\$437,800,690	35.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 FMR Net Services data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes data for all 50 states and the District of Columbia. U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands) did not have any section 1915(j) expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports.

Table C.34. MFP demonstration expenditures by state, FY 2016–2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Alabama	\$0.34	\$0.57	\$2,028,750	\$1,652,485	-18.5	\$2,798,017	69.3
Alaska	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arizona	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Arkansas	\$1.92	\$1.76	\$7,305,753	\$5,758,992	-21.2	\$5,311,725	-7.8
California	\$0.79	\$0.28	\$19,844,287	\$30,969,656	56.1	\$11,242,042	-63.7
Colorado	\$0.64	\$1.20	\$2,407,793	\$3,613,327	50.1	\$6,811,566	88.5
Connecticut	\$10.84	\$9.45	\$36,384,668	\$38,739,949	6.5	\$33,743,233	-12.9
Delaware	\$3.08	\$3.05	\$2,955,561	\$2,944,000	-0.4	\$2,944,000	0.0
District of Columbia	\$4.84	\$4.49	\$2,100,002	\$3,365,993	60.3	\$3,151,957	-6.4
Florida	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Georgia	\$0.82	\$0.78	\$4,726,095	\$8,565,952	81.2	\$8,224,616	-4.0
Hawaii	\$0.72	\$0.65	\$1,078,717	\$1,029,565	-4.6	\$919,699	-10.7
Idaho	\$1.95	\$1.24	\$2,855,505	\$3,353,764	17.4	\$2,171,593	-35.2
Illinois	\$0.18	\$0.04	\$13,324,266	\$2,251,613	-83.1	\$561,119	-75.1
Indiana	\$0.48	\$0.73	\$9,560,658	\$3,218,658	-66.3	\$4,909,343	52.5
Iowa	\$2.31	\$2.38	\$12,737,829	\$7,266,867	-43.0	\$7,484,218	3.0
Kansas	\$2.76	\$2.77	\$8,019,801	\$8,014,368	-0.1	\$8,067,931	0.7
Kentucky	\$0.08	\$0.05	\$1,567,460	\$376,556	-76.0	\$241,183	-36.0
Louisiana	\$2.32	\$1.93	\$11,588,071	\$10,855,432	-6.3	\$9,001,248	-17.1
Maine	\$0.73	\$0.37	\$927,053	\$979,085	5.6	\$497,834	-49.2
Maryland	\$2.27	\$2.21	\$11,923,708	\$13,679,545	14.7	\$13,318,138	-2.6
Massachusetts	\$5.25	\$0.24	\$29,903,029	\$35,982,798	20.3	\$1,676,786	-95.3
Michigan	\$0.72	\$0.03	\$0	\$7,148,101	100.0	\$258,243	-96.4
Minnesota	\$1.32	\$2.35	\$4,971,282	\$7,343,391	47.7	\$13,190,086	79.6
Mississippi	\$1.29	\$0.83	\$5,102,557	\$3,866,217	-24.2	\$2,478,094	-35.9
Missouri	\$1.19	\$0.88	\$9,923,157	\$7,283,641	-26.6	\$5,360,789	-26.4

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
Montana	\$2.03	\$0.38	\$2,376,586	\$2,131,860	-10.3	\$402,398	-81.1
Nebraska	\$0.63	\$0.54	\$1,037,622	\$1,200,549	15.7	\$1,046,759	-12.8
Nevada	\$0.61	\$0.40	\$1,436,908	\$1,825,838	27.1	\$1,206,713	-33.9
New Hampshire	\$0.18	\$0.04	\$594,770	\$245,846	-58.7	\$51,164	-79.2
New Jersey	\$1.60	\$1.58	\$20,534,698	\$14,173,132	-31.0	\$14,071,136	-0.7
New Mexico	\$0	\$0	\$0	\$0	0.0	\$0	0.0
New York	\$1.28	\$1.01	\$19,412,745	\$25,155,225	29.6	\$19,688,065	-21.7
North Carolina	\$0.86	\$0.65	\$7,031,782	\$8,832,308	25.6	\$6,758,059	-23.5
North Dakota	\$2.53	\$1.91	\$1,519,709	\$1,907,770	25.5	\$1,446,629	-24.2
Ohio	\$6.27	\$6.85	\$59,283,903	\$73,048,108	23.2	\$79,979,172	9.5
Oklahoma	\$0.08	\$0.11	\$2,158,044	\$328,737	-84.8	\$447,323	36.1
Oregon	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Pennsylvania	\$2.53	\$1.52	\$20,465,024	\$32,413,313	58.4	\$19,512,877	-39.8
Rhode Island	\$1.19	\$1.11	\$1,439,974	\$1,254,565	-12.9	\$1,175,293	-6.3
South Carolina	\$0.08	\$0.15	\$270,443	\$418,871	54.9	\$740,343	76.7
South Dakota	\$2.17	\$2.41	\$1,464,224	\$1,895,504	29.5	\$2,116,799	11.7
Tennessee	\$1.39	\$1.64	\$13,442,829	\$9,317,060	-30.7	\$11,109,827	19.2
Texas	\$0.49	\$0.54	\$21,989,073	\$13,988,478	-36.4	\$15,348,436	9.7
Utah	\$0	\$0	\$0	\$0	0.0	\$0	0.0
Vermont	\$3.60	\$3.21	\$3,011,858	\$2,247,401	-25.4	\$2,006,243	-10.7
Virginia	\$1.80	\$1.24	\$9,685,440	\$15,217,821	57.1	\$10,551,307	-30.7
Washington	\$3.14	\$3.35	\$23,267,408	\$23,288,451	0.1	\$25,234,660	8.4
West Virginia	\$1.20	\$1.31	\$1,143,216	\$2,181,491	90.8	\$2,362,124	8.3
Wisconsin	\$1.40	\$1.38	\$9,037,213	\$8,108,435	-10.3	\$8,041,073	-0.8
Wyoming	\$0	\$0	\$0	\$0	0.0	\$0	0.0

State	FY 2017 expenditures per state resident	FY 2018 expenditures per state resident	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2018 expenditures	FY 2018 % change
United States	\$1.38	\$1.13	\$421,839,471	\$447,440,718	6.1	\$367,659,860	-17.8

Sources: Mathematica’s analysis of FY 2017 and 2018 MFP budget worksheet for proposed budget data and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Includes the most recent data for states that submitted MFP worksheet for proposed budget data to CMS. Projected expenditures were used for Delaware and Massachusetts in FY 2017 and 2018 and for Illinois and Michigan in FY 2018 only. All other expenditures represent actual expenditures. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; LTSS = long-term services and supports; MFP = Money Follows the Person.

Percentage of LTSS for HCBS

Table C.35. Percentage of LTSS for HCBS by state, FY 2016–2018

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Alabama	35	35	42.9	43.5	42.8
Alaska	9	9	64.2	62.3	62.3
Arizona	4	5	70.3	73.6	75.2
Arkansas	24	25	52.1	52.0	51.9
California	NA	NA	NA	NA	NA
Colorado	10	22	66.4	62.1	55.3
Connecticut	22	21	53.1	54.4	55.5
Delaware	39	31	46.0	42.0	47.5
District of Columbia	15	10	56.1	60.2	61.6
Florida	42	41	33.5	36.0	37.1
Georgia	30	29	47.0	48.3	48.5
Hawaii	34	34	41.5	44.2	45.5
Idaho	18	15	55.4	56.3	60.0
Illinois	NA	NA	49.3	NA	NA
Indiana	44	42	32.1	32.6	34.8
Iowa	21	39	50.4	54.4	41.5
Kansas	8	8	56.6	67.0	67.0
Kentucky	38	36	43.5	42.3	42.8
Louisiana	43	44	35.3	34.8	34.2
Maine	19	18	53.6	55.9	57.6
Maryland	16	12	55.8	59.3	60.9
Massachusetts	6	6	71.5	70.4	71.1
Michigan	37	37	39.7	43.0	42.7
Minnesota	2	2	75.7	77.0	77.4
Mississippi	46	45	27.0	31.5	32.6
Missouri	14	14	58.4	60.2	60.2
Montana	13	19	58.2	61.0	56.1
Nebraska	25	23	51.5	49.8	52.7
Nevada	12	11	56.9	61.2	61.3
New Hampshire	29	33	42.6	48.5	46.6
New Jersey	41	43	38.8	39.9	34.4
New Mexico	3	3	78.5	76.7	75.7
New York	NA	NA	61.0	NA	NA
North Carolina	NA	NA	45.0	NA	NA
North Dakota	40	38	42.1	41.1	41.7
Ohio	17	17	52.7	57.8	57.7
Oklahoma	27	30	47.2	49.0	48.0
Oregon	1	1	81.4	82.7	83.4
Pennsylvania	23	16	48.2	52.6	58.7
Rhode Island	45	46	55.4	31.7	30.0
South Carolina	33	32	49.1	46.8	47.2
South Dakota	32	28	47.7	47.9	49.8

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Tennessee	28	24	53.5	48.6	52.1
Texas	11	13	58.0	61.6	60.5
Utah	31	26	52.4	48.2	51.4
Vermont	20	20	70.3	54.6	55.8
Virginia	NA	NA	57.3	NA	NA
Washington	7	7	68.5	69.4	70.0
West Virginia	36	40	44.6	43.0	41.4
Wisconsin	5	4	67.7	72.3	75.3
Wyoming	26	27	49.6	49.3	50.3
United States			57.0	55.4	56.1

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, New York, North Carolina, and Virginia. Excludes the U.S. territories from all data years. Includes data for all other states and the District of Columbia. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person. MLTSS = managed long-term services and supports; NA = not available.

