Department of Health & Human Services

2018 ACTUARIAL REPORT

ON THE FINANCIAL OUTLOOK FOR MEDICAID

Office of the Actuary
Centers for Medicare & Medicaid Services
United States Department of Health & Human Services

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Office of the Actuary
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STATEMENT FROM THE CHIEF ACTUARY

The Medicaid program is of critical importance to American society. After Medicare, it is the largest health program as measured by expenditures, representing one-sixth of the health economy, and it is the largest as measured by enrollment. In 2017, its outlays of $606 billion accounted for a sizeable portion of Federal and State budgets and were a significant source of revenue for health care providers and insurers. As importantly, Medicaid serves as a safety net for the nation's most vulnerable populations, covering an estimated 73 million beneficiaries in 2017, including more than 12 million expansion adults under the Affordable Care Act. In this report, we analyze key historical Medicaid trends—both financial and demographic—and include projections of expenditures and enrollment to inform the public and help policy makers gain insight into the future of the program.

The Medicaid projections shown here are developed under current law, and they do not assume any changes in future legislation. The economic assumptions used to generate the projections are the same as those used by the 2018 OASDI and Medicare Boards of Trustees in their annual reports to Congress.

Projections of health care costs are inherently uncertain. For Medicaid, such projections present an even greater challenge as enrollment and costs are very sensitive to economic conditions. Since CMS is still working to ensure the quality of data received through the Transformed Medicaid Statistical Information System (T-MSIS), these projections rely on Medicaid Statistical Information System (MSIS) data that are mostly complete through 2013. Our analysis finds that, without detailed and reliable data from the last 5 years, there could be substantial variation in estimated and actual enrollment and per enrollee expenditures. Therefore, we believe that the credibility of these estimates—particularly of the per enrollee expenditure estimates—is lower than in previous reports, and I caution readers against relying on the estimates and projections of per enrollee expenditures. Because of the greater degree of uncertainty, the projections for per enrollee costs are again included only in the Appendix of this year's report. If data of sufficient quality for analysis are not available going forward, it is possible that other estimates and projections provided in future reports may be less reliable as well. The one exception to this uncertainty concerns the expansion adult estimates; because they are based on Medicaid financial reports that are more up-to-date, these estimates provide more credible reporting of historical per enrollee expenditures that can be used to project future expenditures for this population.

It is my opinion that (i) the techniques and methodology used herein to project the future costs of the Medicaid program are based upon sound principles of actuarial practice and are generally accepted within the actuarial profession, and (ii) the principal assumptions and resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of projecting such costs under current law. Considering the substantial uncertainties inherent in projecting future health care

costs, readers should be aware that actual future Medicaid costs could differ significantly from these estimates.

I would like to thank team leader Christopher Truffer and team members Kathryn Rennie, Lindsey Wilson, and Eric Eckstein for their diligent efforts in preparing this report. We welcome feedback from readers; comments may be sent to christopher.truffer@cms.hhs.gov.

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EXECUTIVE SUMMARY

The joint Federal-State Medicaid program provides health care assistance to certain low-income people and is one of the largest payers for health care in the United States. This report presents an analysis of past Medicaid trends and 10-year projections of expenditures and enrollment under current law. Underlying demographic or economic experience that is different than assumed or significant changes in legislation can materially affect the cost and enrollment projections included in this report.

HIGHLIGHTS AND FINDINGS

2017 Medicaid Information

- Total estimated Medicaid outlays in Federal fiscal year (FY) 2017 amounted to $600.0 billion and increased by 3.9 percent between 2016 and 2017. This is a slower rate of growth than in recent history.

- Federal Medicaid outlays in 2017 were $370.2 billion and grew 1.5 percent over the previous year. Federal outlays represented 62 percent of total spending on the program. State and local governments' estimated outlays were $229.9 billion, which constituted 38 percent of total program costs, and increased by 8.1 percent in 2017; the higher growth rate for State and local governments' outlays reflected changes to the expansion adult Federal matching rate beginning in 2017.

- Medicaid provided health care assistance for an estimated 73.4 million enrollees on average in 2017, including those enrolled in Territory Medicaid programs and 12.2 million expansion adults.[1] Enrollment is estimated to have increased by 1.7 percent between 2016 and 2017; expansion adult enrollment is estimated to have increased by 9.0 percent, and all other enrollment is estimated to have increased by 0.4 percent.

2018 Medicaid Estimates

- Medicaid expenditures are estimated to have increased 2.7 percent to $616.1 billion in 2018, with Federal expenditures having grown an estimated 4.4 percent to $386.5 billion. The Federal share of all Medicaid expenditures is estimated to have been 63 percent in 2018. State Medicaid expenditures are estimated to have decreased 0.1 percent to $229.6 billion.

[1] Adults made newly eligible for Medicaid under the Affordable Care Act beginning in 2014 pursuant to section 1902(a)(10)(A)(i)(VIII) of the Social Security Act [42 U.S.C. § 1396a] are referred to in this report as expansion adults. The Affordable Care Act technically specifies an upper income threshold of 133 percent of the Federal Poverty Level (FPL) but also allows a 5-percent income disregard, making the effective threshold 138 percent.

- Average Medicaid enrollment is estimated to have increased 0.7 percent to 73.9 million enrollees in 2018.

- Expansion adult enrollment was 12.2 million in 2017, and is estimated to have remained at the 2017 level of 12.2 million (0.2 percent growth). Total Medicaid benefit expenditures for the expansion adult population amounted to $69.0 billion in 2017 and are estimated to have increased to $74.2 billion in 2018 (7.6 percent growth).

10-Year Medicaid Projections (2018-2027)

- Over the next 10 years, expenditures are projected to increase at an average annual rate of 5.3 percent and to reach $1,007.9 billion by 2027. The Gross Domestic Product (GDP) is expected to grow by an average rate of 4.6 percent. As a result, Medicaid expenditures are projected to increase from 3.1 percent of GDP in 2017 to 3.3 percent of GDP in 2027. The increase in expenditures could place a growing strain on Federal and State budgets.

- Expenditures for capitated payments and premiums are projected to grow 7.3 percent per year on average from 2018 to 2027 and reach $612.8 billion in 2027. Fee-for-service acute care expenditures are projected to grow by 3.0 percent per year to $195.7 billion in 2027. Spending for fee-for-service long-term care is projected to grow by 3.1 percent per year and reach $158.2 billion in 2027. The average annual growth in disproportionate share hospital (DSH) payments is projected to be 4.4 percent, with projected expenditures in 2027 of $23.2 billion.

- Enrollment is projected to increase at an average annual rate of 1.1 percent over the next 10 years and reach 82.0 million in 2027.

- Medicaid expenditures for expansion adults are projected to grow 6.1 percent per year on average from 2018 to 2027, from $74.2 billion in 2018 to $124.3 billion in 2027. Most of these expenditures—about 91 percent—are projected to be financed by the Federal government.

- An estimated 12.2 million expansion adult enrollees were covered in 2018, based on enrollment counts included in 2018 financial data reported by the States to CMS. By 2027, the expansion adult population is projected to grow to 13.6 million. These estimates are based on the assumption that 58 percent of potential expansion enrollees reside in States with expanded eligibility in 2020 and after.

Comparison to 2017 Actuarial Report Projections

- Compared to the prior report, total projected Medicaid expenditures for benefits and administrative costs are expected to be $314.8 billion less from

2017 through 2026, or 4.0 percent lower, reflecting slower growth for 2018 than previously anticipated and slower growth in benefit expenditures for managed care and acute care services over the 10-year period. Annual per enrollee costs are projected to grow by 4.1 percent, which is 0.4 percent lower than in the prior report.

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I. INTRODUCTION

Medicaid is a cooperative program between the Federal and State governments to pay for health care and medical services for certain low-income persons in the United States and its Territories. The Federal and the State governments share responsibilities in designing, administering, and funding the program. The Centers for Medicare & Medicaid Services (CMS) is the agency charged with administering Medicaid for the Federal government.

This is the tenth annual Medicaid report prepared by the Office of the Actuary (OACT) at CMS. Its purpose is to describe the past and projected trends for Medicaid expenditures and enrollment, including estimates for Federal fiscal year (FY) 2018 and projections over the next 10 years. It also describes the data available on Medicaid spending and enrollment, as well as the methodology and assumptions used in the projections. Finally, this report places and describes the Medicaid program within the context of Federal and State government spending and the U.S. health care system.

II. OVERVIEW OF MEDICAID

Authorized by Title XIX of the Social Security Act, Medicaid was signed into law in 1965 and is an optional program for the States. Currently all States, the District of Columbia, and five U.S. Territories have Medicaid programs.[2]

The Federal government establishes certain requirements for the States' Medicaid programs. The States then administer their own programs, determining the eligibility of applicants, deciding which health services to cover, setting provider reimbursement rates, paying for a portion of the total program, and processing claims.

Eligibility for enrollment in Medicaid is determined by both Federal and State law. Title XIX of the Social Security Act specifies which groups of people must be eligible, and States have the flexibility to extend coverage to additional groups. In addition to income, eligibility is typically based on several other factors, including age, disability status, other government assistance, other health or medical conditions such as pregnancy, and in some cases financial resources (or assets). As of January 2014, States have had the authority to expand Medicaid eligibility to almost all individuals under age 65 who are living in families with income below 138 percent of the Federal poverty level (FPL) (and who are citizens or eligible legal residents), with the Federal government initially paying 100 percent of the costs for expansion adults, to be reduced to 90 percent by 2020.[3]

Title XIX specifies that certain medical services must be covered under Medicaid, while also granting the States flexibility to cover many other benefits. Services usually covered include hospital care, physician services, laboratory and other diagnostic tests, prescription drugs, dental care, and many long-term care services. The States also have the option to use managed care plans to provide and coordinate benefits, and they may apply for waivers of certain requirements that allow more flexibility in developing specialized benefit packages for specific populations. Generally, States must provide the same benefit package to most Medicaid enrollees. Exceptions to these requirements include the use of waivers, demonstration projects, and alternative benefit plans, and States must provide an alternative benefit plan, including all essential health benefits, to the expansion adult population. In addition, there may be limited benefits provided for individuals who are eligible based only on

[2] For more information on Medicaid, including information on eligibility and covered services, see B. Klees, E. Eckstein, and C. Curtis, "Brief Summaries of Medicare & Medicaid," October 2018, available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareProgramRatesStats/Downloads/MedicareMedicaidSummaries2018.pdf.

[3] The estimated enrollment and expenditures for the expansion adults are presented in section III.D of this report.

medical need, through Medicare savings programs, or through family planning programs.[4]

The Federal government and the States share the responsibility for funding Medicaid. States pay providers or managed care plans for Medicaid costs and then report these payments to CMS. The Federal government pays for a percentage of the costs of medical services by reimbursing each State; this percentage, known as the Federal Medical Assistance Percentage (FMAP), is calculated annually for each State based on a statutory formula that takes into account State per capita income with some adjustments prescribed by legislation.[5] A separate FMAP is specified for expansion adults. Additionally, the Federal government pays for a portion of each State's administration costs. Beneficiary cost sharing, such as deductibles or co-payments, and beneficiary premiums are very limited in Medicaid and do not represent a significant share of the total cost of health care goods and services for Medicaid enrollees.

In contrast to the Federal Medicare program, Medicaid's financial operations are not financed through trust funds. Other than a very small amount of premium revenue from enrollees, as noted above, and certain other sources of State revenue (such as some provider taxes), there are no dedicated revenue sources comparable to the Medicare Hospital Insurance payroll tax. Medicaid costs are met primarily by Federal and State general revenues, on an as-needed basis; the States may also rely on local government revenues to finance a portion of their share of Medicaid costs. The Federal financing is authorized through an annual appropriation by Congress. These funds are then spent through daily draws from the general fund of the Treasury in the amounts required to pay that day's Federal matching amounts on the State program expenditures. As a result, Medicaid outlays and revenues are automatically in financial balance, there is no need to maintain a contingency reserve, and, unlike Medicare Part A, the *financial status* or funding adequacy of the program is not in question from an actuarial perspective.

Medicaid coverage is extremely valuable to the low-income individuals and families who qualify for the health care services provided by the program. By extension, the program is also valuable to society at large, as it enables the least-fortunate members of the population to obtain the health care they need in an orderly way and diminishes their financial burdens. Furthermore, the program provides financial benefits to

[4] The Medicare Savings Programs provide assistance to low-income aged persons and persons with disabilities for their share of Medicare costs. Different programs cover a combination of the beneficiary's Part A premium (if any), Part B premium, Part A deductible, and Part B cost-sharing requirements.

[5] In general, Title XIX specifies that the FMAP for each State cannot be lower than 50 percent or higher than 83 percent; in FY 2017, FMAPs ranged from 50.00 percent to 74.63 percent. Also, Title XIX provides for specific FMAP levels for certain States and, in some cases, for specific services or populations.

entities such as governments and health care providers that may otherwise not be compensated for providing health care services to these individuals and families. It is also important, of course, to consider the costs to society of providing this coverage and to anticipate likely future trends in such costs. The balance of this report is intended to describe these trends.[6]

[6] This report does not cover expenditures or enrollment under the Children's Health Insurance Program (CHIP), whether such expenditures are made for a program operated under Title XIX or Title XXI of the Social Security Act. CHIP provides health coverage to many children in households with income above Medicaid eligibility levels. Currently, funding for CHIP is authorized through 2027.

III. ACTUARIAL ANALYSIS

A. FISCAL YEAR 2017 MEDICAID OUTLAYS AND ENROLLMENT

The Federal government and the States collectively spent an estimated $605.1 billion for Medicaid in 2017. Of this amount, the Federal government paid $374.7 billion, representing about 62 percent of net program outlays, and the States paid an estimated $230.4 billion, or about 38 percent of net outlays. Table 1 summarizes total Medicaid outlays for 2017.

Table 1—Medicaid Outlays for Fiscal Year 2017 by Type of Payment
(in billions)

Title XIX Outlays[1]	Federal Share	State Share	Total
Medical Assistance Payments:			
Acute Care Benefits[2]	$89.3	$56.5	$145.8
Long-Term Care Benefits[2]	66.3	50.2	116.5
Capitation Payments and Premiums[2]	191.9	109.8	301.7
Disproportionate Share Hospital (DSH) Payments[2]	8.9	6.3	15.1
Adjustments[3]	−3.6	−2.7	−6.3
Subtotal, Medical Assistance Payments	352.9	220.0	572.9
Administration Payments	18.2	10.4	28.5
Vaccines for Children Program	4.3	—	4.3
Gross Outlays[4]	375.3	230.4	605.8
Collections[5]	−0.7	—	−0.7
Net Outlays	374.7	230.4	604.4

Totals may not add due to rounding.

[1] Federal outlays are the funds drawn from the U.S. Treasury by the States. The State and total outlays are estimated, reflecting spending as reported by the States for the purposes of drawing Federal funding from the U.S. Treasury. Expenditures represent the spending as it was paid by the State to health care plans or providers. While expenditures and outlays are generally similar, they are not equal mainly due to the timing differences between the States paying for services and the States receiving Federal funds. Neither outlays nor expenditures include Title XIX costs in support of the Children's Health Insurance Program.

[2] Benefit expenditures as reported on the CMS-64 (Net Services).

[3] Adjustments include net adjustments of benefits from prior periods and the difference between expenditures and outlays.

[4] Gross outlays net of all non-Federal sourced collections.

[5] Collections from Medicare Part B for the Qualifying Individuals (QI) program and from other miscellaneous sources.

The great majority of Medicaid spending—95 percent of total outlays in 2017—was for medical assistance payments. In table 1, these payments are divided into four major categories: acute care benefits, long-term care benefits, capitation payments and premiums, and disproportionate share hospital (DSH) payments.

Acute care benefits include fee-for-service spending for inpatient and outpatient hospital care, physician and other medical professional services, prescription drugs, dental care, laboratory and imaging tests, mental health facility services, and case

management costs, as well as coinsurance payments for beneficiaries in managed care plans. Long-term care benefits include fee-for-service spending on nursing home services, home health care, intermediate care facility services for individuals with intellectual and developmental disabilities, and home and community-based services. Capitation payments and premiums include premiums paid to Medicaid managed care plans, pre-paid health plans, other health plan premiums, and premiums for Medicare Part A and Part B. DSH payments are provided to certain hospitals that have furnished care for a significant number of uninsured persons and Medicaid beneficiaries and that have acquired, as a result, a substantial amount of uncompensated care costs.

Of these four categories, capitation payments and other premiums represented the largest portion of Medicaid spending in 2017, accounting for $301.7 billion or 52 percent of Medicaid benefit expenditures. Capitation payments and other premiums grew significantly as a share of Medicaid benefit spending, increasing from 49 percent in 2016 to 52 percent by 2017. Fee-for-service acute care benefit expenditures were the next largest expenditure category, constituting $145.8 billion or 25 percent of benefit expenditures (a decrease from 27 percent in 2016). Medicaid spending for fee-for-service long-term care amounted to $116.5 billion, representing 20 percent of expenditures on benefits (a decrease from 21 percent in 2016), and DSH payments accounted for $15.1 billion, or 3 percent, of Medicaid benefits in 2017 (a decrease from 4 percent in 2016).

Medicaid outlays for program administration totaled $28.5 billion in 2017—$18.2 billion in Federal outlays and $10.4 billion in State outlays—and represented 5 percent of Medicaid outlays. Included in administration outlays were $1.5 billion in health information technology incentive payments to providers.[7]

Medicaid also provided $4.3 billion in 2017 for the Vaccines for Children program.[8]

Enrollment is measured as *person-year equivalents*, or the average enrollment over the course of a year. In 2017, 73.4 million individuals are estimated to have been

[7] Health information technology incentive payments were provided for by the American Recovery and Reinvestment Act of 2009 and are paid entirely by the Federal government. This figure does not include payments to States to administer the health information technology incentive payment program.

[8] The Vaccines for Children program is administered by the Centers for Disease Control and Prevention and provides vaccines for children enrolled in Medicaid, as well as for other children who might otherwise not be able to afford vaccines. All Vaccines for Children program costs are paid by the Federal government.

enrolled in Medicaid (including enrollment in the U.S. Territories).[9] Children are estimated to have numbered 27.9 million, representing 38 percent of overall Medicaid enrollment. There were an estimated 15.4 million non-expansion adults (21 percent of enrollment) and an estimated 12.2 million expansion adults (17 percent). Finally, enrollees with disabilities and aged enrollees are estimated to have numbered 10.6 million and 5.8 million (14 percent and 8 percent of Medicaid enrollment, respectively). Another 1.4 million enrollees (2 percent) were estimated for the five U.S. Territories with Medicaid programs (Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands).

In reports prior to 2017, this section provided estimates of enrollment, expenditures, and per enrollee spending by eligibility group; however, the most recent data on enrollment and expenditures by eligibility group are from 2013 or 2014 for most States, and no information is available for 2015, 2016, or 2017. Given the lack of more recent data, estimates of expenditures per enrollee by eligibility category are less reliable than in the past, and readers should be aware that expenditures per enrollee by eligibility group could vary significantly from those provided in this report. These figures can be found in section VI.F.

[9] Since data for some States are not available for 2013 and 2014, and no data are available for 2015, 2016, and 2017, enrollment figures in this report are estimates for these years, as described further in section IV of the report. In addition, past reports have provided figures for *ever-enrolled* enrollment, or the number of people who were enrolled at any time during the year. As no data are currently available that show the number of expansion adults who were ever-enrolled, and since there is no historical experience with this population, this report does not provide an estimate of ever-enrolled enrollment for 2017.

B. HISTORICAL MEDICAID TRENDS

Since the start of the program, the year-to-year growth rates of total Medicaid expenditures (Federal and State expenditures combined) and enrollment have varied substantially, as can be seen in figure 1 and figure 2. The growth in expenditures over time reflects growth in the number of enrollees in the program and growth in the cost per enrollee. Enrollment growth is a result of a change in the number of people eligible and electing to participate in the program, but it is also strongly influenced by legislative changes to the eligibility criteria. Similarly, per enrollee costs vary over time due to (i) changes in the use of medical services and the prices paid to providers of health care services and supplies, (ii) legislative and other policy changes to the benefits offered by State Medicaid programs, and (iii) changes in the relative shares of enrollment by eligibility group in Medicaid.

Figure 1— Historical and Projected Medicaid Expenditures and Annual Growth Rates, Fiscal Years 1966–2027

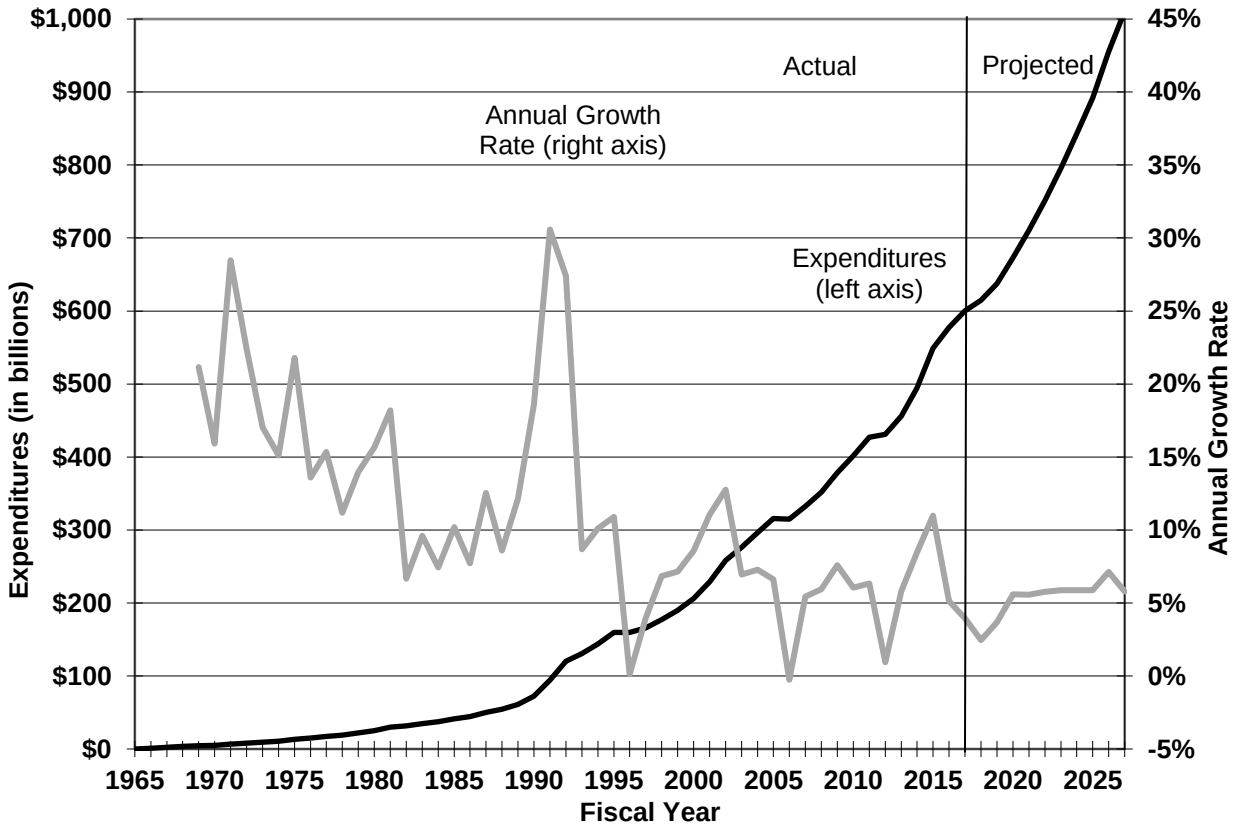
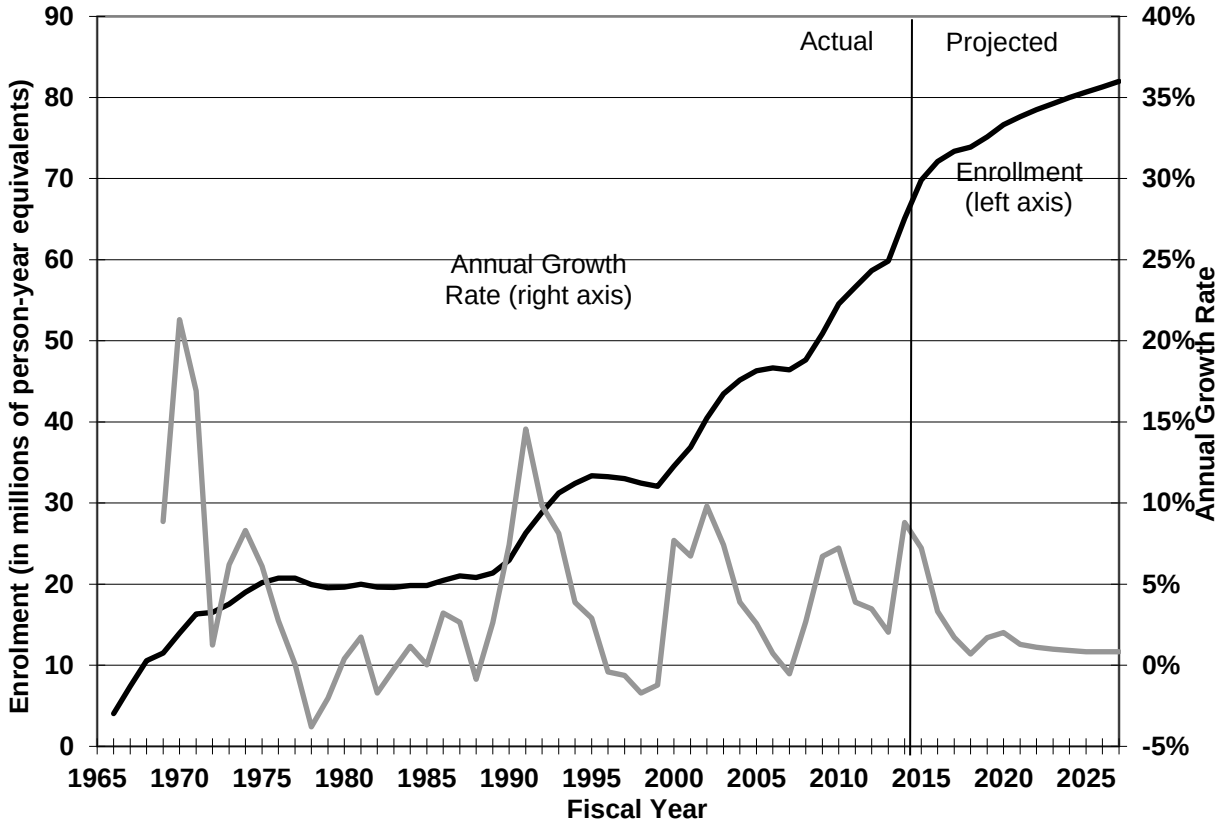


Figure 2—Historical and Projected Medicaid Enrollment and Annual Growth Rates, Fiscal Years 1966–2027



Note: Enrollment levels for 2013 through 2017 are estimated, and projected afterward.