Table C.36. Percentage of LTSS for HCBS for older adults and people with physical or other disabilities by state, FY 2016–2018

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Alabama	38	35	14.8	14.5	16.1
Alaska	5	7	50.8	45.3	44.4
Arizona	10	9	44.2	39.9	39.9
Arkansas	12	13	33.9	35.5	36.0
California	NA	NA	NA	NA	NA
Colorado	8	8	58.3	43.3	40.4
Connecticut	13	11	39.7	35.5	36.9
Delaware	29	25	35.3	20.1	22.2
District of Columbia	3	3	49.1	53.1	55.6
Florida	31	29	22.5	18.8	21.4
Georgia	18	17	29.1	30.1	29.8
Hawaii	28	31	26.0	20.1	20.2
Idaho	15	10	34.4	34.3	38.7
Illinois	NA	NA	45.8	NA	NA
Indiana	32	32	17.8	18.4	20.0
Iowa	37	37	25.4	16.3	10.2
Kansas	NA	NA	30.9	NA	NA
Kentucky	39	36	12.8	11.6	13.5
Louisiana	25	28	24.0	22.7	21.6
Maine	19	16	27.9	29.8	32.6
Maryland	33	33	28.4	18.0	18.2
Massachusetts	NA	NA	62.4	NA	NA
Michigan	14	14	30.5	35.0	34.2
Minnesota	1	1	69.9	71.3	71.9
Mississippi	22	18	25.5	28.2	29.1
Missouri	7	5	42.7	43.5	45.2
Montana	21	21	38.2	28.6	25.7
Nebraska	20	19	28.1	29.3	28.6
Nevada	11	12	36.7	37.1	36.2
New Hampshire	NA	NA	11.4	NA	NA
New Jersey	34	30	19.6	17.6	20.9
New Mexico	2	2	73.5	66.4	63.5
New York	NA	NA	52.2	NA	NA
North Carolina	NA	NA	41.0	NA	NA
North Dakota	35	34	15.3	16.9	17.5
Ohio	6	6	36.9	44.6	44.5
Oklahoma	17	20	30.1	30.2	27.7
Oregon	26	26	80.3	21.4	22.1
Pennsylvania	9	NA	34.6	41.9	NA
Rhode Island	40	38	24.4	10.7	8.7
South Carolina	16	15	31.2	31.4	32.8
South Dakota	30	24	18.1	19.5	22.2
Tennessee	41	40	34.7	2.9	3.0

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Texas	NA	NA	55.7	NA	NA
Utah	27	27	25.9	20.3	21.6
Vermont	NA	NA	45.3	NA	NA
Virginia	NA	NA	48.4	NA	NA
Washington	36	39	71.1	16.4	7.8
West Virginia	24	23	26.3	24.9	22.6
Wisconsin	4	4	54.4	47.4	48.6
Wyoming	23	22	25.8	25.9	24.9
United States			46.4	33.7	32.8

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, Kansas, Massachusetts, New Hampshire, New York, North Carolina, Texas, Vermont, and Virginia. Excludes FY 2018 data for Pennsylvania. Excludes the U.S. territories from all data years. Includes data for all other states and the District of Columbia. Methodology changes in how we are defining this population group could affect FY 2016 to 2017 and 2018 trending. Further details about these changes, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person. MLTSS = managed long-term services and supports; NA = not available.

Table C.37. Percentage of LTSS for HCBS for people with autism spectrum disorder, intellectual or developmental disabilities by state, FY 2016-2018

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Alabama	3	3	99.4	99.5	99.4
Alaska	4	4	98.5	98.5	98.6
Arizona	NA	NA	96.5	NA	NA
Arkansas	37	34	54.7	54.0	57.9
California	NA	NA	86.5	NA	NA
Colorado	13	6	91.2	85.4	96.5
Connecticut	22	23	78.5	79.0	80.0
Delaware	35	21	70.0	64.4	81.0
District of Columbia	30	30	69.1	73.4	72.4
Florida	27	27	73.5	75.2	76.3
Georgia	7	7	92.7	93.6	95.1
Hawaii	9	8	92.0	92.5	94.1
Idaho	14	16	82.3	83.8	84.0
Illinois	NA	NA	52.0	NA	NA
Indiana	29	28	72.5	73.7	75.2
Iowa	39	38	63.8	8.4	11.7
Kansas	NA	NA	84.7	NA	NA
Kentucky	17	19	83.3	82.1	81.1
Louisiana	36	35	54.7	55.7	56.4
Maine	16	17	81.6	82.3	83.2
Maryland	5	5	97.8	98.4	98.4
Massachusetts	NA	NA	90.8	NA	NA
Michigan	2	2	100.0	100.0	100.0
Minnesota	11	11	88.0	89.1	90.7
Mississippi	38	37	23.0	29.6	33.1
Missouri	10	12	87.7	89.3	90.5
Montana	6	10	91.9	96.6	91.3
Nebraska	26	20	79.3	76.2	81.0
Nevada	12	14	82.5	85.8	86.3
New Hampshire	NA	NA	98.0	NA	NA
New Jersey	33	36	72.7	68.8	55.9
New Mexico	8	9	92.8	93.1	93.0
New York	NA	NA	82.2	NA	NA
North Carolina	NA	NA	58.8	NA	NA
North Dakota	34	33	68.8	66.0	68.6
Ohio	31	31	68.8	71.7	72.4
Oklahoma	19	22	77.7	80.8	80.8
Oregon	1	1	100.0	100.0	100.0
Pennsylvania	21	NA	79.7	79.2	NA
Rhode Island	NA	NA	95.8	NA	NA
South Carolina	32	32	71.2	69.3	71.8
South Dakota	20	24	79.1	79.4	80.0
Tennessee	25	26	77.4	77.4	78.4

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Texas	NA	NA	51.6	NA	NA
Utah	24	25	75.1	77.7	78.8
Vermont	NA	NA	99.4	NA	NA
Virginia	NA	NA	76.0	NA	NA
Washington	28	29	74.0	73.7	75.0
West Virginia	18	18	82.5	81.8	81.5
Wisconsin	23	15	89.0	78.0	85.7
Wyoming	15	13	84.6	83.6	87.9
United States			77.9	77.5	78.6

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for Arizona, California, Illinois, Kansas, Massachusetts, New Hampshire, New York, North Carolina, Rhode Island, Texas, Vermont, and Virginia. Excludes FY 2018 data for Pennsylvania. Excludes the U.S. territories from all data years. Includes data for all other states and the District of Columbia. Methodology changes in how we are defining this population group could affect FY 2016 to 2017 trending. Further details about these changes, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person. MLTSS = managed long-term services and supports; NA = not available.

Table C.38. Percentage of LTSS for HCBS for people with behavioral health conditions by state, FY 2016-2018

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Alabama	10	12	68.9	68.5	66.5
Alaska	36	36	0.0	0.0	0.0
Arizona	11	17	25.6	66.0	47.9
Arkansas	5	7	81.2	80.7	79.1
California	NA	NA	1.7	NA	NA
Colorado	7	4	84.4	78.3	88.2
Connecticut	27	24	6.3	17.3	25.9
Delaware	17	15	69.2	56.3	54.7
District of Columbia	26	25	27.2	20.8	23.4
Florida	28	31	0.0	13.0	6.9
Georgia	3	3	91.5	91.6	94.3
Hawaii	1	1	100.0	100.0	100.0
Idaho	37	37	0.0	0.0	0.0
Illinois	NA	NA	46.2	NA	NA
Indiana	24	26	21.8	22.1	23.4
Iowa	30	30	79.7	9.8	8.2
Kansas	NA	NA	88.6	NA	NA
Kentucky	32	33	2.1	4.5	4.6
Louisiana	35	35	0.3	0.2	0.2
Maine	29	28	13.7	10.2	9.4
Maryland	9	10	73.2	73.3	75.3
Massachusetts	NA	NA	81.1	NA	NA
Michigan	33	34	13.0	3.4	3.9
Minnesota	25	27	8.1	21.7	14.3
Mississippi	21	19	40.1	39.6	40.5
Missouri	14	21	60.5	58.4	38.8
Montana	13	14	54.8	62.0	57.6
Nebraska	38	38	0.0	0.0	0.0
Nevada	6	6	71.0	79.1	82.9
New Hampshire	NA	NA	43.2	NA	NA
New Jersey	31	32	4.0	4.9	4.9
New Mexico	22	29	18.1	28.9	8.5
New York	NA	NA	10.4	NA	NA
North Carolina	NA	NA	5.4	NA	NA
North Dakota	23	23	13.0	26.3	26.0
Ohio	4	5	88.3	88.5	86.1
Oklahoma	20	18	26.7	40.0	45.6
Oregon	8	8	77.5	77.9	78.8
Pennsylvania	34	NA	0.4	1.6	NA
Rhode Island	2	2	95.4	94.5	95.9
South Carolina	18	22	64.5	47.6	37.6
South Dakota	12	11	71.7	64.5	68.2
Tennessee	39	9	0.0	0.0	76.7

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Texas	NA	NA	15.8	NA	NA
Utah	15	13	56.1	57.6	65.5
Vermont	NA	NA	99.6	NA	NA
Virginia	NA	NA	0.0	NA	NA
Washington	40	39	0.0	0.0	0.0
West Virginia	19	16	49.8	46.5	50.8
Wisconsin	16	20	63.4	56.9	39.4
Wyoming	41	40	0.0	0.0	0.0
United States			42.9	49.7	49.9

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Illinois, Kansas, Massachusetts, New Hampshire, New York, North Carolina, Texas, Vermont, and Virginia. Excludes FY 2018 data for Pennsylvania. Excludes the U.S. territories from all data years. Includes data for all other states and the District of Columbia. Methodology changes in how we are defining this population group could affect FY 2016 to 2017 trending. Further details about these changes, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person. MLTSS = managed long-term services and supports; NA = not available.

Table C.39. Percentage of LTSS for HCBS for multiple populations by state, FY 2016–2018

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Alabama	1	1	NA	100.0	100.0
Alaska	2	2	NA	100.0	100.0
Arizona	38	37	NA	87.6	91.1
Arkansas	3	3	NA	100.0	100.0
California	NA	NA	NA	NA	NA
Colorado	NA	NA	NA	NA	NA
Connecticut	4	4	NA	100.0	100.0
Delaware	5	5	NA	100.0	100.0
District of Columbia	6	6	NA	100.0	100.0
Florida	39	38	NA	70.9	72.0
Georgia	7	7	NA	100.0	100.0
Hawaii	40	39	NA	61.7	61.2
Idaho	8	8	NA	100.0	100.0
Illinois	NA	NA	NA	NA	NA
Indiana	9	9	NA	100.0	100.0
Iowa	10	10	NA	100.0	100.0
Kansas	NA	NA	NA	NA	NA
Kentucky	11	11	NA	100.0	100.0
Louisiana	12	12	NA	100.0	100.0
Maine	13	13	NA	100.0	100.0
Maryland	14	14	NA	100.0	100.0
Massachusetts	NA	NA	NA	NA	NA
Michigan	15	15	NA	100.0	100.0
Minnesota	37	36	NA	99.3	99.3
Mississippi	16	16	NA	100.0	100.0
Missouri	17	17	NA	100.0	100.0
Montana	18	18	NA	100.0	100.0
Nebraska	19	19	NA	100.0	100.0
Nevada	20	20	NA	100.0	100.0
New Hampshire	NA	NA	NA	NA	NA
New Jersey	21	21	NA	100.0	100.0
New Mexico	22	22	NA	100.0	100.0
New York	NA	NA	NA	NA	NA
North Carolina	NA	NA	NA	NA	NA
North Dakota	23	23	NA	100.0	100.0
Ohio	24	24	NA	100.0	100.0
Oklahoma	25	25	NA	100.0	100.0
Oregon	26	26	NA	100.0	100.0
Pennsylvania	27	NA	NA	100.0	NA
Rhode Island	28	27	NA	100.0	100.0
South Carolina	29	28	NA	100.0	100.0
South Dakota	30	29	NA	100.0	100.0
Tennessee	31	30	NA	100.0	100.0
Texas	NA	NA	NA	NA	NA

State	FY 2017 rank	FY 2018 rank	FY 2016	FY 2017	FY 2018
Utah	32	31	NA	100.0	100.0
Vermont	NA	NA	NA	NA	NA
Virginia	NA	NA	NA	NA	NA
Washington	33	32	NA	100.0	100.0
West Virginia	34	33	NA	100.0	100.0
Wisconsin	35	34	NA	100.0	100.0
Wyoming	36	35	NA	100.0	100.0
United States				96.5	96.9

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 data, state-submitted MLTSS data, and MFP budget worksheet for proposed budget data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 LTSS Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for California, Colorado, Illinois, Kansas, Massachusetts, New Hampshire, New York, North Carolina, Texas, Vermont, and Virginia. Excludes FY 2018 data for Pennsylvania. Excludes the U.S. territories from all data years. Includes data for all other states and the District of Columbia. Methodology changes in how we are defining this population group could affect FY 2016 to 2017 trending. Further details about these changes, data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; HCBS = home and community-based services; MFP = Money Follows the Person. MLTSS = managed long-term services and supports; NA = not available.

Section 1915(c) waiver program-level population tables, FY 2016 to 2018

Table C.40. Section 1915(c) waiver program expenditures for older adults and people with physical or other disabilities by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Alabama	0068	Older Adults, Physical Disabilities, Other Disabilities	\$68,066,836	\$59,559,082	-12.5	\$12.22	\$74,101,956	24.4	\$15.16
Alabama	0241	Physical Disabilities	\$5,439,132	\$4,874,489	-10.4	\$1.00	\$6,082,912	24.8	\$1.24
Alabama	0878	Older Adults, Physical Disabilities, Other Disabilities	\$1,705,797	\$3,169,702	85.8	\$0.65	-\$1,233,096	-138.9	-\$0.25
Alaska	0261	Older Adults, Physical Disabilities	\$72,951,501	\$70,951,133	-2.7	\$95.92	\$69,423,617	-2.2	\$94.44
Arkansas	0195	Older Adults, Physical Disabilities	\$85,119,203	\$121,381,017	42.6	\$40.44	\$126,952,625	4.6	\$42.18
Arkansas	0312	Physical Disabilities	\$19,230,700	-\$41,994	-100.2	-\$0.01	-\$86,776	-106.6	-\$0.03
Arkansas	0400	Older Adults, Physical Disabilities	\$22,552,943	\$23,245,489	3.1	\$7.75	\$22,221,819	-4.4	\$7.38
California	0141	Older Adults	\$31,640,649	\$18,352,549	-42.0	\$0.47	\$18,974,003	3.4	\$0.48
California	0431	Older Adults, Physical Disabilities, Other Disabilities	\$89,658,475	\$91,779,609	2.4	\$2.33	\$104,129,486	13.5	\$2.64
California	0855	Older Adults, Physical Disabilities, Other Disabilities	\$632,265	\$706,350	11.7	\$0.02	\$0	0.0	\$0
Colorado	0961	Older Adults, Physical Disabilities	\$1,932,934	\$1,806,143	-6.6	\$0.32	\$5,939,012	228.8	\$1.04
Connecticut	0140	Older Adults	\$450,531,892	\$402,801,132	-10.6	\$112.73	\$458,335,870	13.8	\$128.33
Connecticut	0301	Physical Disabilities	\$14,466,731	\$2,237,365	-84.5	\$0.63	\$1,992,514	-10.9	\$0.56
Connecticut	40110	Physical Disabilities - Children	\$71,374	\$69,781	-2.2	\$0.02	\$78,418	12.4	\$0.02
District of Columbia	0334	Older Adults, Physical Disabilities	\$42,057,130	\$67,993,226	61.7	\$97.85	\$94,111,042	38.4	\$134.15
Georgia	0112	Older Adults, Physical Disabilities	\$436,069,300	\$469,265,117	7.6	\$45.08	\$490,965,154	4.6	\$46.71
Georgia	4170	Physical Disabilities	\$54,047,611	\$71,038,698	31.4	\$6.82	\$71,332,488	0.4	\$6.79
Idaho	1076	Older Adults, Physical Disabilities, Other Disabilities	\$68,393,204	\$67,006,236	-2.0	\$39.01	\$74,753,177	11.6	\$42.70

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Illinois	0142	Physical Disabilities	\$223,361,104	\$195,061,954	-12.7	\$15.26	\$207,005,473	6.1	\$16.27
Illinois	0143	Older Adults, Physical Disabilities	\$705,339,874	\$302,060,691	-57.2	\$23.64	\$386,868,937	28.1	\$30.41
Illinois	0326	Older Adults, Physical Disabilities	\$114,432,957	\$81,771,647	-28.5	\$6.40	\$112,990,283	38.2	\$8.88
Indiana	0210	Older Adults, Physical Disabilities, Other Disabilities	\$201,467,627	\$237,722,769	18.0	\$35.70	\$279,546,208	17.6	\$41.75
Iowa	0345	Physical Disabilities	\$2,187,961	\$56,685	-97.4	\$0.02	\$133,131	134.9	\$0.04
Iowa	4111	Physical Disabilities	\$13,648,015	\$4,909,788	-64.0	\$1.56	\$6,553,454	33.5	\$2.08
Iowa	4155	Older Adults	\$85,792,992	\$209,114	-99.8	\$0.07	\$1,419,585	578.9	\$0.45
Kansas	0303	Older Adults	\$56,621,892	\$0	0.0	\$0	\$5,107	0.0	\$0
Kansas	0304	Physical Disabilities	\$102,778,989	-\$427	-100.0	\$0	\$1,419	432.3	\$0
Kentucky	0144	Older Adults, Physical Disabilities, Other Disabilities	\$96,083,293	\$88,579,050	-7.8	\$19.90	\$114,105,574	28.8	\$25.58
Louisiana	0121	Older Adults, Physical Disabilities	\$8,507,674	\$7,568,627	-11.0	\$1.62	\$6,823,506	-9.8	\$1.46
Louisiana	0866	Older Adults, Physical Disabilities	\$104,833,217	\$99,293,047	-5.3	\$21.26	\$96,737,538	-2.6	\$20.76
Maine	0276	Older Adults, Physical Disabilities	\$20,356,818	\$22,317,985	9.6	\$16.72	\$24,893,029	11.5	\$18.59
Maine	0995	Older Adults, Other Developmental Disabilities	\$2,688,522	\$3,088,763	14.9	\$2.31	\$3,541,292	14.7	\$2.64
Maryland	0265	Older Adults, Physical Disabilities	\$40,263,477	\$40,771,647	1.3	\$6.77	\$30,428,221	-25.4	\$5.04
Maryland	0353	Physical Disabilities	\$0	\$26,041	100.0	\$0	\$10,771,440	41,263.4	\$1.78
Maryland	0645	Older Adults, Physical Disabilities, Other Disabilities	\$87,123,756	\$95,102,725	9.2	\$15.79	\$94,568,757	-0.6	\$15.67
Massachusetts	0059	Older Adults, Physical Disabilities	\$182,667,892	\$169,795,613	-7.0	\$24.75	\$178,163,910	4.9	\$25.89
Michigan	0233	Older Adults, Physical Disabilities	\$322,700,000	\$327,243,472	1.4	\$32.81	\$341,560,777	4.4	\$34.21
Michigan	1126	Older Adults, Physical Disabilities	\$0	\$0	0.0	\$0	\$0	0.0	\$0
Minnesota	0025	Older Adults	\$340,170,135	\$324,945,988	-4.5	\$58.38	\$346,523,391	6.6	\$61.81
Minnesota	0166	Physical Disabilities, Other Disabilities	\$695,127,227	\$782,117,704	12.5	\$140.51	\$880,245,183	12.5	\$157.01