From 2008 to 2017, Medicaid expenditures grew at an average annual rate of 6.1 percent, but during this period annual growth rates varied from a low of 0.9 percent in 2012 to a high of 11.0 percent in 2015. Growth in health care expenditures is driven primarily by several key factors: growth in the population, changes in the use of health care services, and changes in the prices of health care services. In addition to these, several other factors affected Medicaid expenditure trends in recent history.

The American Recovery and Reinvestment Act of 2009 provided for temporary increases in the Federal share of Medicaid payments in 2009, 2010, and 2011, as well as for health information technology incentive payments that were funded entirely by the Federal government. While the increase in the Federal share of Medicaid payments was significant, it is not estimated to have affected total Medicaid expenditure growth in those years; in 2012, however, after the Federal share returned to typical levels, total expenditure growth slowed considerably (from 6.3 percent in 2011 to 0.9 percent in 2012).

Although the Affordable Care Act had a number of provisions that affected Medicaid starting in 2010, most of the changes to the Medicaid program through 2013 are

estimated to have had only minor effects on Medicaid expenditure growth rates. Beginning in 2014, the expansion of eligibility to adults with incomes less than 138 percent of the FPL led to a significant increase in expenditures and enrollment. Continued expansion of State programs to cover expansion adults in 2015 and 2016 resulted in the fastest program growth in more than a decade.

Medicaid expenditure growth is also affected by States' decisions in operating their programs. In the past, States took steps to control the costs of their Medicaid programs, especially during periods of relatively faster growth, and many States have taken such steps to slow the rate of expenditure growth in recent history.[10] Common methods have included freezing or reducing provider reimbursement rates and limiting or curtailing optional health care benefits. States have also used managed care and alternative care delivery approaches to control costs in their Medicaid programs.

Medicaid enrollment is estimated to have grown at an average annual rate of 4.7 percent from 2008 to 2017. Annual growth rates are estimated to have varied substantially, from a low of 1.5 percent in 2013 to a high of 8.8 percent in 2014. Outside of legislation affecting eligibility, changes in Medicaid enrollment are mainly driven by population growth and by changes in economic growth and unemployment rates. In general, Medicaid enrollment increases more quickly during economic recessions, and growth slows as the economy expands. Faster Medicaid enrollment growth in turn typically leads to increases in expenditure growth. Medicaid enrollment and expenditure trends followed these historical patterns during the 2001 recession, the 2007-2009 recession, and the subsequent economic recoveries. The Affordable Care Act provided for an expansion of Medicaid eligibility, which contributed to the substantial increase in enrollment in 2014 and 2015. Enrollment growth is estimated to have slowed to 3.3 percent in 2016 and then to 1.7 percent in 2017, as growth in expansion adult enrollment decelerated after rapid growth in the first two years of the eligibility expansion.

[10] These State actions are well documented in the annual 50-State survey of Medicaid programs conducted by the Kaiser Family Foundation; see V. Smith, *et al.*, "Implementing Coverage and Payment Initiatives: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2016 and 2017," Kaiser Family Foundation, October 2016.

C. MEDICAID EXPENDITURES AND ENROLLMENT PROJECTIONS, FISCAL YEARS 2018–2027

The projections presented in this report reflect Medicaid medical assistance payments (or *benefit* expenditures) from the President's FY 2020 Budget and Medicaid enrollment from the Mid-Session Review of the President's FY 2020 Budget. The benefit expenditure projections are based on current law, including legislation passed in 2019 prior to the publication of this report.[11] Administrative expenditures are also included and are based on the most recent estimates from OACT, as well as on administrative cost data reported to CMS.[12] Other Title XIX expenditures (such as the Vaccines for Children program) are not included. Historical and projected Medicaid expenditures for medical assistance payments and administration are shown in table 2.[13,14,15]

[11] Up to and including the Additional Supplemental Appropriations for Disaster Relief Act (Public Law 116-20). This bill contained provisions establishing 1-year increases to the FMAP for U.S. Territories.

[12] The projections of administration expenditures are adjusted to be consistent with the expenditures reported in the CMS-64; total expenditures are also projected for administration, whereas the President's Budget projects only Federal outlays.

[13] In table 3, enrollment and expenditure data for the period 1966 through 1976 have been revised to be consistent with the current definition of the Federal fiscal year (October-September).

[14] There are differences between Medicaid outlays and Medicaid expenditures, mainly due to timing disparities between States paying for services and States receiving Federal funds. Thus, the levels and trends in outlays and expenditures differ slightly, and the amounts shown in table 4 differ from those shown in table 3.

[15] The projections of Territory expenditures include additional funding provided to Territory Medicaid programs through 2019 through the Affordable Care Act and the Bipartisan Budget Act of 2018. Consistent with current law, these projections assume that the additional funds would not continue in future years.

Table 2—Historical and Projected Medicaid Enrollment and Expenditures and Average Federal Share of Expenditures, Selected Years

(Enrollment in millions of person-year equivalents, expenditures in billions of dollars)

Fiscal Year	Enrollment	Total Expenditures			Benefit Expenditures			Administration Expenditures			Avg. Federal Share
		Total	Federal	State	Total	Federal	State	Total	Federal	State	
Historical Data:											
1966	4.0	$0.9	$0.5	$0.4	$0.9	$0.4	$0.4	$0.0	$0.0	$0.0	50%
1970	14.0	5.1	2.8	2.3	4.9	2.6	2.2	0.2	0.1	0.1	54
1975	20.2	13.1	7.3	5.9	12.6	6.9	5.6	0.6	0.3	0.3	55
1980	19.6	25.2	14.0	11.2	24.0	13.3	10.7	1.2	0.7	0.5	55
1985	19.8	41.3	22.8	18.4	39.3	21.7	17.6	2.0	1.2	0.8	57
1990	22.9	72.2	40.9	31.3	68.7	38.9	29.8	3.5	2.0	1.5	57
1995	33.4	159.5	90.7	68.8	151.8	86.5	65.3	7.7	4.2	3.4	57
2000	34.5	206.2	117.0	89.2	195.7	111.1	84.6	10.6	5.9	4.7	57
2005	46.3	315.9	180.4	135.5	300.7	172.1	128.7	15.1	8.3	6.8	57
2006	46.7	315.1	179.3	135.8	299.0	170.6	128.5	16.0	8.7	7.3	57
2007	46.4	332.2	189.0	143.2	315.8	180.0	135.8	16.4	9.0	7.5	57
2008	47.7	351.9	200.2	151.7	334.2	190.6	143.6	17.7	9.6	8.1	57
2009	50.9	378.6	246.3	132.3	360.3	236.3	124.0	18.3	10.0	8.3	65
2010	54.5	401.5	269.8	131.7	383.6	260.0	123.6	17.9	9.8	8.1	67
2011	56.3	427.0	270.5	156.4	407.5	259.6	147.9	19.5	10.9	8.6	63
2012	58.9	431.0	248.8	182.2	408.8	235.1	173.8	22.2	13.7	8.4	58
2013[16]	59.8	456.0	263.0	193.0	433.1	248.8	184.3	22.9	14.2	8.7	58
2014[16]	65.1	494.7	299.3	195.4	470.3	284.1	186.2	24.4	15.2	9.2	61
2015[16]	69.8	549.1	346.0	203.1	523.9	329.8	194.0	25.2	16.2	9.0	63
2016[16]	72.1	577.3	364.5	212.7	550.9	347.7	203.2	26.3	16.8	9.6	63
2017[16]	73.4	600.0	370.2	229.9	572.2	352.4	219.8	27.8	17.7	10.1	62
Projections:											
2018	73.9	616.1	386.5	229.6	588.3	369.0	219.2	27.8	17.4	10.4	63
2019	75.1	639.4	399.4	240.0	611.7	382.3	229.5	27.7	17.1	10.6	63
2020	76.7	672.7	418.7	254.0	644.2	401.1	243.2	28.5	17.6	10.9	62
2021	77.6	709.2	442.1	267.0	679.7	423.9	255.9	29.5	18.3	11.2	62
2022	78.5	751.3	467.5	283.8	722.1	450.0	272.1	29.2	17.5	11.7	62
2023	79.3	798.5	496.6	301.9	768.5	478.6	289.9	30.1	18.1	12.0	62
2024	80.0	839.6	521.9	317.7	808.6	503.3	305.3	31.0	18.6	12.4	62
2025	80.7	888.8	552.2	336.6	856.8	533.0	323.8	32.0	19.2	12.8	62
2026	81.3	952.1	590.6	361.5	919.2	570.8	348.4	32.9	19.8	13.2	62
2027	82.0	1,007.9	624.8	383.0	973.9	604.5	369.4	34.0	20.4	13.6	62

[16] Enrollment is estimated for 2013 through 2017.

Expenditures

Total Medicaid expenditures (Federal and State combined) for benefits and administration are estimated to have grown 2.7 percent in 2018 to $616.1 billion and are projected to reach $1,007.9 billion by 2027, increasing at an average rate of 5.3 percent per year through the projection period. Federal government spending on Medicaid benefit expenditures and administration costs is estimated to have increased by 4.4 percent to $386.5 billion in 2018, representing 63 percent of total Medicaid expenditures. Federal spending on Medicaid is projected to reach $624.8 billion by 2027, or 62 percent of total spending. State Medicaid expenditures for benefits and administration are estimated to have decreased to $229.6 billion in 2018, a 0.1-percent decline, and are projected to grow to $383.0 billion by 2027.

For much of history, the average annual Federal share has been about 57 percent of total expenditures, with several years of greater Federal shares due to changes specified in legislation. The average Federal share was 58 percent in 2013 and increased to 61 percent in 2014 due mainly to the higher FMAP for expansion adults, and it is estimated to have increased to 63 percent in 2015 and 2016 and to 62 percent in 2017. The matching rate for the expansion adults is set to decline gradually from 100 percent in 2016 to 95 percent in 2017, 94 percent in 2018, 93 percent in 2019,and 90 percent in 2020 and thereafter).The average Federal share is projected to decrease from 63 percent in 2018 and 2019 to 62 percent from 2020 through 2027.