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Minnesota	4128	Other Disabilities	\$32,152,155	\$36,671,197	14.1	\$6.59	\$41,912,166	14.3	\$7.48
Mississippi	0255	Older Adults, Physical Disabilities, Other Disabilities	\$47,970,431	\$62,004,917	29.3	\$20.75	\$44,720,469	-27.9	\$15.00
Mississippi	0272	Older Adults, Physical Disabilities	\$170,874,937	\$230,603,170	35.0	\$77.16	\$249,598,925	8.2	\$83.73
Mississippi	0355	Older Adults, Physical Disabilities, Other Disabilities	\$10,241,620	\$11,047,204	7.9	\$3.70	\$11,196,520	1.4	\$3.76
Missouri	0026	Older Adults, Physical Disabilities	\$64,599,569	\$63,214,733	-2.1	\$10.35	\$63,448,174	0.4	\$10.36
Missouri	0346	Physical Disabilities	\$1,673,672	\$1,999,483	19.5	\$0.33	\$4,694,255	134.8	\$0.77
Missouri	1021	Other Disabilities	\$13,806,049	\$15,975,312	15.7	\$2.62	\$16,786,740	5.1	\$2.74
Montana	0148	Older Adults, Physical Disabilities, Other Disabilities	\$33,701,040	\$35,983,172	6.8	\$34.19	\$33,910,976	-5.8	\$31.97
Nebraska	0187	Older Adults, Physical Disabilities	\$97,389,933	\$110,195,838	13.1	\$57.52	\$124,146,942	12.7	\$64.47
Nevada	0152	Older Adults	\$12,652,871	\$12,591,252	-0.5	\$4.24	\$13,864,704	10.1	\$4.58
Nevada	4150	Older Adults, Physical Disabilities	\$4,800,028	\$5,682,974	18.4	\$1.91	\$5,268,219	-7.3	\$1.74
New Hampshire	0060	Older Adults, Physical Disabilities, Other Disabilities	\$37,165,002	NA	NA	NA	NA	NA	NA
New Mexico	0449	Older Adults, Physical Disabilities	\$0	-\$1,950	-100.0	\$0	-\$1,300	33.3	\$0
New York	0034	Older Adults, Physical Disabilities	\$231,013	\$6,406	-97.2	\$0	\$743	-88.4	\$0
New York	0444	Older Adults, Physical Disabilities	\$158,251,035	\$165,119,729	4.3	\$8.43	\$174,935,819	5.9	\$8.96
North Carolina	0132	Older Adults, Physical Disabilities	\$234,595,952	\$248,110,350	5.8	\$24.16	\$249,541,837	0.6	\$24.04
North Dakota	0273	Older Adults, Physical Disabilities, Other Disabilities	\$6,667,095	\$7,140,022	7.1	\$9.46	\$7,219,258	1.1	\$9.52
Ohio	0198	Older Adults, Physical Disabilities	\$239,555,523	\$260,479,624	8.7	\$22.34	\$277,671,541	6.6	\$23.78
Ohio	0337	Physical Disabilities	\$121,571,128	\$122,256,105	0.6	\$10.49	\$114,253,399	-6.5	\$9.79
Ohio	0440	Older Adults, Other Disabilities	\$168,823	\$11,371	-93.3	\$0	-\$42	-100.4	\$0
Ohio	0446	Older Adults, Physical Disabilities	\$47,252,535	\$47,176,393	-0.2	\$4.05	\$49,681,755	5.3	\$4.25
Ohio	1035	Older Adults, Physical Disabilities	\$753,971,078	\$1,162,125,208	54.1	\$99.67	\$1,161,558,184	0.0	\$99.48

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Oklahoma	0256	Older Adults, Physical Disabilities, Other Disabilities	\$197,475,611	\$196,118,831	-0.7	\$49.89	\$166,241,427	-15.2	\$42.19
Oregon	0185	Older Adults, Physical Disabilities	\$7,918,749	\$5,972,957	-24.6	\$1.44	\$8,836,819	47.9	\$2.11
Oregon	0565	Physical Disabilities - Children	\$548,321	\$804,752	46.8	\$0.19	\$311,698	-61.3	\$0.07
Pennsylvania	0277	Physical Disabilities	\$400,223,987	\$525,944,285	31.4	\$41.13	\$649,783,639	23.5	\$50.76
Pennsylvania	0279	Older Adults, Physical Disabilities	\$844,637,378	\$1,225,704,556	45.1	\$95.85	\$1,531,097,219	24.9	\$119.61
Pennsylvania	0319	Physical Disabilities	\$592,843,681	\$741,831,010	25.1	\$58.01	\$841,906,192	13.5	\$65.77
Pennsylvania	0386	Older Adults, Physical Disabilities	\$65,779,220	\$77,341,781	17.6	\$6.05	\$14,218,184	-81.6	\$1.11
South Carolina	0284	Physical Disabilities, Other Disabilities	\$31,670,227	\$31,971,322	1.0	\$6.37	\$35,308,739	10.4	\$6.94
South Carolina	0405	Older Adults, Physical Disabilities	\$181,850,539	\$184,365,164	1.4	\$36.72	\$211,717,461	14.8	\$41.64
South Dakota	0189	Older Adults, Physical Disabilities, Other Disabilities	\$13,443,481	\$15,539,132	15.6	\$17.80	\$14,622,636	-5.9	\$16.64
South Dakota	0264	Older Adults, Physical Disabilities	\$3,881,995	\$4,251,152	9.5	\$4.87	\$5,143,324	21.0	\$5.85
Texas	0266	Older Adults, Physical Disabilities	-\$670,489	-\$206,987	69.1	-\$0.01	\$0	0.0	\$0
Utah	0247	Older Adults	\$5,445,989	\$6,251,785	14.8	\$2.02	\$4,987,976	-20.2	\$1.58
Utah	0331	Older Adults, Physical Disabilities	\$2,091,886	\$2,185,095	4.5	\$0.70	\$2,498,808	14.4	\$0.79
Utah	0439	Older Adults, Physical Disabilities, Other Disabilities	\$40,865,544	\$47,394,216	16.0	\$15.28	\$49,081,330	3.6	\$15.56
Virginia	40206	Older Adults, Physical Disabilities	\$767,694	\$195,245	-74.6	\$0.02	\$0	0.0	\$0
Washington	0049	Older Adults, Physical Disabilities, Other Disabilities	\$25,899,366	\$13,658,932	-47.3	\$1.84	-\$3,812,954	-127.9	-\$0.51
Washington	0443	Older Adults, Physical Disabilities, Other Disabilities	\$12,182,203	\$11,950,113	-1.9	\$1.61	-\$8,206,440	-168.7	-\$1.09
Washington	1086	Older Adults, Physical Disabilities, Other Disabilities	\$1,228,748	\$38,276,740	3,015.1	\$5.16	-\$5,592,739	-114.6	-\$0.74
West Virginia	0134	Older Adults, Physical Disabilities	\$103,811,699	\$101,964,857	-1.8	\$56.12	\$101,577,615	-0.4	\$56.30
Wisconsin	0154	Older Adults, Physical Disabilities	\$47,185,467	\$52,512,196	11.3	\$9.07	\$29,923,069	-43.0	\$5.15

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Wisconsin	0413	Physical Disabilities, Other Disabilities - Children	\$4,220,251	\$6,455,750	53.0	\$1.11	\$1,332,512	-79.4	\$0.23
Wisconsin	0485	Older Adults, Physical Disabilities	\$152,982,373	\$0	0.0	\$0	\$0	0.0	\$0
Wyoming	0236	Older Adults, Physical Disabilities	\$16,536,573	\$20,514,163	24.1	\$35.43	\$27,733,321	35.2	\$48.01
Wyoming	0369	Older Adults, Physical Disabilities	\$3,744,723	\$1,309,279	-65.0	\$2.26	\$0	0.0	\$0
Total	All		\$9,716,628,349	\$10,169,536,843	4.7	\$14.25	\$11,064,079,556	8.8	\$15.44

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; NA = not available.