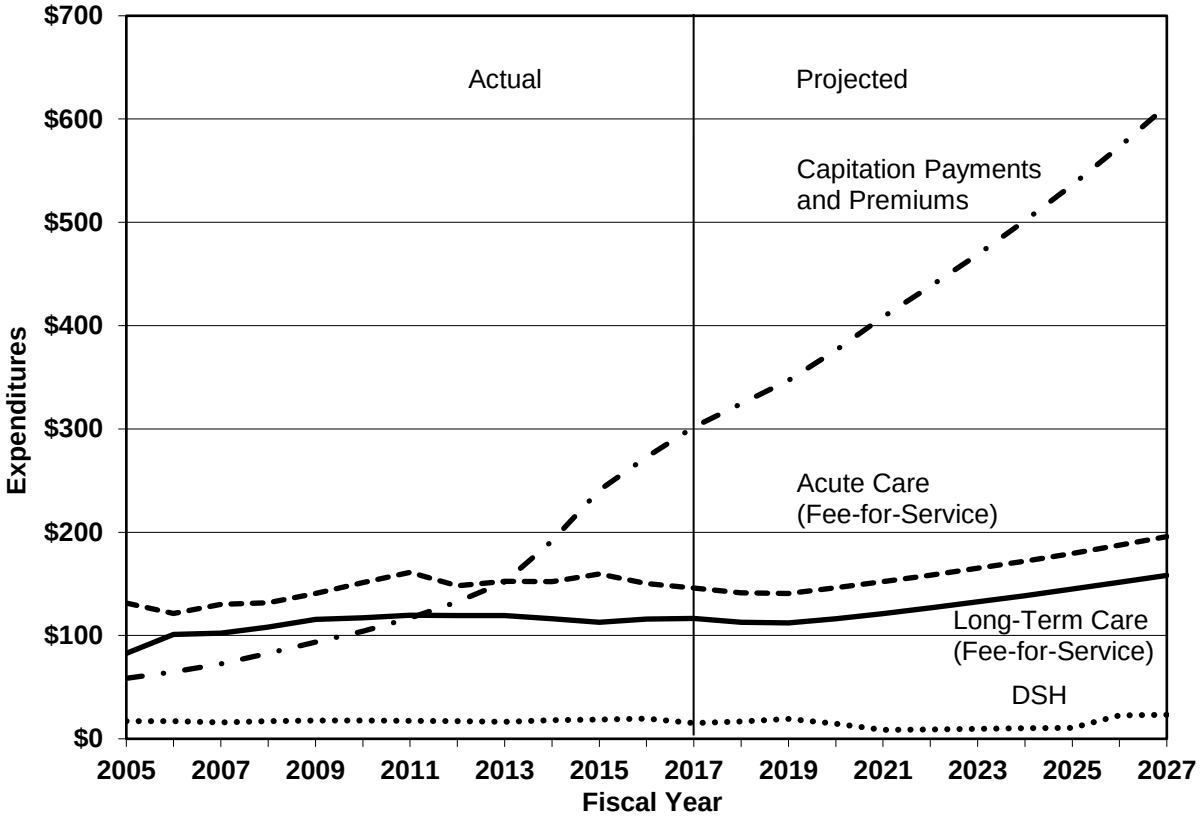
Total Medicaid expenditures (Federal and State combined) for benefits, excluding those for administration, are estimated to have grown 2.8 percent in 2018 to $588.3 billion. This is a slower rate of growth than in 2017 (3.9 percent) and is expected to be the result of continuing decelerations in enrollment growth (from 1.7 percent in 2017 to 0.7 percent in 2018) and per enrollee benefit expenditure growth (from 3.6 percent in 2017 to 0.9 percent in 2018). Medicaid expenditures on total benefits are projected to reach $973.9 billion by 2027, increasing at an average rate of 5.5 percent per year through the projection period. Federal government spending on these Medicaid payments is estimated to have been $369.0 billion in 2018 and is projected to grow to $604.5 billion by 2027.

Administrative expenditures are estimated to have amounted to $27.8 billion in 2018, reflecting an increase of 0.1 percent, down from a growth rate of 5.7 percent in 2017. They are projected to reach $34.0 billion by 2027, growing at an average annual rate of 2.0 percent over the 10-year period. While administrative expenditures are estimated to have constituted 4.6 percent of total Medicaid costs in 2018, this percentage is projected to decline to 3.4 percent by 2027.

Figure 3 shows historical and projected Medicaid benefit expenditures by four major categories of services: acute care fee-for-service, long-term care fee-for-service, capitation payments and premiums, and DSH payments.[17]

Figure 3—Past and Projected Medicaid Expenditures for Medical Assistance Payments, by Type of Payment, Fiscal Years 2005–2027[18]

(in billions)



Over the next 10 years, expenditures for capitation payments and premiums are expected to continue to grow more rapidly than expenditures for the other major Medicaid service categories, as shown in figure 3. These expenditures increased 7.5 percent in 2018 and are projected to grow 7.3 percent per year on average from 2018 to 2027 (from $301.7 billion in 2017 to $612.8 billion in 2027), which would be 1.8 percentage points faster than overall Medicaid benefit growth. In 2014 through 2017, relatively faster growth in these payments was driven by the Medicaid eligibility expansion under the Affordable Care Act, since most of the expansion adults are enrolled in managed care plans. In addition, States increased the use of these plans by including managed long-term care services and support programs for their aged enrollees and persons with disabilities. From 2001 to 2013—prior to the Medicaid expansion in 2014—Medicaid payments for managed care plans and other premiums grew on average 12.2 percent per year, more rapidly than the overall

[17] The data for selected figures in the report can be found in section VI.D.

[18] The data for this graph can be found in table 15 of section VI.D.

Medicaid benefit expenditure growth rate of 6.5 percent. Over 2014 and 2015, these payments increased nearly 60 percent, due primarily to the continued enrollment of expansion adults in managed care programs. The use of managed care plans within Medicaid increased over time, with 82 percent of enrollees covered by at least one such plan and 69 percent covered by a comprehensive managed care program in 2017.[19] The increase in the use of these plans accounts for much of the difference between the capitation payment and overall Medicaid expenditure growth rates; however, this increase does not necessarily imply differences in per enrollee cost growth between those enrolled in managed care and those not enrolled.

Acute care fee-for-service expenditures are estimated to have decreased by 3.0 percent in 2018, due in part to continued managed-care contract use replacing fee-for-service delivery in the Medicaid program. Over the next decade, these expenditures are projected to grow at an average rate of 3.0 percent per year, from $145.8 billion in 2017 to $195.7 billion in 2027. States are expected to continue to approach the challenge of cost growth for aged beneficiaries and persons with disabilities through increased use of managed care programs for those populations.

Medicaid spending on fee-for-service long-term care is estimated to have declined 3.1 percent in 2018 but is projected to grow by 3.1 percent on average for 2018 through 2027, increasing from $116.5 billion in 2017 to $158.2 billion in 2027.[20] Aged enrollees and persons with disabilities receive the vast majority of long-term care services, and growth in these expenditures is driven in part by growth in enrollment among these beneficiaries. In recent years, Medicaid expenditures on these services declined; from 2011 through 2017, long-term care expenditures decreased at an average rate of 0.3 percent per year, compared to average annual growth of 7.2 percent from 2005 through 2010. This deceleration reflects relatively slower growth in reimbursement rates and utilization of long-term care. Additionally, over the last several years, there was an increase in the use of managed care for long-term

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[19] Centers for Medicare & Medicaid Services, *Medicaid Managed Care Enrollment and Program Characteristics, 2017,* available at https://www.medicaid.gov/medicaid/managed-care/downloads/enrollment/2017-medicaid-managed-care-enrollment-report.pdf.

[20] Use of home and community-based services can substantially reduce expenditures for enrollees who would otherwise have had to enter a nursing home or who transition from institutional to community settings. Conversely, the expanding use of these services, by those who would not otherwise have had nursing home care, adds to overall program costs and may offset some amount of the savings realized by reducing the use of institutional long-term care services. Growth in the use of home and community long-term care reflects the increase in the number of home and community-based waivers in Medicaid, as well as the provision of such care through State plans. In addition, in *Olmstead v. L.C.*, 119 S. Ct. 2176 (1999), the Supreme Court ruled that, under the Americans with Disabilities Act of 1990, States must provide community-based placement for persons with disabilities when appropriate and consistent with consumer wishes. This ruling is also expected to have led to an increase in non-institutional long-term care expenditures in Medicaid.

care services in Medicaid—a factor that resulted in several years of slow growth or contraction in long-term care fee-for-service expenditures.

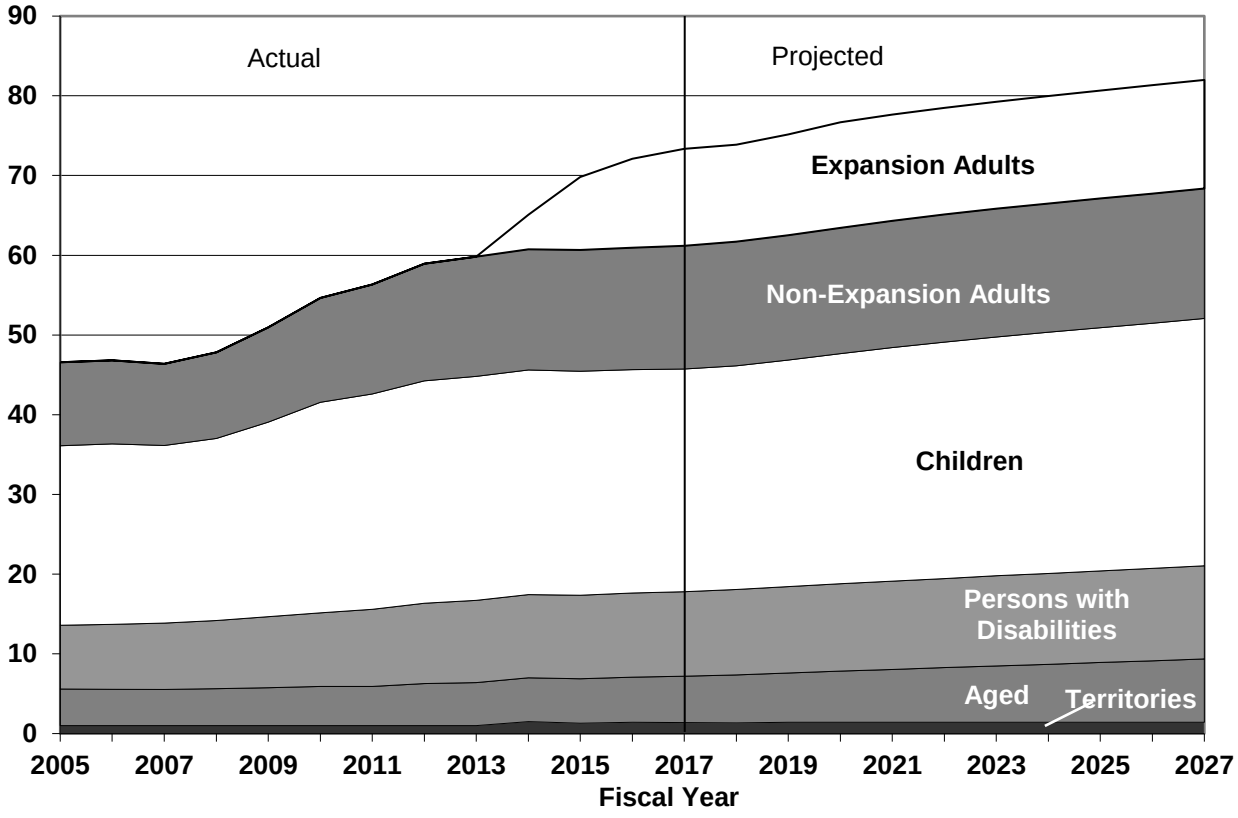
Medicaid DSH expenditures are typically expected to grow at the same rate as the Medicaid Federal DSH allotments, which are based on the Consumer Price Index (CPI). The Affordable Care Act, however, prescribes reductions in Medicaid DSH allotments, and subsequent legislation has extended those reductions through 2025.[21] The average growth rate for DSH spending is projected to be 4.4 percent over the next 10 years, with DSH expenditures expected to decrease from $19.4 billion in 2019 to $8.6 billion in 2021 before rising to $22.7 billion in 2026 and $23.2 billion in 2027. This trend is driven by the expiration of the DSH reductions under current law in 2026, when DSH payments are scheduled to resume their levels absent any payment reductions.

[21] Several acts of legislation have combined to delay the start of DSH reductions until 2020 and extend the duration of the reductions through 2025: the Middle Class Tax Relief and Job Creation Act (Public Law 112-96); the American Taxpayer Relief Act (Public Law 112-240); the Bipartisan Budget Act (Public Law 113-67); the Protecting Access to Medicare Act (Public Law 113-93); the Medicare Access and CHIP Reauthorization Act (Public Law 114-10); and the Bipartisan Budget Act of 2018 (Public Law 115-123).

Enrollment

Increasing levels of Medicaid enrollment are expected to contribute to expenditure growth over the next 10 years. Historical and projected Medicaid enrollments are shown by category in figure 4.

Figure 4—Past and Projected Numbers of Medicaid Enrollees, by Category, Fiscal Years 2005–2027[22]
(in millions of person-year equivalents)



Note: Enrollment levels after 2012 are estimated for all but the expansion adults, whose levels are reported through 2017.

Total enrollment is estimated to have grown from 73.4 million in 2017 (including 1.4 million enrollees in the U.S. Territories) to 73.9 million in 2018—with increases across all bases of eligibility. Growth is estimated to have slowed after many States expanded Medicaid eligibility in 2014 and 2015; enrollment is estimated to have increased 8.8 percent in 2014 and 7.2 percent in 2015, but growth slowed to 3.3 percent in 2016, 1.7 percent in 2017, and only 0.7 percent in 2018.

During 2018 through 2027, the total number of Medicaid enrollees is projected to increase at a rate of about 1.1 percent per year, reflecting expected U.S. population growth and an increase in the number of aged enrollees as baby boomers continue to

[22] The data for this graph can be found in table 16 of section VI.D.

reach age 65. Growth in the number of aged adults is expected to be faster than that for the other categories of enrollment; the average annual growth rate for aged adults is projected to be 3.2 percent over the next 10 years. By 2027, Medicaid enrollment is projected to increase to 82.0 million.[23]

[23] Territory enrollment is projected to remain level at about 1.4 million persons from 2018 to 2027, despite the projected reduction in Federal expenditures for Territory Medicaid programs due to the expiration of additional funds provided by the Affordable Care Act and the Bipartisan Budget Act of 2018. These projections are based on the assumption that Territories will provide additional funding or make other program changes to maintain enrollment levels as Federal funding is reduced.