Table C.41. Section 1915(c) waiver program expenditures for autism spectrum disorder, intellectual disabilities, or developmental disabilities by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Alabama	0001	Intellectual Disabilities	\$340,869,905	\$344,450,003	1.1	\$70.66	\$346,414,330	0.6	\$70.87
Alabama	0391	Intellectual Disabilities - Children	\$4,953,291	\$5,178,808	4.6	\$1.06	\$5,049,907	-2.5	\$1.03
Alaska	0260	ASD, Developmental Disabilities, Intellectual Disabilities	\$180,026,532	\$183,520,911	1.9	\$248.10	\$180,686,275	-1.5	\$245.79
Alaska	0262	ASD, Developmental Disabilities, Intellectual Disabilities	\$8,946,917	\$8,171,283	-8.7	\$11.05	\$8,687,666	6.3	\$11.82
Arkansas	0188	ASD, Developmental Disabilities, Intellectual Disabilities	\$213,760,704	\$222,693,633	4.2	\$74.20	\$232,599,602	4.4	\$77.28
Arkansas	0936	ASD - Children Only	\$2,482,579	\$2,444,252	-1.5	\$0.81	\$2,943,709	20.4	\$0.98
California	0336	ASD, Developmental Disabilities, Intellectual Disabilities	\$3,838,338,886	\$3,261,719,654	-15.0	\$82.87	\$3,523,834,722	8.0	\$89.30
Colorado	0007	Developmental Disabilities	\$357,747,681	\$271,650,240	-24.1	\$48.41	\$409,566,607	50.8	\$71.96
Colorado	0293	Developmental Disabilities	\$55,269,733	\$51,730,956	-6.4	\$9.22	\$71,663,779	38.5	\$12.59
Colorado	0305	Developmental Disabilities - Children	\$2,075,760	\$1,384,298	-33.3	\$0.25	\$3,362,321	142.9	\$0.59
Colorado	0434	ASD - Children Only	\$538,638	\$397,304	-26.2	\$0.07	\$10,840,513	2,628.5	\$1.90
Colorado	4180	Developmental Disabilities - Children	\$22,651,423	\$22,206,374	-2.0	\$3.96	\$27,014,098	21.7	\$4.75
Connecticut	0426	Developmental Disabilities, Intellectual Disabilities	\$120,334,015	\$157,158,056	30.6	\$43.98	\$147,357,190	-6.2	\$41.26
Connecticut	0437	Developmental Disabilities, Intellectual Disabilities	\$726,673,013	\$871,391,044	19.9	\$243.86	\$843,878,447	-3.2	\$236.28
Connecticut	0881	Developmental Disabilities, Intellectual Disabilities	\$20,742,864	\$24,143,377	16.4	\$6.76	\$25,819,359	6.9	\$7.23
Connecticut	0993	ASD	\$2,553,421	\$1,172,820	-54.1	\$0.33	\$1,636,109	39.5	\$0.46
Connecticut	1040	ASD - Children Only	\$833,221	\$133,631	-84.0	\$0.04	\$0	0.0	\$0

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State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Delaware	0009	ASD, Intellectual Disabilities	\$108,502,459	\$130,964,420	20.7	\$136.87	\$139,590,524	6.6	\$144.58
District of Columbia	0307	Developmental Disabilities, Intellectual Disabilities	\$207,293,315	\$224,139,367	8.1	\$322.55	\$241,892,500	7.9	\$344.80
Florida	0867	ASD, Developmental Disabilities, Intellectual Disabilities	\$924,617,878	\$1,016,836,438	10.0	\$48.50	\$1,084,548,133	6.7	\$51.05
Georgia	0175	Developmental Disabilities, Intellectual Disabilities	\$64,915,151	\$61,948,480	-4.6	\$5.95	\$62,311,586	0.6	\$5.93
Georgia	0323	Developmental Disabilities, Intellectual Disabilities	\$471,426,004	\$520,192,399	10.3	\$49.97	\$585,013,366	12.5	\$55.66
Hawaii	0013	Developmental Disabilities, Intellectual Disabilities	\$110,320,905	\$112,117,659	1.6	\$78.71	\$129,861,581	15.8	\$91.41
Idaho	0076	ASD, Developmental Disabilities, Intellectual Disabilities	\$195,477,772	\$216,144,385	10.6	\$125.83	\$239,318,367	10.7	\$136.71
Idaho	0859	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$22,455,369	\$16,578,269	-26.2	\$9.65	\$0	0.0	\$0
Idaho	0887	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$8,976,046	\$8,485,221	-5.5	\$4.94	\$8,526,737	0.5	\$4.87
Illinois	0350	ASD, Developmental Disabilities, Intellectual Disabilities	\$744,354,984	\$689,184,090	-7.4	\$53.93	\$852,640,321	23.7	\$67.02
Illinois	0464	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$17,835,144	\$17,839,866	0.0	\$1.40	\$17,030,227	-4.5	\$1.34
Illinois	0473	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$23,333,690	\$20,854,414	-10.6	\$1.63	\$20,866,683	0.1	\$1.64
Indiana	0378	ASD, Developmental Disabilities, Intellectual Disabilities	\$601,540,355	\$634,104,715	5.4	\$95.24	\$682,957,578	7.7	\$102.00
Indiana	0387	ASD, Developmental Disabilities, Intellectual Disabilities	\$109,058,521	\$127,118,071	16.6	\$19.09	\$149,526,555	17.6	\$22.33
Iowa	0242	Intellectual Disabilities	\$488,044,712	\$22,250,852	-95.4	\$7.08	\$38,677,272	73.8	\$12.28

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Kansas	0224	ASD, Developmental Disabilities, Intellectual Disabilities	\$334,115,764	\$22,913	-100.0	\$0.01	\$13,153	-42.6	\$0
Kansas	0476	ASD - Children Only	\$303,933	\$0	0.0	\$0	\$0	0.0	\$0
Kentucky	0314	Developmental Disabilities, Intellectual Disabilities	\$345,624,823	\$337,752,154	-2.3	\$75.86	\$347,576,152	2.9	\$77.91
Kentucky	0475	Developmental Disabilities, Intellectual Disabilities	\$321,129,506	\$323,833,100	0.8	\$72.73	\$318,768,302	-1.6	\$71.45
Louisiana	0361	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$12,003,047	\$11,081,844	-7.7	\$2.37	\$10,299,871	-7.1	\$2.21
Louisiana	0401	ASD, Developmental Disabilities, Intellectual Disabilities	\$439,103,106	\$446,876,573	1.8	\$95.68	\$447,139,778	0.1	\$95.96
Louisiana	0453	ASD, Developmental Disabilities, Intellectual Disabilities	\$12,341,933	\$12,823,215	3.9	\$2.75	\$9,612,818	-25.0	\$2.06
Louisiana	0472	ASD, Developmental Disabilities, Intellectual Disabilities	\$647,151	\$632,036	-2.3	\$0.14	\$2,207,150	249.2	\$0.47
Maine	0159	ASD, Intellectual Disabilities	\$296,343,891	\$317,126,604	7.0	\$237.62	\$338,398,412	6.7	\$252.71
Maine	0467	ASD, Intellectual Disabilities	\$44,157,623	\$45,545,015	3.1	\$34.13	\$57,023,682	25.2	\$42.58
Maryland	0023	Developmental Disabilities	\$728,729,301	\$867,343,978	19.0	\$143.98	\$920,688,314	6.2	\$152.54
Maryland	0339	ASD - Children Only	\$35,154,728	\$35,108,831	-0.1	\$5.83	\$35,909,932	2.3	\$5.95
Massachusetts	0826	Intellectual Disabilities	\$53,797,898	\$62,657,723	16.5	\$9.13	\$59,866,163	-4.5	\$8.70
Massachusetts	0827	Intellectual Disabilities	\$1,159,247,840	\$1,278,157,822	10.3	\$186.33	\$1,347,789,329	5.4	\$195.82
Massachusetts	0828	Intellectual Disabilities	\$51,494,448	\$57,741,595	12.1	\$8.42	\$61,785,934	7.0	\$8.98
Massachusetts	40207	ASD - Children Only	\$3,443,268	\$3,905,328	13.4	\$0.57	\$2,717,030	-30.4	\$0.39
Michigan	0167	Developmental Disabilities, Intellectual Disabilities	\$445,276,900	\$437,431,817	-1.8	\$43.86	\$430,042,729	-1.7	\$43.07
Michigan	4119	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$14,027,572	\$13,793,901	-1.7	\$1.38	\$16,475,098	19.4	\$1.65
Minnesota	0061	Developmental Disabilities, Intellectual Disabilities	\$1,204,063,310	\$1,271,489,557	5.6	\$228.43	\$1,374,482,111	8.1	\$245.17