D. IMPACTS OF THE MEDICAID ELIGIBILITY EXPANSION

Expansion of Medicaid eligibility to almost all persons under age 65 who are living in families with incomes below 138 percent of the FPL (and who are citizens or eligible legal residents) began in 2014. Expansion adult enrollment was 11.2 million in 2016 and 12.2 million in 2017. In 2018, such enrollment is estimated to have remained at the 2017 level of 12.2 million. Expansion adults are projected to number 13.6 million by 2027.

Total Medicaid benefit expenditures for the expansion adult population amounted to $69.0 billion in 2017. Expenditures are estimated to have increased to $74.2 billion in 2018 and are projected to reach $124.3 billion by 2027. For expansion adult beneficiaries, a higher Federal matching rate is specified, decreasing from 100 percent through 2016 to 95 percent in 2017 and then gradually declining to 90 percent by 2020 and beyond. By 2027, the States are projected to pay $12.4 billion of the costs for expansion adults.

Unlike the per enrollee costs for non-expansion populations (which are excluded from the body of this year's report for reasons explained in section VI.F), expansion adult expenditures per enrollee are calculated from the CMS-64 financial statements, which include a reliable accounting of the number of expansion adults enrolled in each State for every month of its expansion. As a result, the calculated per enrollee costs for this population are considered credible and are included below.

The average per enrollee costs for expansion adults were $5,511 in 2014 and grew to $6,365 in 2015. These costs reflected that managed care rates for these populations relied on assumptions about higher initial health care spending, including pent-up demand for newly covered individuals and higher acuity levels than other adults enrolled in Medicaid. Average per enrollee costs decreased in 2016 ($5,969) and in 2017 ($5,669) as those effects diminished and as data on this population indicated costs were lower than originally assumed in many states. Moreover, prior period adjustments by some States indicate that certain adjustments significantly lowered payments made in 2016 and 2017.

Data for the expansion adult population are still limited. While CMS has reported some enrollment and expenditure information for this group, data on claims and managed care encounters, and on the health status and demographics of these enrollees, are not available. Thus, there is still uncertainty about the health care costs of expansion adults in 2014 through 2017, as well as for future years. (As additional data are provided in the financial reports for the expansion adults, it is possible to provide per enrollee cost estimates for this group. See section IV for more information.)

Given the uncertainty inherent in covering a large new population in Medicaid (many of whom were expected to have been previously uninsured), most States that

implemented the eligibility expansion included risk-sharing arrangements in their contracts with managed care plans for expansion adults in 2014 and 2015, with some States continuing these arrangements into 2016.[24] The most common approaches were to use a risk corridor or to use a minimum medical loss ratio. Under a risk corridor, the managed care plans would return some payments to the State and the Federal government if the average benefits per enrollee or loss ratio fell below a certain level or ratio, and the plans would receive additional payments from the State and the Federal government if the average benefits per enrollee or loss ratio exceeded a certain level or ratio. In States requiring a minimum medical loss ratio, the managed care plans would return some payments to the State and the Federal government if the loss ratio fell below a certain level, but the plans would not receive additional funding if the loss ratio was higher than expected.

As a result of these arrangements, there is the potential that the ultimate payments for expansion adults may be notably different from those currently reported. By the end of 2017, States had reported most of the results from 2014 and 2015. Some States without finalized arrangements effectively made prepayments to the Federal government through prior period adjustments (which are adjustments to payments prior to the settlement of risk corridors and minimum loss ratios). Based on the results of States that have reported such information and on comparisons of the costs for expansion and non-expansion adults enrolled in Medicaid, the Federal government is expected to receive an estimated $3.2 billion from the risk-mitigation strategies and prior period adjustments due from 2014 experience, an estimated $5.5 billion due from 2015, and an estimated $4.0 billion due from 2016. (Additional payments may also be due from 2017 and 2018, but these would likely be smaller than the amounts from 2014 through 2016.) Of the total $12.7 billion estimated to ultimately be paid to the Federal government, $1.2 billion was paid in 2016, $5.1 billion in 2017, and nothing in 2018, while in 2019 and 2020 recoveries are projected to total $3.2 billion in each year. These payments have been made through risk mitigation settlements, and in some cases through prior period adjustments.[25]

[24] Of the States that did not use a risk-sharing arrangement, several covered expansion adults under fee-for-service arrangements, and one covered enrollees through private health insurance plans using premium assistance. Several other States chose not to use risk-sharing arrangements.

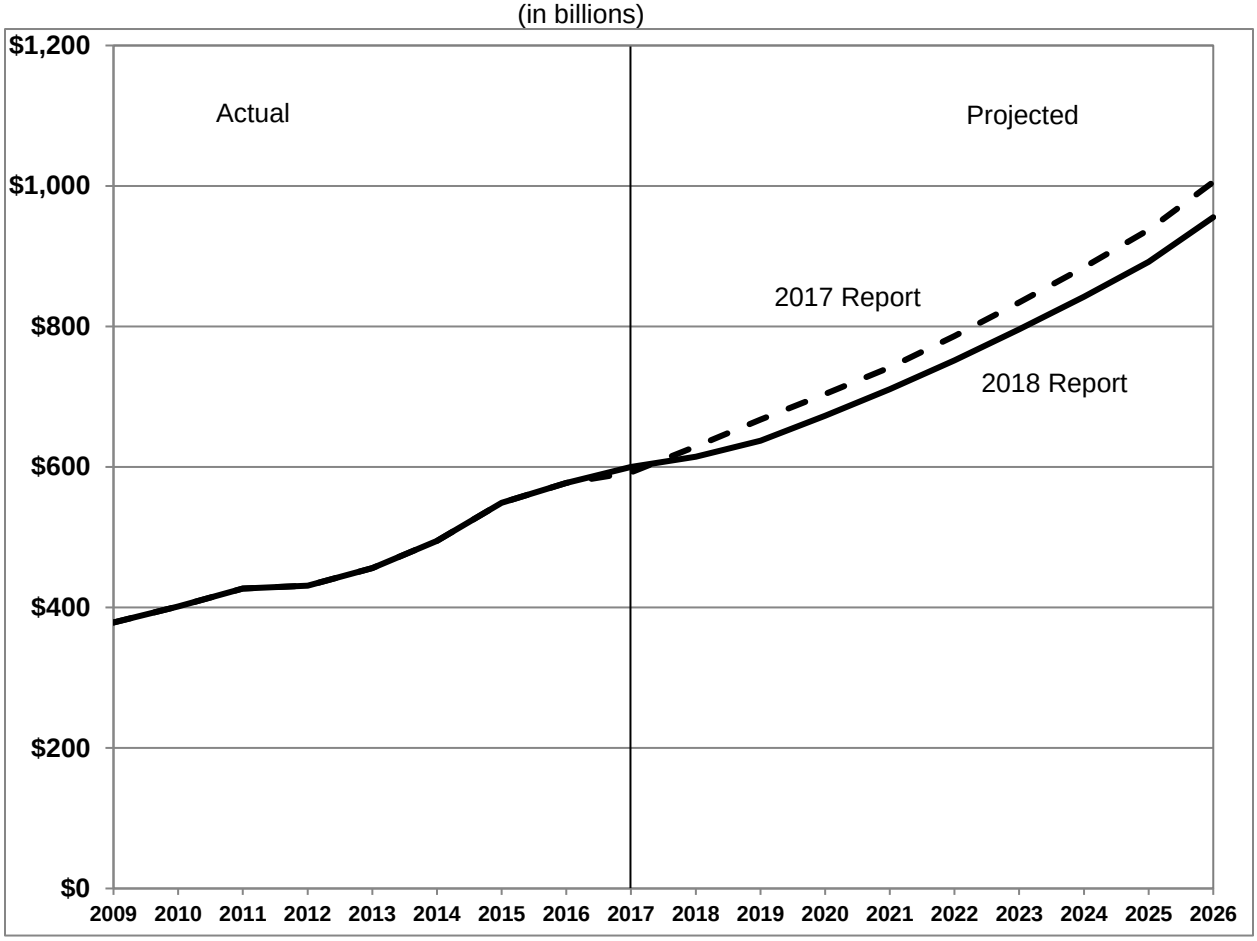
[25] Since only some States have reported the results of these contractual provisions, and because of the various arrangements employed by those States and the uncertainty regarding the costs of the new adult enrollees, it is possible that the actual amounts returned to the Federal government could differ significantly from those estimated here. In addition, it is possible that the actual payments to the Federal government (or potentially from the Federal government) could occur later than expected.

E. COMPARISON TO 2017 REPORT PROJECTIONS

The projections of Medicaid expenditures in this report are slightly lower than in the *2017 Actuarial Report on the Financial Outlook for Medicaid*. Figure 5 compares the 2018 projections of total Medicaid expenditures (including Federal and State) to those in last year's report.

Figure 5—Projected Medicaid Expenditures: Comparison of 2018 versus 2017 Actuarial Reports on the Financial Outlook for Medicaid, Fiscal Years 2009–2026[26]

(in billions)



Expenditures in 2018 ($616.1 billion) are estimated to have been 2.1 percent lower than last year's forecast ($629.3 billion), due to lower estimated benefit expenditures for most eligibility groups, particularly for aged enrollees and enrollees with disabilities. Projected spending of $952.1 billion in 2026 is 5.3 percent lower than the corresponding amount from last year ($1,005.7 billion). In total, the 10-year projections from 2017 through 2026 are $314.8 billion, or 4.0 percent, lower. The decrease over the 10-year period is primarily due to lower estimated spending in 2018

[26] The data for this graph can be found in table 18 of section VI.D.

and slower projected benefit expenditure growth, most notably for managed care programs and fee-for-service acute care services.

Projected increases in utilization (or the residual factors) were slower in this year's report than in last year's. As recent historical expenditures have grown more slowly, the outlook for future utilization growth in the program has changed accordingly.

Medicaid enrollment is projected to reach 81.3 million by 2026, which is 1.0 million lower than projected in the 2017 report (82.3 million). Enrollment is estimated to have been 0.2 million lower beginning in 2015, primarily for non-expansion adults and children, reaching 0.9 million fewer enrollees in 2018. As a result, projected enrollment levels over the next 10 years are lower as well.

F. MEDICAID IN CONTEXT

From the estimates and analysis of health spending in the United States provided by the national health expenditure accounts (NHEA), additional insight can be obtained into the role of Medicaid within the total U.S. health care system.[27] Medicaid spending in the 2017 NHEA represented 16.7 percent of total national health expenditures. Private health insurance was the largest source of spending on health care in 2017, accounting for 33.9 percent of total national health expenditures, while Medicare paid for 20.2 percent.[28]

The historical NHEA also present health care spending by the original source of financing (or sponsor). In calendar year (CY) 2017, Medicaid represented 36.8 percent of Federal government expenditures on health services and supplies and 37.0 percent of such spending by State and local governments. For the fourth consecutive year, Medicaid was larger than Medicare as a share of Federal government expenditures on health services and supplies. (Trust fund and general revenue Medicare expenditures accounted for 31.5 percent of Federal spending on health services and supplies in 2017.)[29] Medicaid is the largest source of Federal general revenue-based spending on health services. A sizeable portion of Medicare spending is funded by income from dedicated revenue sources—which include Medicare Part A payroll taxes and Part B and Part D beneficiary premiums—with the balance from Federal general revenues. In contrast, Medicaid does not have any dedicated Federal revenue source; all Federal spending on Medicaid comes from general revenue. For State governments, Medicaid is the largest source of general revenue-based spending on health services.[30]

Moreover, Medicaid has a greater number of enrollees than Medicare. In FY 2017, Medicaid is estimated to have covered 73.4 million individuals (including persons residing in U.S. Territories). In comparison, Medicare covered an average of

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[27] The historical Medicaid spending data and projections presented in this report differ slightly from the national health expenditure estimates and projections in several ways. Some of the differences are as follows: (i) the data and projections featured in this report are shown on a fiscal year basis, whereas the national health expenditure amounts are on a calendar year basis; (ii) the NHEA make several adjustments to Medicaid, such as classifying Medicaid spending for Medicare premiums as Medicare spending; and (iii) the NHEA use somewhat different definitions of services than do the data presented in this report.

[28] A. Martin, *et al.*, "National Health Care Spending in 2017: Growth Slows to Post-Great Recession Rates; Share of GDP Stabilizes," *Health Affairs*, 38, no.1 (2019): 96-106.

[29] National Health Expenditure Data, Historical 2017, tables 5.3 and 5.4, available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html.

[30] *Ibid*. There are some State dedicated revenues for Medicaid. For more detail on this analysis of health care spending by sponsor, see the methodology paper at https://www.cms.gov/files/document/definitions-sources-and-methods.pdf.

58.4 million people during CY 2017.[31] Within these totals, there are substantial differences between the programs in the number and nature of people covered. For example, Medicare automatically covers nearly all people over age 65 (49.5 million beneficiaries in 2017), but only those aged individuals with very low incomes and assets—and who apply for the coverage—become Medicaid enrollees (estimated at 5.7 million). Enrollment for persons with disabilities was more similar between the two programs in 2017; Medicaid covered an estimated average of 10.6 million persons with disabilities that year, while Medicare covered 8.9 million persons with disabilities. Although the definition of disability is essentially the same for both programs, the other eligibility criteria are different.[32] Finally, as noted earlier, a majority of Medicaid enrollees are either children or non-disabled non-aged adults in families with low incomes; Medicare does not have comparable categories of beneficiaries. The Medicare Payment Advisory Commission (MedPAC) and Medicaid and CHIP Payment and Access Commission (MACPAC) found that 9.5 million persons (or about 15 percent of all enrollees) were dually eligible in 2013 and that, in that year, dual-eligible beneficiaries accounted for $118.9 billion in Medicaid expenditures (or about 32 percent of Medicaid benefit spending).[33]

Among the different types of health care services, Medicaid plays the largest role in the funding of long-term care. According to the 2017 NHEA, during that year Medicaid is estimated to have paid for 36.1 percent of all freestanding home health care and 30.2 percent of all freestanding nursing home care in the United States. In addition, Medicaid covered an estimated 57.8 percent of other health, personal, and residential care in 2017, including Medicaid payments for intermediate care facilities for individuals with intellectual and developmental disabilities and such payments for home and community-based waivers.[34] Medicaid has a major responsibility for providing long-term care because the program covers some aged persons and many persons with disabilities of all ages—individuals who tend to be the most frequent and most costly users of such care—and because private health insurance and Medicare often furnish only limited coverage for these benefits. Many people who pay privately for nursing home care or community-based long-term care become

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[31] *The 2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,* available at https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/reportstrustfunds/downloads/tr2018.pdf.

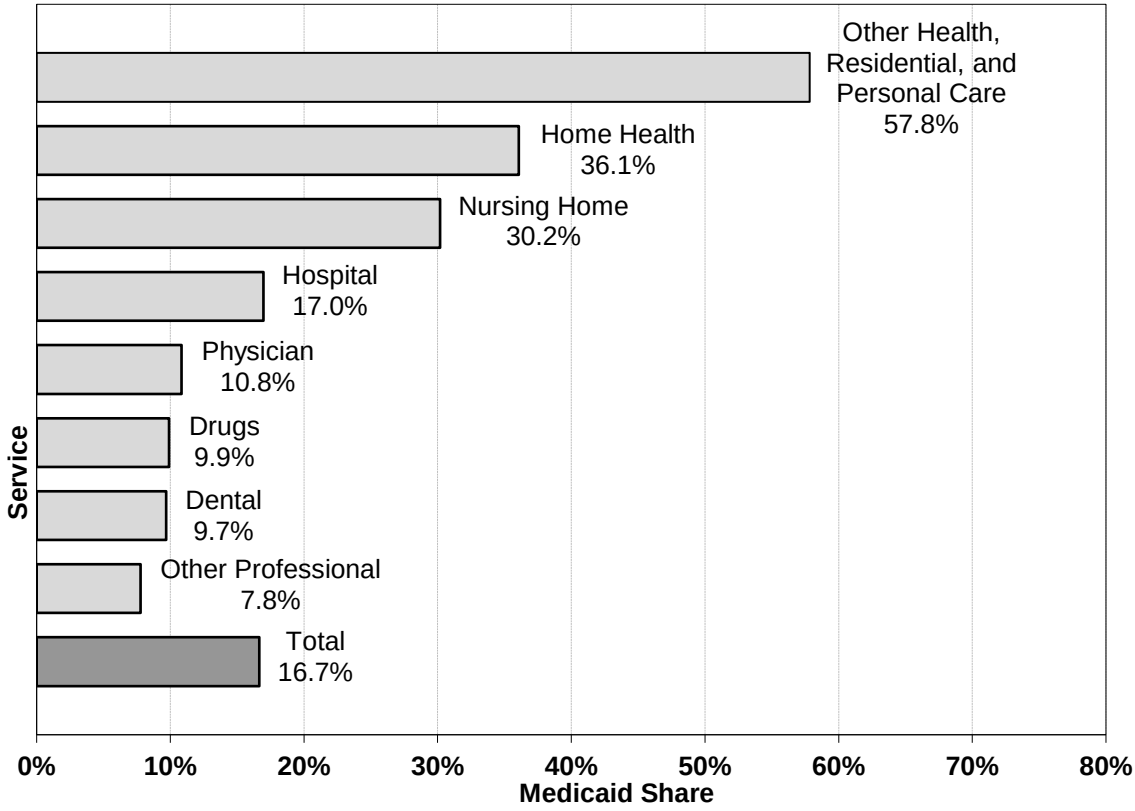
[32] Medicaid eligibility for persons with disabilities is based on income and asset criteria (among other measures). Medicare eligibility for persons with disabilities generally depends on an individual's sufficient participation in the paid work force prior to disability. Furthermore, in many cases the time period to determine eligibility for Medicare on the basis of disability is longer than that for determining Medicaid eligibility. Despite these different requirements, a significant number of persons with disabilities qualify for coverage under both Medicaid and Medicare, while some persons are only eligible for one of the programs.

[33] Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission, *Data Book: Beneficiaries Dually Eligible for Medicare and Medicaid*, January 2018, available at http://medpac.gov/docs/default-source/data-book/jan18_medpac_macpac_dualsdatabook_sec.pdf?sfvrsn=0.

[34] A. Martin, *et al*., "National Health Care Spending in 2017: Growth Slows to Post-Great Recession Rates; Share of GDP Stabilizes."

impoverished due to the expense; as a result, these people eventually become eligible for Medicaid. Figure 6 shows the percentage of total spending for the major health care services that Medicaid covers.

Figure 6—Medicaid Expenditures as Percentage of Total U.S. Health Expenditures, by Service Category, Calendar Year 2017



Medicaid represents a significant share of the Federal and State budgets. In FY 2018, out of a total of $4,109 billion spent by the Federal government for all purposes, an estimated $389 billion (or 9.5 percent) can be attributed to Medicaid. Under the President's FY 2020 Budget, Federal outlays on Medicaid for current services are projected to account for 9.5 percent of all Federal outlays by 2027 as well.[35]

According to the National Association of State Budget Officers (NASBO), Medicaid represented an estimated 28.9 percent of all State government spending in State fiscal year 2017.[36] This amount, however, includes all Federal contributions to State Medicaid spending, as well as expenditures from State general revenue funds and other State funds (which for Medicaid may include provider taxes, fees, donations,

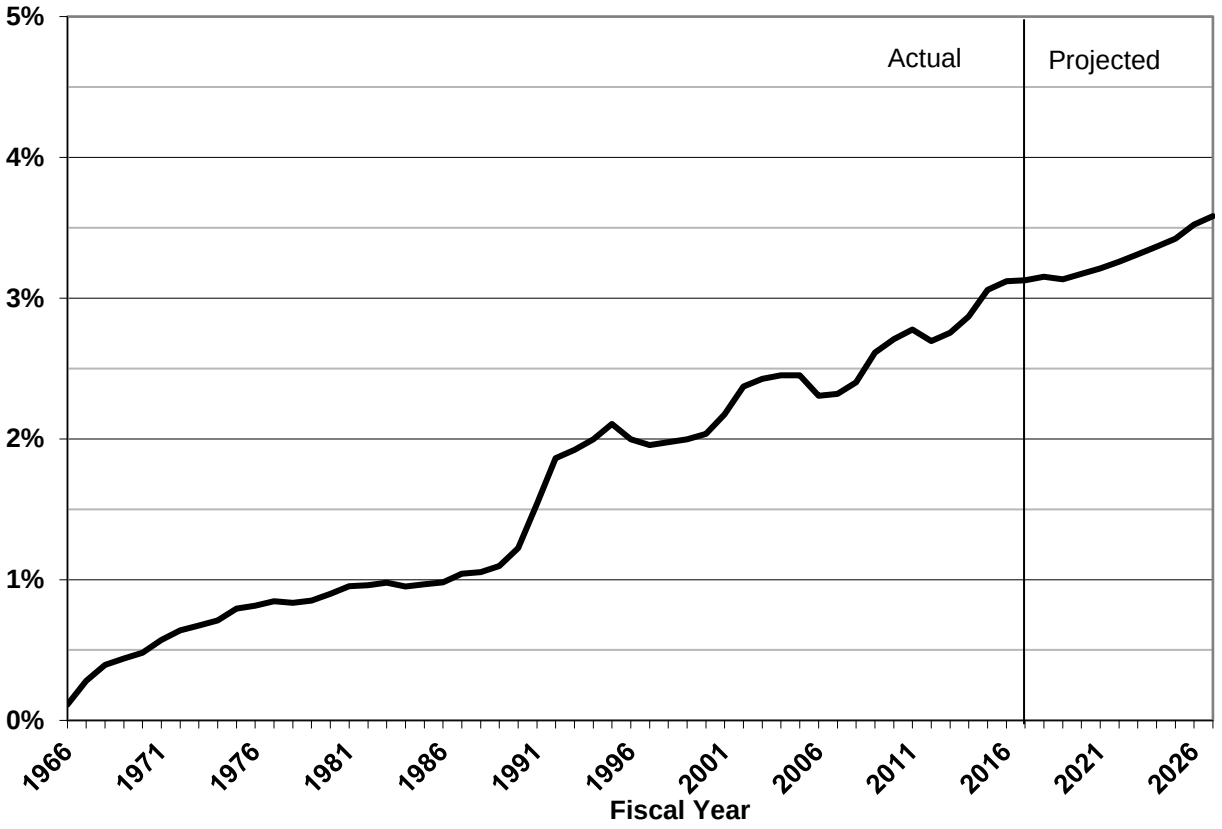
[35] Figures from the President's Budget differ from those shown in this report due to timing and differences in projected economic assumptions. More information on the Federal budget is available in *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2020.*

[36] National Association of State Budget Officers, *State Expenditure Report: 2016–2018 State Spending*, 2018.

assessments, and local funds). According to NASBO, Medicaid was the largest program as measured by State expenditures in 2017. When only State general revenues are considered, however, Medicaid spending constituted an estimated 19.7 percent of State expenditures in 2017, placing it well behind elementary and secondary education. Overall in 2017, State general revenue expenditures for Medicaid increased by 3.7 percent, which was faster than the overall State general revenue expenditure growth rate of 3.1 percent.

As shown in figure 7, Medicaid represented about 3.1 percent of the Gross Domestic Product (GDP) in 2017. This gradual increase from 2.8 percent in 2013 largely reflects the growth in Medicaid expenditures associated with the eligibility expansion starting in 2014.

Figure 7—Past and Projected Medicaid Expenditures as Share of GDP, Fiscal Years 1966–2027[37]



Note: Percentages are affected by economic cycles.

In 2018, GDP is estimated to have grown by 4.6 percent. This growth rate is faster than that for Medicaid spending, which is estimated to have increased by 2.7 percent, as the main effects of the coverage expansion under the Affordable Care Act slowed.

[37] The data for this graph can be found in table 19 of section VI.D.

Medicaid spending is estimated to have remained at 3.1 percent as a share of GDP in 2018.

As seen in figure 7, the program's expenditures are projected to grow to 3.3 percent of GDP by 2027. From 2018 through 2027, Medicaid expenditures are projected to increase about 0.7 percentage point faster than GDP per year. This difference is driven by relatively faster projected growth in per enrollee spending for the program overall, averaging 4.3 percent from 2018 through 2027, as well as by increases in DSH expenditures starting in 2026 following the expiration of the temporary DSH allotment reductions most recently updated in the Bipartisan Budget Act of 2018 (Public Law 115-123).

This projection of Medicaid spending as a share of GDP is lower than that included in last year's report. The share of GDP devoted to Medicaid in 2026 is projected to be 3.3 percent, down from last year's projection of 3.7 percent as a result of slower projected growth in Medicaid expenditures and an increase in the projected GDP growth rate as compared to the 2017 report.

IV. SUMMARY OF DATA, ASSUMPTIONS, AND METHODOLOGY

Projections of Medicaid expenditures and enrollment are highly dependent on both demographic and economic assumptions. The most important such assumptions are those regarding the growth of health care prices, growth in the use of health care goods and services, overall economic growth, individual wage growth, and population growth. In addition, there are various programmatic factors that have historically influenced Medicaid expenditure and enrollment trends, including decisions by the States regarding eligibility and payment rules for their Medicaid plans, the coverage of and enrollment in other health insurance programs, including Medicare and private health insurance, and changes in the participation rates of eligible persons in Medicaid. The projections also depend on the nature and quality of the available data on Medicaid operations. This section briefly describes the sources of data and assumptions that are used to generate the Medicaid projections shown in this report; further detail is provided in sections VI.A and VI.B.