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Mississippi	0282	ASD, Developmental Disabilities, Intellectual Disabilities	\$77,608,475	\$104,546,892	34.7	\$34.98	\$117,788,679	12.7	\$39.51
Missouri	0178	Developmental Disabilities, Intellectual Disabilities	\$697,430,971	\$801,035,991	14.9	\$131.17	\$830,168,206	3.6	\$135.61
Missouri	0404	Developmental Disabilities, Intellectual Disabilities	\$41,768,769	\$63,158,392	51.2	\$10.34	\$79,794,254	26.3	\$13.03
Missouri	0698	ASD - Children Only	\$1,254,271	\$965,153	-23.1	\$0.16	\$3,014	-99.7	\$0
Missouri	0841	ASD, Developmental Disabilities, Intellectual Disabilities	\$14,373,085	\$14,420,221	0.3	\$2.36	\$11,312,242	-21.6	\$1.85
Missouri	40185	Developmental Disabilities, Intellectual Disabilities - Children	\$3,910,277	\$3,644,633	-6.8	\$0.60	\$3,900,162	7.0	\$0.64
Montana	0208	Developmental Disabilities, Intellectual Disabilities	\$106,730,562	\$113,589,501	6.4	\$107.93	\$113,205,239	-0.3	\$106.73
Montana	0667	ASD - Children Only	\$1,261,584	\$1,099,399	-12.9	\$1.04	\$133,479	-87.9	\$0.13
Montana	1037	Developmental Disabilities, Intellectual Disabilities	\$12,927	\$0	0.0	\$0	\$0	0.0	\$0
Nebraska	0394	ASD, Developmental Disabilities, Intellectual Disabilities	\$14,548,928	\$14,675,997	0.9	\$7.66	\$13,498,495	-8.0	\$7.01
Nebraska	0396	ASD, Developmental Disabilities, Intellectual Disabilities	\$250,444,357	\$186,356,857	-25.6	\$97.27	\$9,033,661	-95.2	\$4.69
Nebraska	4154	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$14,315,125	\$36,558,021	155.4	\$19.08	\$293,614,196	703.1	\$152.48
Nevada	0125	Intellectual Disabilities	\$87,410,515	\$109,433,621	25.2	\$36.85	\$98,164,421	-10.3	\$32.43
New Hampshire	0053	ASD, Developmental Disabilities, Intellectual Disabilities	\$176,739,443	NA	NA	NA	NA	NA	NA
New Hampshire	0397	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$3,822,957	NA	NA	NA	NA	NA	NA
New Jersey	0031	ASD, Developmental Disabilities, Intellectual Disabilities	\$1,152,000,337	\$1,102,914,021	-4.3	\$124.12	\$552,118,529	-49.9	\$62.13

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
New Mexico	0173	ASD, Developmental Disabilities, Intellectual Disabilities	\$278,970,241	\$277,444,985	-0.5	\$132.64	\$282,230,679	1.7	\$134.86
New Mexico	0448	ASD, Developmental Disabilities, Intellectual Disabilities	\$72,421,013	\$88,526,510	22.2	\$42.32	\$98,677,523	11.5	\$47.15
New York	0238	ASD, Developmental Disabilities, Intellectual Disabilities	\$5,538,622,289	\$5,617,321,943	1.4	\$286.75	\$5,919,201,760	5.4	\$303.08
New York	0470	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$16,627,516	\$16,427,160	-1.2	\$0.84	\$16,428,133	0.0	\$0.84
New York	40176	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$949,931	\$1,708,487	79.9	\$0.09	\$2,611,914	52.9	\$0.13
New York	40200	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$919,719	\$606,761	-34.0	\$0.03	\$42	-100.0	\$0
North Carolina	0423	Developmental Disabilities, Intellectual Disabilities	\$653,201,861	\$0	0.0	\$0	\$0	0.0	\$0
North Carolina	0662	ASD, Developmental Disabilities, Intellectual Disabilities	\$801	\$0	0.0	\$0	\$0	0.0	\$0
North Dakota	0037	Developmental Disabilities, Intellectual Disabilities	\$200,362,701	\$197,232,607	-1.6	\$261.26	\$197,221,799	0.0	\$260.16
North Dakota	0842	ASD - Children Only	\$1,504,373	\$1,246,385	-17.1	\$1.65	\$284,332	-77.2	\$0.38
Ohio	0231	Developmental Disabilities, Intellectual Disabilities	\$1,311,535,445	\$1,473,567,673	12.4	\$126.38	\$1,584,639,228	7.5	\$135.71
Ohio	0380	Developmental Disabilities, Intellectual Disabilities	\$173,782,285	\$191,606,138	10.3	\$16.43	\$198,657,596	3.7	\$17.01
Ohio	0383	ASD, Developmental Disabilities, Intellectual Disabilities	\$36,228,956	\$9,262,414	-74.4	\$0.79	\$75,942	-99.2	\$0.01
Ohio	0877	Developmental Disabilities, Intellectual Disabilities	\$8,200,620	\$13,862,283	69.0	\$1.19	\$19,999,285	44.3	\$1.71
Oklahoma	0179	Intellectual Disabilities	\$201,826,177	\$203,462,276	0.8	\$51.75	\$201,427,677	-1.0	\$51.12
Oklahoma	0343	Intellectual Disabilities	\$23,772,375	\$24,104,885	1.4	\$6.13	\$23,470,237	-2.6	\$5.96

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Oklahoma	0351	Intellectual Disabilities - Children	\$1,795,827	\$1,471,019	-18.1	\$0.37	\$1,082,326	-26.4	\$0.27
Oklahoma	0399	Intellectual Disabilities	\$84,287,506	\$80,723,242	-4.2	\$20.53	\$76,883,687	-4.8	\$19.51
Oregon	0117	Developmental Disabilities, Intellectual Disabilities	\$34,629,294	\$44,599,119	28.8	\$10.76	\$96,288,617	115.9	\$23.03
Oregon	0375	Developmental Disabilities, Intellectual Disabilities	\$26,453,842	\$34,478,461	30.3	\$8.32	\$57,346,028	66.3	\$13.71
Oregon	40194	Developmental Disabilities, Intellectual Disabilities - Children	\$816,723	\$1,202,891	47.3	\$0.29	\$136,797	-88.6	\$0.03
Pennsylvania	0147	ASD, Developmental Disabilities, Intellectual Disabilities	\$2,076,545,236	\$2,282,767,988	9.9	\$178.51	\$2,610,961,883	14.4	\$203.97
Pennsylvania	0235	Developmental Disabilities	\$89,489,581	\$99,042,467	10.7	\$7.75	\$88,050,839	-11.1	\$6.88
Pennsylvania	0324	Developmental Disabilities, Intellectual Disabilities - Children	\$8,302,143	\$8,005,696	-3.6	\$0.63	\$9,458,516	18.1	\$0.74
Pennsylvania	0354	ASD, Developmental Disabilities, Intellectual Disabilities	\$232,156,638	\$257,932,067	11.1	\$20.17	\$299,911,040	16.3	\$23.43
Pennsylvania	0593	ASD	\$22,735,759	\$27,129,212	19.3	\$2.12	\$32,419,763	19.5	\$2.53
Pennsylvania	1486	ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$0	\$0	0.0	\$0	\$23,529,475	0.0	\$1.84
South Carolina	0237	Intellectual Disabilities	\$321,417,171	\$324,310,408	0.9	\$64.59	\$342,240,591	5.5	\$67.32
South Carolina	0456	ASD - Children Only	\$15,339,317	\$10,378,146	-32.3	\$2.07	\$1,726,097	-83.4	\$0.34
South Carolina	0676	Intellectual Disabilities	\$24,800,489	\$29,679,000	19.7	\$5.91	\$31,253,648	5.3	\$6.15
South Dakota	0044	Developmental Disabilities, Intellectual Disabilities	\$113,278,666	\$116,973,397	3.3	\$134.01	\$122,499,370	4.7	\$139.41
South Dakota	0338	Developmental Disabilities, Intellectual Disabilities - Children	\$3,193,504	\$2,941,064	-7.9	\$3.37	\$4,347,273	47.8	\$4.95
Tennessee	0128	Developmental Disabilities, Intellectual Disabilities	\$375,087,217	\$392,287,074	4.6	\$58.47	\$400,068,113	2.0	\$59.08
Tennessee	0357	Intellectual Disabilities	\$270,975,633	\$261,952,226	-3.3	\$39.05	\$257,973,022	-1.5	\$38.10

Medicaid LTSS Expenditures Report: FY 2017 and 2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Tennessee	0427	Developmental Disabilities, Intellectual Disabilities	\$24,720,229	\$25,741,302	4.1	\$3.84	\$25,643,307	-0.4	\$3.79
Texas	0110	Developmental Disabilities, Intellectual Disabilities	\$1,008,108,186	\$1,104,874,129	9.6	\$39.05	\$1,119,138,433	1.3	\$39.09
Texas	0221	Developmental Disabilities	\$171,334,383	\$269,277,730	57.2	\$9.52	\$283,079,746	5.1	\$9.89
Texas	0281	Developmental Disabilities	\$8,009,196	\$13,326,883	66.4	\$0.47	\$13,868,927	4.1	\$0.48
Texas	0403	Developmental Disabilities, Intellectual Disabilities	\$86,383,065	\$123,208,825	42.6	\$4.35	\$116,288,866	-5.6	\$4.06
Utah	0158	ASD, Developmental Disabilities, Intellectual Disabilities	\$211,261,340	\$240,241,008	13.7	\$77.47	\$268,164,131	11.6	\$85.04
Utah	1029	ASD - Children Only	\$357,469	\$86,419	-75.8	\$0.03	\$27,634	-68.0	\$0.01
Virginia	0358	ASD, Developmental Disabilities, Intellectual Disabilities	\$28,407,965	\$38,692,190	36.2	\$4.57	\$53,419,062	38.1	\$6.28
Virginia	0372	ASD, Developmental Disabilities, Intellectual Disabilities	\$737,271,198	\$707,604,303	-4.0	\$83.61	\$855,172,030	20.9	\$100.59
Virginia	0430	ASD, Developmental Disabilities, Intellectual Disabilities	\$3,774,678	\$2,997,945	-20.6	\$0.35	\$3,129,934	4.4	\$0.37
Washington	0409	ASD, Developmental Disabilities, Intellectual Disabilities	\$59,796,927	\$61,755,758	3.3	\$8.32	\$67,621,245	9.5	\$8.99
Washington	0410	ASD, Developmental Disabilities, Intellectual Disabilities	\$436,768,938	\$468,562,259	7.3	\$63.12	\$514,613,152	9.8	\$68.40
Washington	0411	ASD, Developmental Disabilities, Intellectual Disabilities	\$56,591,986	\$59,916,438	5.9	\$8.07	\$64,129,053	7.0	\$8.52
Washington	1186	ASD, Developmental Disabilities, Intellectual Disabilities	\$1,416,393	\$4,193,133	196.0	\$0.56	\$6,479,474	54.5	\$0.86
Washington	40669	ASD, Developmental Disabilities, Intellectual Disabilities	\$4,456,474	\$3,749,376	-15.9	\$0.51	\$2,467,691	-34.2	\$0.33
West Virginia	0133	Developmental Disabilities, Intellectual Disabilities	\$323,491,241	\$308,806,899	-4.5	\$169.95	\$304,222,399	-1.5	\$168.61

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Wisconsin	0229	Developmental Disabilities, Intellectual Disabilities	\$108,920,068	\$104,107,010	-4.4	\$17.98	\$99,563,100	-4.4	\$17.14
Wisconsin	0368	Developmental Disabilities, Intellectual Disabilities	\$651,609,850	\$0	0.0	\$0	\$0	0.0	\$0
Wisconsin	0484	Developmental Disabilities, Intellectual Disabilities	\$240,479,248	\$330,219,582	37.3	\$57.03	\$689,703,653	108.9	\$118.76
Wyoming	0253	Developmental Disabilities, Intellectual Disabilities - Children	\$13,330	\$11,926	-10.5	\$0.02	\$0	0.0	\$0
Wyoming	1060	Developmental Disabilities, Intellectual Disabilities	\$3,251,207	\$4,863,378	49.6	\$8.40	\$6,075,996	24.9	\$10.52
Wyoming	1061	Developmental Disabilities, Intellectual Disabilities	\$87,577,936	\$89,794,558	2.5	\$155.10	\$99,462,812	10.8	\$172.20
Total	All		\$34,615,821,669	\$33,378,313,030	-3.6	\$37.33	\$35,591,020,476	6.6	\$39.60

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

ASD = autism spectrum disorder; CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; NA = not available.

Table C.42. Section 1915(c) waiver program expenditures for medically fragile or technologically dependent by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Alabama	0407	Technologically Dependent	\$1,891,847	\$1,953,161	3.2	\$0.40	\$1,934,757	-0.9	\$0.40
Alaska	0263	Medically Fragile	\$10,791,780	\$10,221,822	-5.3	\$13.82	\$8,976,847	-12.2	\$12.21
California	0139	Medically Fragile, Technologically Dependent	\$210,703,038	\$139,212,427	-33.9	\$3.54	\$158,898,794	14.1	\$4.03
California	0457	Medically Fragile, Technologically Dependent	\$15,163,967	\$9,285,149	-38.8	\$0.24	\$19,298,235	107.8	\$0.49
California	0486	Medically Fragile, Technologically Dependent	\$1,571,763	\$1,560,235	-0.7	\$0.04	\$1,638,243	5.0	\$0.04
Colorado	0450	Medically Fragile	\$687,861	\$418,069	-39.2	\$0.07	\$982,693	135.1	\$0.17
Colorado	4157	Medically Fragile - Children	\$13,414,036	\$10,675,596	-20.4	\$1.90	\$34,218,503	220.5	\$6.01
Florida	0392	Medically Fragile	\$6,086,175	\$6,528,565	7.3	\$0.31	\$2,643,066	-59.5	\$0.12
Florida	40166	Medically Fragile	\$8,200	\$2,360	-71.2	\$0	\$5,184	119.7	\$0
Florida	40205	Medically Fragile	\$53,147	\$43,213	-18.7	\$0	\$40,751	-5.7	\$0
Georgia	4116	Medically Fragile, Technologically Dependent - Children	\$8,980	\$0	0.0	\$0	\$0	0.0	\$0
Illinois	0278	Medically Fragile, Technologically Dependent	\$2,089,993	\$2,252,431	7.8	\$0.18	\$2,052,716	-8.9	\$0.16
Kansas	4165	Medically Fragile, Technologically Dependent	\$3,107,092	\$0	0.0	\$0	\$0	0.0	\$0
Kentucky	40146	Technologically Dependent	\$3,877,608	\$3,198,022	-17.5	\$0.72	\$2,663,360	-16.7	\$0.60
Maryland	40118	Medically Fragile	\$1,212,567	\$1,198,303	-1.2	\$0.20	\$1,209,557	0.9	\$0.20
New Mexico	0223	Medically Fragile	\$1,667,744	\$1,336,900	-19.8	\$0.64	\$1,390,221	4.0	\$0.66
North Carolina	4141	Medically Fragile	\$108,442,075	\$84,083,267	-22.5	\$8.19	\$48,980,808	-41.7	\$4.72
North Dakota	0468	Technologically Dependent	\$346	\$0	0.0	\$0	\$0	0.0	\$0
North Dakota	0568	Medically Fragile	\$112,052	\$144,838	29.3	\$0.19	\$122,213	-15.6	\$0.16
North Dakota	0834	Medically Fragile	\$0	\$0	0.0	\$0	\$0	0.0	\$0

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
North Dakota	1266	Technologically Dependent	\$78,787	\$174,668	121.7	\$0.23	\$168,710	-3.4	\$0.22
Oklahoma	0811	Medically Fragile, Technologically Dependent	\$5,677,544	\$4,955,177	-12.7	\$1.26	\$5,558,084	12.2	\$1.41
Oregon	40193	Medically Fragile	\$191,361	\$210,707	10.1	\$0.05	\$92,721	-56.0	\$0.02
South Carolina	0675	Medically Fragile	\$2,145,230	\$2,579,056	20.2	\$0.51	\$3,324,576	28.9	\$0.65
South Carolina	40181	Technologically Dependent	\$1,768,210	\$1,600,325	-9.5	\$0.32	\$1,809,962	13.1	\$0.36
Texas	0181	Medically Fragile	\$90,797,474	\$12,788,243	-85.9	\$0.45	\$44,896,326	251.1	\$1.57
Utah	1246	Medically Fragile	\$106,669	\$535,438	402.0	\$0.17	\$751,547	40.4	\$0.24
Utah	40183	Medically Fragile, Technologically Dependent	\$3,035,482	\$2,816,126	-7.2	\$0.91	\$2,761,105	-2.0	\$0.88
Virginia	4149	Technologically Dependent	\$29,092,710	\$28,942,952	-0.5	\$3.42	\$5,412,113	-81.3	\$0.64
Total	All		\$513,783,738	\$326,717,050	-36.4	\$1.05	\$349,831,092	7.1	\$1.12

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year.

Table C.43. Section 1915(c) waiver program expenditures for brain injuries by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Colorado	0288	Brain Injuries	\$16,898,090	\$13,357,555	-21.0	\$2.38	\$29,608,667	121.7	\$5.20
Connecticut	0302	Brain Injuries	\$50,480,262	\$53,117,955	5.2	\$14.87	\$52,600,678	-1.0	\$14.73
Connecticut	1085	Brain Injuries	\$5,192,531	\$12,440,218	139.6	\$3.48	\$18,962,857	52.4	\$5.31
Florida	0342	Brain Injuries	\$13,060,749	\$12,995,974	-0.5	\$0.62	\$3,956,920	-69.6	\$0.19
Illinois	0329	Brain Injuries	\$46,833,102	\$35,204,823	-24.8	\$2.75	\$30,716,018	-12.8	\$2.41
Indiana	4197	Brain Injuries	\$4,957,477	\$4,606,573	-7.1	\$0.69	\$4,628,386	0.5	\$0.69
Iowa	0299	Brain Injuries	\$34,135,241	\$1,646,963	-95.2	\$0.52	\$4,301,359	161.2	\$1.37
Kansas	4164	Brain Injuries	\$10,587,357	\$0	0.0	\$0	\$0	0.0	\$0
Kentucky	0333	Brain Injuries	\$22,564,326	\$22,892,464	1.5	\$5.14	\$24,707,337	7.9	\$5.54
Kentucky	0477	Brain Injuries	\$19,386,032	\$21,158,828	9.1	\$4.75	\$21,310,247	0.7	\$4.78
Maine	1082	Brain Injuries	\$12,401,156	\$15,953,687	28.6	\$11.95	\$17,311,838	8.5	\$12.93
Maryland	40198	Brain Injuries	\$9,623,139	\$10,205,360	6.1	\$1.69	\$10,179,351	-0.3	\$1.69
Massachusetts	0359	Brain Injuries	\$8,115,841	\$9,162,440	12.9	\$1.34	\$8,267,344	-9.8	\$1.20
Massachusetts	40701	Brain Injuries	\$38,842,735	\$42,233,180	8.7	\$6.16	\$49,862,335	18.1	\$7.24
Massachusetts	40702	Brain Injuries	\$4,083,578	\$5,183,227	26.9	\$0.76	\$6,738,644	30.0	\$0.98
Minnesota	4169	Brain Injuries	\$96,486,656	\$95,794,064	-0.7	\$17.21	\$93,631,800	-2.3	\$16.70
Nebraska	40199	Brain Injuries	\$699,764	\$689,766	-1.4	\$0.36	\$0	0.0	\$0
New Hampshire	4177	Brain Injuries	\$16,902,411	NA	NA	NA	NA	NA	NA
New York	0269	Brain Injuries	\$194,579,866	\$205,801,311	5.8	\$10.51	\$194,477,381	-5.5	\$9.96
Utah	0292	Brain Injuries	\$5,106,330	\$5,977,011	17.1	\$1.93	\$6,828,868	14.3	\$2.17
West Virginia	0876	Brain Injuries	\$1,208,743	\$1,628,764	34.7	\$0.90	\$1,501,833	-7.8	\$0.83
Wyoming	0370	Brain Injuries	\$6,742,514	\$6,961,849	3.3	\$12.03	\$3,274,206	-53.0	\$5.67
Total	All		\$618,887,900	\$577,012,012	-6.8	\$3.99	\$582,866,069	1.0	\$4.02

Sources: Mathematica analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; NA = not available.