Data Sources

The data and assumptions on which these Medicaid projections are based are derived from three major sources. The first source is CMS data, which are submitted by the States to CMS on a regular basis. These data include the CMS-64 Financial Management Report (FMR) and the Medicaid Analytic eXtract (MAX).

The FMR provides separate Federal and State expenditures for all Medicaid fee-for-service programs and capitation arrangements.[38] The data and projections in this Medicaid actuarial report rely on the *Net Services* FMR, while Medicaid reports prior to 2015 used the *Base* FMR. Both the Net Services and Base FMRs provide the same total expenditures, but the former allocates prior period adjustments by service, while the latter does not. Neither the total expenditures reported nor the projected total expenditures are changed as a result of the switch from the Base to the Net Services FMR, but the benefit expenditures per enrollee are generally increased (since the benefit expenditures are more complete and thus are greater), as are the benefit expenditures for some categories of service. OACT made this change because using the Net Services FMR provides a more accurate allocation of the costs (by category of service and by enrollment category) than does reporting a significant portion of expenditures as prior period adjustments, and because further complications arise when the Base FMR is used and adjustments are allocated to the expansion adults. The effects of changing from the Base to the Net Services FMR are described more fully in section VI.A.

[38] More information on the CMS-64 is available on the CMS website at https://www.medicaid.gov/medicaid/finance/state-expenditure-reporting/expenditure-reports/index.html. Additional detail is provided in section VI.A.

Table 3 shows the 2017 Medicaid medical assistance payments and administration costs reported in the Net Services FMR.

Table 3—Total Medical Assistance Payments and Administration Expenditures from the CMS-64 Financial Management Report, Fiscal Year 2017

Type of Payment	Total	Federal	State
Medical Assistance Payments	$572,243,939,611	$352,470,195,654	$219,773,743,957
Administration Costs	27,821,118,952	17,702,038,485	10,119,080,467
Total Expenditures	600,065,058,563	370,172,234,139	229,892,824,424

Note: The complete CMS-64 Financial Management Report for medical assistance payments and administrative costs in FY 2017 is provided in section VI.D and is available on the CMS website at https://www.medicaid.gov/medicaid/finance/state-expenditure-reporting/expenditure-reports/index.html.

CMS data also include MAX, which contains both service and demographic data supplied by the States, including provider payments and enrollment counts, and are derived from the Medicaid Statistical Information System (MSIS).[39] MAX expenditure data include only total Medicaid expenditures and do not provide data separately for Federal or State expenditures. Several adjustments are made to merge the CMS-64 and MAX data together for use in preparing projections.

Table 4 shows average annual Medicaid enrollment by enrollment category for the last 4 years of complete enrollment data (2009 through 2012). Enrollment data are available in only 46 States in 2013. Enrollment levels are estimated for all States after 2013, as described in the section B of the Appendix (Key Assumptions).

[39] More information regarding MAX can be found on the CMS website at https://www.cms.gov/research-statistics-data-and-systems/computer-data-and-systems/medicaiddatasourcesgeninfo/maxgeneralinformation.html.

Table 4—Average Annual Medicaid Enrollment by MAX Enrollment Category, Fiscal Years 2009–2012

Enrollment Category	2009	2010	2011	2012
Aged	4,742,798	4,906,857	5,070,917	5,281,836
Persons with Disabilities	8,915,394	9,223,315	9,651,883	10,069,328
Children	23,338,750	25,314,793	26,079,135	26,802,765
Adults	11,675,142	12,875,583	13,550,526	14,446,790
Children (Unemployed Parent)	182,751	217,681	234,629	235,524
Unemployed Adults	148,525	181,847	200,381	204,703
Foster Care Children	897,986	880,464	839,805	848,280
Breast and Cervical Cancer Act Enrollees	38,152	39,968	41,963	43,300
Total	49,939,498	53,640,509	55,669,239	57,932,526

Note: MAX data for 2012 are supplemented with 2011 MAX data for Colorado and Idaho, as information for these two States is unavailable in the 2012 MAX data.

Key Assumptions

The Boards of Trustees for Old-Age, Survivors, and Disability Insurance (OASDI, or Social Security) and Medicare constitute the second source for the data and assumptions.[40] The projections in this Medicaid report are based on the same economic and demographic assumptions that were developed by the Trustees and used to determine the intermediate estimates presented in their statutory 2018 annual reports to Congress on the financial status of the OASDI and Medicare programs. The Trustees' intermediate economic assumptions are also used to develop the health care service price forecasts underlying the projections in this report.[41]

The third source of underlying data and assumptions—national health expenditure historical data and projections—is used for comparing Medicaid expenditures and enrollment with Medicare, private health insurance, and total health care spending

[40] *The 2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,* available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2018.pdf, and *The 2018 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds,* available at https://www.ssa.gov/OACT/TR/2018/.

[41] These assumptions are different from those used for projections in the President's FY 2020 Budget. Consequently, the projections presented in this report usually differ somewhat from the President's Budget projections. In addition, due to differences in the timing of this report and the Budget, later data are generally available for use in this report. Finally, while the Trustees' economic assumptions underlie both the Medicare Trustees Report and the Medicaid actuarial report, the two sets of health care service price growth forecasts are not the same. The two programs have significantly different statutory mechanisms for setting provider price updates, and these differences are reflected in the updated assumptions for each program.

in the United States. OACT develops the national health expenditure data and projections.[42]

For the purpose of projecting enrollment of, and expenditures for, expansion adults, OACT developed assumptions regarding States' decisions to implement the eligibility expansion. Of all people who were potentially newly eligible Medicaid enrollees, 45 percent are estimated to have resided in States that elected to expand Medicaid eligibility in 2014, and 50 percent are estimated to have resided in States that expanded eligibility by 2015. This share rose to 55 percent in 2016 and is estimated to have remained at that level through 2018. Virginia and Maine expanded Medicaid in 2019. Idaho, Nebraska, and Utah are projected to expand Medicaid in 2020, increasing the share of newly eligible enrollees who are covered to 58 percent. No additional States are projected to expand Medicaid after this time.

In the future, actual participation by States could differ from these assumptions. A greater or lesser number of States could elect to expand eligibility than has been assumed, and States' decisions may change over time (either to expand if they have not done so previously or to end the expansion sometime in the future).[43]

The Medicaid expenditure and enrollment projections shown in this report are based on current law. That is, they are consistent with current legislation and administrative policy regarding Medicaid including the Bipartisan Budget Act of 2018, which extended funding for the Children's Health Insurance Program (CHIP) through the projection window.[44] No attempts have been made to forecast any future changes in policy or legislation that, if realized, would affect the Medicaid program—including Federal Medicaid, State Medicaid, or Medicare policy and legislation or other legislation that could affect private health insurance plans. Thus, while changes in Federal or State Medicaid policy have been significant factors affecting the patterns of growth in expenditures and enrollment over the historical period, no

[42] More information on the historical NHEA and projections is available on the CMS website at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html. Also, see A. Martin, *et al*., "National Health Care Spending in 2017: Growth Slows to Post-Great Recession Rates; Share of GDP Stabilizes," *Health Affairs*, 38, no.1 (2019): 96-106; and A. Sisko, *et al.*, "National Health Expenditure Projections, 2016-25: Economic and Demographic Trends Drive Spending and Enrollment Growth," *Health Affairs*, 38, no. 3 (2019): 491-501.

[43] Currently we assume that all States that expanded prior to January 1, 2018 will remain expansion States. For those remaining, we assume the following expansion dates: January 1, 2019 for Virginia; April 4, 2019 for Maine; and July 1, 2019 for Idaho, Nebraska, and Utah.

[44] This report does not cover expenditures and enrollment under CHIP, whether operated under Title XIX or Title XXI of the Social Security Act. CHIP provides health coverage to many children in households with income above Medicaid eligibility levels. In addition, this report does not consider any potential effects on Medicaid if CHIP funding were to be depleted prior to FY 2027. Should CHIP experience a shortfall in available funding, children enrolled in Medicaid expansion CHIP would be eligible for coverage in Medicaid, and projected Medicaid expenditures and enrollment would be higher than the projections in this report.

future changes in policy are assumed (beyond those already scheduled under current law).

Methodology

Health actuaries typically base estimates of medical expenditures on three major factors:

- C – the number of people enrolled in the program (*caseload*),
- U – the quantity of services each person uses (*utilization*), and
- P – the reimbursement (*price*) for each unit of service.

The product of these three factors yields an estimate of total expenditures for medical services:

$$E = C \times U \times P \qquad (1)$$

Direct application of equation (1) requires data on utilization and reimbursement rates for Medicaid that are not currently available or practical to maintain.[45] An alternative recursive approach is therefore used for the projections, as described below.

Instead of using equation (1), the projection algorithm begins with development of data on the current level of Medicaid expenditures, by eligibility category and by type of medical service, to serve as a projection base. *Changes* in the three determinants of expenditures in equation (1) are then projected for future years and applied sequentially to the base year expenditures. Thus, if E_y represents expenditures in year y, then

$$E_{y+1} = E_y \times (1 + c_{y+1}) \times (1 + u_{y+1}) \times (1 + p_{y+1}) \qquad (2)$$

where c_{y+1}, u_{y+1}, and p_{y+1} are the assumed or projected rates of change in caseload, utilization, and prices, respectively, between years y and y+1. Equation (2) is applied separately to expenditures for each combination of the Medicaid eligibility categories and categories for type of service.

With a few exceptions, caseload factors vary by eligibility category, price factors vary by type of service, and utilization factors can vary by both eligibility category and type of service. The projected caseload factors are determined by trend and regression analysis of Medicaid enrollment data. Projections of future enrollment by eligibility category are based on estimates of the change in the share of the U.S. population

[45] No comprehensive sources are available that track reimbursement rates and use by service for all Medicaid programs. Because the expenditure data reported by the States in the CMS-64 are at an aggregate service level, each category likely includes various services with different numbers of claims and distinct reimbursement rates. Additionally, reimbursement rates and service use are different for each State.

enrolled in Medicaid, which has historically varied with changes in the unemployment rate. The relationship between Medicaid enrollment and unemployment reflects (i) how many people are without other forms of insurance and (ii) how many people might qualify for Medicaid based on its income requirements. Historically, this relationship has varied by eligibility category; in general, child and adult enrollment in Medicaid has been more sensitive to changes in the unemployment rate, and the enrollment of aged persons and persons with disabilities has been relatively less sensitive.

Price changes are derived from economic forecasts produced for the 2018 Medicare Trustees Report, including forecasts for economy-wide inflation, inflation for prices of medical services, and wage growth. Utilization is treated as the residual between total growth and the growth due to enrollment and price changes. The estimate of utilization is determined by an analysis of the historical interrelationship of expenditure, caseload, and price factor growth.[46] The residual factor, while termed *utilization*, reflects not only the change in the average number of services per enrollee but also changes in the *intensity* or average complexity of the services. In addition, any errors in the measurement of the number of enrollees and price per service are implicitly included in the residual.

The methodology used to develop the utilization factor for the projections is calculated by service and by enrollment category. While for some services historical utilization is similar across enrollment categories, utilization in services disproportionately concentrated in one or two enrollment categories can vary significantly by enrollment category. In these cases, projecting utilization by both type of service and enrollment category improves the accuracy of the forecast. In addition, the growth of managed care in Medicaid has reduced historical fee-for-service utilization for several types of service. The extent to which States appear to have maximized their use of managed care or are likely to continue to expand is measured and projected in the utilization factor for managed care services and the affected fee-for-service categories.

The results obtained from the *Caseload, Utilization, Price* (*CUP*) recursive forecast, using equation (2), are frequently adjusted to be consistent with recent expenditure data and outlay trends.

It is important to note that some of the reported line items in the financial data are not projected using category- or service-specific growth rates with respect to caseload, utilization, or price. Collections reported by the States constitute the largest such item, and they are projected to grow at the underlying total Medicaid expenditure growth rate, calculated net of all reported collections. In addition, payments for the Medicare Part A and Part B premiums are projected to grow at rates based on the most recent premium amounts and projections developed for the Social Security and

[46] More details on the trend residual methodology are included in section VI.C.

Medicare Boards of Trustees in their 2018 reports to Congress. Separate utilization and price trends are not developed.

The projections of expansion adult enrollment and costs are based on currently available data from the CMS-64 and on several assumptions, including projections of population growth, eligibility for and enrollment in other forms of health care coverage (such as employer-sponsored insurance and the Health Insurance Marketplaces), and growth in the utilization and prices of health care services. In addition, preliminary indications are that the actual costs for these beneficiaries are significantly less than the payments made to managed care plans to cover them. These results are considered in developing the projected per enrollee costs for expansion adults. Section III of the report discusses this issue in more detail.