Table C.44. Section 1915(c) waiver program expenditures for HIV/AIDS by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Alabama	40382	HIV	\$347,789	\$9,714,047	2,693.1	\$1.99	\$20,892	-99.8	\$0
California	0183	HIV	\$11,376,772	\$7,369,787	-35.2	\$0.19	\$9,518,817	29.2	\$0.24
Colorado	0211	HIV	\$0	-\$36,624	-100.0	-\$0.01	\$0	0.0	\$0
Florida	0194	HIV	\$19,938,736	\$12,557,937	-37.0	\$0.60	\$3,791,245	-69.8	\$0.18
Illinois	0202	HIV	\$9,990,836	\$6,680,040	-33.1	\$0.52	\$6,371,572	-4.6	\$0.50
Iowa	0213	HIV	\$165,313	\$879	-99.5	\$0	\$959	9.1	\$0
Missouri	0197	HIV	\$2,201,293	\$2,440,306	10.9	\$0.40	\$2,356,612	-3.4	\$0.38
Pennsylvania	0192	HIV	\$90,019	-\$1	-100.0	\$0	-\$617	-61,600.0	\$0
South Carolina	0186	HIV	\$4,673,268	\$4,686,143	0.3	\$0.93	\$4,817,110	2.8	\$0.95
Total	All		\$48,784,026	\$43,412,514	-11.0	\$0.39	\$26,876,590	-38.1	\$0.24

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year.

Table C.45. Section 1915(c) waiver program expenditures for mental health services or serious emotional disturbances by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Colorado	0268	Mental Health Services	\$38,327,572	\$23,084,590	-39.8	\$4.11	\$52,552,619	127.7	\$9.23
Connecticut	0653	Mental Health Services	\$11,510,142	\$14,148,936	22.9	\$3.96	\$14,577,591	3.0	\$4.08
Indiana	0003	Mental Health Services, Serious Emotional Disturbances	\$0	\$5,492	0.0	\$0	-\$376	-106.8	\$0
Iowa	0819	Serious Emotional Disturbances - Children	\$6,600,065	\$600,077	-90.9	\$0.19	\$696,838	16.1	\$0.22
Kansas	0320	Serious Emotional Disturbances - Children	\$91,398,450	\$60,586	-99.9	\$0.02	\$45,625	-24.7	\$0.02
Louisiana	0889	Serious Emotional Disturbances - Children	\$0	\$0	0.0	\$0	\$0	0.0	\$0
Michigan	0438	Serious Emotional Disturbances - Children	\$20,609,426	\$7,535,359	-63.4	\$0.76	\$6,492,797	-13.8	\$0.65
Montana	0455	Mental Health Services	\$3,915,970	\$5,201,380	32.8	\$4.94	\$5,308,341	2.1	\$5.00
New York	0296	Serious Emotional Disturbances - Children	\$42,650,906	\$23,708,690	-44.4	\$1.21	\$34,762,994	46.6	\$1.78
New York	0469	Mental Health Services, Serious Emotional Disturbances - Children	\$78,708,280	\$79,356,276	0.8	\$4.05	\$83,735,220	5.5	\$4.29
Texas	0657	Serious Emotional Disturbances - Children	\$7,390,466	\$9,524,254	28.9	\$0.34	\$10,712,671	12.5	\$0.37
Wisconsin	0415	Serious Emotional Disturbances - Children	\$18,277,321	\$20,071,844	9.8	\$3.47	\$3,421,168	-83.0	\$0.59
Wyoming	0451	Serious Emotional Disturbances - Children	\$0	\$0	0.0	\$0	\$0	0.0	\$0
Total	All		\$319,388,598	\$183,297,484	-42.6	\$1.64	\$212,305,488	15.8	\$1.90

Sources: Mathematica's analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year.

Table C.46. Section 1915(c) waiver program expenditures for multiple populations by state and waiver program, FY 2016–2018

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Colorado	0006	Older Adults, Physical Disabilities, HIV	\$333,775,925	\$213,038,191	-36.2	\$37.96	\$535,068,689	151.2	\$94.02
Florida	0962	Older Adults, Physical Disabilities, Brain Injuries, HIV, Medically Fragile	\$749,990,007	\$0	0.0	\$0	\$0	0.0	\$0
Massachusetts	1027	Older Adults, Physical Disabilities, Mental Health Services	\$6,034,348	\$9,546,194	58.2	\$1.39	\$27,819,409	191.4	\$4.04
Massachusetts	1028	Older Adults, Physical Disabilities, Mental Health Services	\$7,225,811	\$7,949,206	10.0	\$1.16	\$26,155,309	229.0	\$3.80
Mississippi	0366	Physical Disabilities, Brain Injury	\$19,428,202	\$24,592,550	26.6	\$8.23	\$18,797,093	-23.6	\$6.31
Missouri	40190	Medically Fragile, Developmental Disabilities	\$17,338,830	\$17,551,908	1.2	\$2.87	\$17,195,364	-2.0	\$2.81
New York	0471	Physical Disabilities, Other Disabilities, Brain Injury, HIV, Medically Fragile, Technologically Dependent - Children	\$3,437,886	\$3,016,721	-12.3	\$0.15	\$2,847,366	-5.6	\$0.15
New York	4125	Physical Disabilities, Other Disabilities, Brain Injury, HIV, Medically Fragile, Technologically Dependent, ASD, Developmental Disabilities, Intellectual Disabilities, Serious Emotional Disturbance	\$6,153,510	\$6,006,512	-2.4	\$0.31	\$6,554,781	9.1	\$0.34
Virginia	0321	Older Adults, Physical Disabilities, Other Disabilities, Technologically Dependent	\$757,678,715	\$874,866,053	15.5	\$103.37	\$805,607,763	-7.9	\$94.76
Wisconsin	0367	Older Adults, Physical Disabilities, Other Disabilities, Developmental Disabilities, Intellectual Disabilities	\$443,818,500	\$0	0.0	\$0	\$0	0.0	\$0

State	Waiver number	Target population	FY 2016 expenditures	FY 2017 expenditures	FY 2017 % change	FY 2017 expenditures per state resident	FY 2018 expenditures	FY 2018 % change	FY 2018 expenditures per state resident
Wisconsin	0414	Physical Disabilities, Other Disabilities, ASD, Developmental Disabilities, Intellectual Disabilities - Children	\$59,090,298	\$78,004,470	32.0	\$13.47	\$61,423,650	-21.3	\$10.58
Total	All		\$2,403,972,032	\$1,234,571,805	-48.6	\$11.37	\$1,501,469,424	21.6	\$13.78

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes data for all other states and the District of Columbia that had at least one active section 1915(c) waiver program in FY 2017 or 2018 that served this population. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

ASD = autism spectrum disorder; CMS = Centers for Medicare & Medicaid Services; FY = fiscal year.

Table C.47. Section 1915(c) waiver program expenditures for uncategorized population by state, FY 2016–2018

State	FY 2016 expenditures	FY 2017 expenditures	FY 2018 expenditures
Connecticut	NA	\$0	\$69,369
Georgia	NA	\$165,287	\$87,725
Louisiana	NA	\$3,649	\$4,897,930
Maryland	NA	\$7,850,399	\$18,139,492
North Carolina	NA	\$0	-\$171,261
Ohio	NA	\$0	-\$70
Total		\$8,019,335	\$23,023,185

Sources: Mathematica’s analysis of FY 2017 and 2018 CMS-64 Schedule A waiver report data, CMS 372 data, and U.S. Census Bureau data. Data for FY 2016 were obtained from an unpublished version of the FY 2017 1915(c) Expenditure Report.

Notes: Excludes FY 2017 and 2018 data for New Hampshire. Includes states that reported an invalid section 1915(c) waiver program number within the CMS-64 Schedule A waiver data that could not be matched to an existing waiver number in the CMS 372 or state waiver list on Medicaid.gov. Further details about the data sources, methods, and data limitations are available in Appendices A and B.

CMS = Centers for Medicare & Medicaid Services; FY = fiscal year; NA = not available.

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Appendix D: Data tables
Excel workbook attachment

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