The projections in the report also include estimated payments that the Federal government is anticipated to receive from managed care plans (via the States), through risk corridors and minimum medical loss ratio requirements, for the expansion adults covered in managed care in 2014 and 2015 and for some States in 2016 and 2017. (These payments are described in more detail in section III.D of the report.) To develop these estimates, per enrollee costs of the expansion adults in 2014, 2015, 2016, and 2017 were compared to projections of the costs of non-expansion adults. The costs for the non-expansion adults were based on data from the MAX files, adjusted to discount the costs of pregnant women (as pregnant women are not expected to be among the expansion population) and projected forward using the data and assumptions of per enrollee costs underlying this report. The costs of the expansion adults were compared to the projected costs for non-expansion adults after adjusting for assumptions of additional costs due to pent-up demand among the new enrollees. The amounts estimated to be owed by plans in each State were then determined using a model risk corridor (reflecting average terms for the risk corridor, such as how much risk remained with the plan and how much remained with the Federal government), and those amounts were adjusted to match in the States that have reported preliminary risk corridor or minimum medical loss ratio amounts to CMS. While this methodology provides a reasonable indication of the amounts that the Federal government is likely to receive from the managed care plans, in actuality the amounts could be significantly greater, or less, than estimated.

In addition to benefit expenditures, this report includes projections of administration costs that are based on historical administrative cost reporting, as well as projected growth rates from the President's FY 2020 Budget, updated to include more recent data.

Like any projection of future health care costs, the Medicaid projections presented here are necessarily uncertain. Actual numbers of enrollees, the number of services used, and the reimbursement levels per service will depend on all of the factors described previously—none of which can be predicted with certainty. Past increases in Medicaid and other health care costs have often been relatively volatile, adding to

the difficulty of correctly anticipating future trends. Finally, there is relatively limited experience for people who became eligible for and enrolled in Medicaid between 2014 and 2018; accordingly, while these estimates are more certain than those in previous reports, they should still be considered uncertain due to the relative lack of program data and experience to inform them and the uncertainty about which States will expand their eligibility standards in the future.

The projections shown in this report should be regarded only as a reasonable indication of future Medicaid costs under current law and from today's perspective. It is important to recognize that actual costs in the future could differ significantly from these projections, as a result of (i) unanticipated developments in demographic, economic, or health cost growth trends and (ii) any further changes in the legislation governing Medicaid.

Sections VI.A and VI.B include additional detail regarding the data, assumptions, and methodologies used in the projections in this report.

V. CONCLUSION

Medicaid expenditures are estimated to have grown 2.7 percent in 2018, down from 3.9 percent in 2017, and to have reached $616.1 billion. Growth is estimated to have decelerated in 2018 due to the slowdown in enrollment of expansion adults and slower growth in benefit expenditures across most eligibility groups. In 2019 and beyond, enrollment and expenditures are expected to steadily increase, with total Medicaid expenditures growing to a projected $1,007.9 billion by 2027. The projected average annual growth rate of Medicaid expenditures from 2018 to 2027 is 5.3 percent—faster than the projection of average annual GDP growth of 4.6 percent over the same period. Should these trends continue as projected under current law, Medicaid's share of State budgets may continue to expand absent other changes to the program, budget expenditures, or budget revenues, while its anticipated share of the Federal budget would remain about the same.

The proportion of Medicaid expenditures for capitation payments and premiums is projected to increase, as is the number of enrollees that receive all or some of their Medicaid benefits through a managed care plan. This trend has accelerated since 2014 as many States have covered expansion enrollees through managed care plans. In addition, States have continued to expand the use of managed care to cover aged enrollees and persons with disabilities and to provide for long-term care services through managed care programs. Thus, understanding how the use of managed care in Medicaid will affect future expenditure growth—and how fee-for-service expenditures for acute care and long-term care will also be affected—will be an important consideration for Medicaid programs in the future.

Because Medicaid does not have any dedicated revenue source at the Federal level or a trust fund approach to financing, the solvency of the program is not an issue in the same way it may be for the Medicare Hospital Insurance (or Part A) trust fund; the expenditures of each State (or Territory) program are covered by the State's revenues plus Federal matching general revenues. However, even without solvency as a concern, Medicaid constitutes a significant portion of spending by both Federal and State governments and thus is important to evaluate as part of the respective budgets. A growing share of budget expenditures on the Medicaid program could displace spending on other important programs, or additional taxes or other revenue sources could be required to fund Medicaid.

Typically the cost growth rates of different payers and programs, such as Medicare, Medicaid, and private health insurance plans, are related. Attempts by one payer or program to affect costs can have a direct or indirect impact on other payers and programs. Whether such efforts are focused on the payment or management of health care specific to certain programs, or on the delivery or practice of health care generally, it will be important to consider the potential effects not just on Medicaid but across all health care payers. Programs and demonstrations that focus on health care provided for persons enrolled in both Medicare and Medicaid (dual-eligible

beneficiaries), or that focus on Medicare but also include some dual-eligible beneficiaries, may have effects on the costs and quality of care paid for by Medicaid.

This report includes projections of the current-law Medicaid program. As policy makers consider changes or reforms to the program, for Medicaid specifically or for the broader health care system, particular attention may need to be paid to the ways in which Medicaid differs from other types of health care coverage—for example, in its administration, the benefits offered, the populations covered, and the ways in which it pays for health care. Other important issues for consideration, as Medicaid's role continues to evolve, are provider participation, Medicaid payment rates and arrangements, and beneficiary access to services.

VI. APPENDIX

A. DATA SOURCES

Projections of Medicaid expenditures and enrollment are highly dependent on both demographic and economic assumptions, as well as on program data. This section describes the sources and limitations of data and assumptions that are used to generate the Medicaid projections shown in this report.

CMS-64 (Financial Management Reports)

The CMS-64 reports (Financial Management Reports, or FMRs) are products of the Medicaid and CHIP Budget and Expenditure Systems (MBES/CBES). These reports are submitted by the States quarterly and provide current fiscal year spending. The expenditure amount shown on the FMR is a summary of expenditures for the various mandatory and optional services covered by the Medicaid State programs. In addition, in 2014 the CMS-64 began reporting monthly enrollment data by enrollment category as well as quarterly expenditures for expansion adults.[47]

The mandatory services contained in the FMR include inpatient and outpatient hospital care, physician services, nursing facility care for individuals aged 21 or older, family planning services, rural health clinic services, home health care, laboratory and x-ray tests, other practitioner services, federally qualified health center services, and early and periodic screening, diagnostic, and treatment services for children under age 21 (EPSDT). Among the many reported optional services that States may provide are clinic services, prescription drugs, services furnished by intermediate care facilities for the intellectually disabled, hospice care, home and community-based care to certain persons with chronic impairments, and targeted case management services. Additionally, the FMR captures expenditures for DSH payments, offsets to drug spending through rebates, Medicare Part A and Part B premiums paid for those dually eligible for Medicare and Medicaid, premiums paid for Medicaid-only capitated arrangements, and expenditures for home and community-based waiver programs.

The FMR also includes the separate Federal and State expenditures for all Medicaid fee-for-service programs and capitation arrangements. The FMR is available on a *Net Services* basis and a *Base* basis, both of which report the same total expenditures. The historical data and projections provided here are based on the expenditure data

[47] The CMS-64 reports enrollment and expenditures for enrollees in the *VIII group*, which includes those persons who are eligible under the criteria of section 1902(a)(10)(A)(i)(VIII) of the Social Security Act. Most enrollees in this group are expansion adults, but some adults who may have been eligible under pre-2014 criteria are in this group as well. The CMS-64 provides data on both expansion adults and other enrollees in the VIII group separately starting in 2014.

in the Net Services reports. All Medicaid reports published prior to 2015 used the Base reports for historical data and projections.

The main difference between the Net Services and Base reports is that the Base report provides service-level expenditures that were both incurred and paid in the current quarter, whereas the Net Services report shows expenditures by service on a paid basis. The Base report allocates expenditures that were paid in a different quarter than the services were incurred as prior period adjustments, and it similarly groups all collections (negative adjustments to payments) together. The Net Services report allocates all prior period adjustments to individual services, and it reports as collections only those collections that are not associated with a specific service (such as recoveries for fraud, waste, and abuse). Total expenditures are the same in both reports.

Because the Net Services report allocates prior period adjustments by service, the net effect is that the amount of prior period adjustments to expenditures is reduced while expenditures by category of service are increased. Therefore, the amounts reported for benefit expenditures by category of service and for benefit expenditures per enrollee are more complete and effectively higher under the Net Services report than under the Base report, and, as a result, these benefit expenditures by category of service and the accompanying projections are greater than shown in previous Medicaid reports.

Medicaid Analytic eXtract (MAX) and the Medicaid Statistical Information System (MSIS)

The Medicaid Statistical Information System (MSIS) is the basic source of State-submitted eligibility and claims data on the Medicaid population, its demographic characteristics, utilization of health care services, and payments. The purpose of MSIS is to collect, manage, analyze, and disseminate information on eligible individuals, beneficiaries, utilization, and payment for services that are covered. States provide CMS with quarterly files consisting of specified data elements for persons covered by Medicaid and adjudicated claims for medical services reimbursed with Title XIX funds. Four types of claims files representing inpatient services, long-term care, prescription drugs, and non-institutional services are submitted. Claims records contain information on the types of services used, providers, service dates, costs, and types of reimbursements. Eligibility characteristics, such as basis-of-eligibility and maintenance assistance status, are the foundation of the enrollment projections; specifically, the primary basis-of-eligibility categories consist of aged persons, persons who are blind or have other disabilities, non-disabled children (including foster care children), and non-disabled non-aged adults (including women eligible under the Breast and Cervical Cancer Act eligibility expansion).

The data and projections in this report generally rely on the Medicaid Analytic eXtract (MAX). MAX contains both service and demographic data supplied by the States, including provider payments and enrollment counts, and is derived from MSIS.[48] As is the case with MSIS, MAX expenditure data include only total Medicaid expenditures, and MAX does not provide data separately for Federal or State expenditures. Several adjustments are made to the CMS-64 and MAX data to merge them together for use in preparing projections.

Prior to the 2015 Medicaid report, historical data and projections relied on data from MSIS—mainly from the Annual Person Summary (APS) files. It is worth noting that MAX data are based on claims data from MSIS, and although there are differences in the way the claims are summarized, these differences do not have a significant impact on the projections in this report. Historical data shown in the report from 2000 through 2004 are based on MSIS.

Users of Medicaid data may note discrepancies between the expenditure information captured in MAX and the CMS-64. For example, DSH payments and Medicare premiums do not appear in MAX. In the CMS-64, expenditures are reported based on the date that the payment was made, whereas MAX reports claims based on the data of adjudication; this may create some timing differences in the data. Service definitions vary in these two sources as well. Territorial data for American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands appear in the CMS-64, but not in MAX. Each State has a different system for capturing statistical (MSIS) and financial (CMS-64) data.

It is important to note the limitations that are associated with the data described in this section. First, MAX data are available for 48 States through 2011, for 49 in 2012, for 44 in 2013, and for only 20 states in 2014. MAX (and the MSIS data from which MAX is derived) is the only available source of complete enrollment data.[49] Consequently, to relate 2011, 2012, 2013, and 2014 actual expenditures to the number of enrollees, estimates of Medicaid enrollment are prepared for those years for the missing States.[50] For 2015, 2016, and 2017 (and for the projections for 2018 through 2027), enrollment is estimated using a regression model and historical data, including available (2011, 2012, 2013, and 2014) State data. MAX also does not

[48] More information regarding MAX can be found on the CMS website at https://www.cms.gov/research-statistics-data-and-systems/computer-data-and-systems/medicaiddatasourcesgeninfo/maxgeneralinformation.html.

[49] While the CMS-64 provides enrollment data starting in 2014, the MSIS and MAX data overlap with the CMS-64 in 2014 for only a small number of States, and thus it is not possible to determine how closely the two sources match. Further, the 2014 MAX data do not differentiate between expansion adults and non-expansion adults. The figures in this report are based on the MAX data, and the CMS-64 enrollment data are used only for expansion adults and for enrollment in the Territories.

[50] In this report, child Medicaid enrollees consist of non-disabled children, children of unemployed parents, and foster care children; adult Medicaid enrollees consist of non-disabled non-aged adults, unemployed adults, and women covered under the Breast and Cervical Cancer Act expansion; and disabled Medicaid enrollees consist of blind or disabled persons.

provide data on enrollment in Territory programs, and thus pre-2014 enrollment figures for Territories are obtained from outside sources; after 2014, enrollment data for the Territories are derived from the CMS-64s.

CMS is currently implementing a new data system to replace MSIS: the Transformed Medicaid Statistical Information System, or T-MSIS. This new system will collect and report data from 2014 onwards (although States may have switched from MSIS to T-MSIS at different points in time in 2014 and 2015). T-MSIS is currently not available for use in providing historical data or in projecting Medicaid expenditures or enrollment, due to limited access to the data, incomplete data, and concerns about data quality. As a result, this report does not rely on T-MSIS data in any way. Also unavailable at this time are MAX data derived from T-MSIS data. As a result of the lack of recent data on Medicaid enrollment and expenditures by eligibility group, some of the projections in this report are less credible than in previous reports—most notably, the expenditures per enrollee by eligibility group, the estimates and projections for which can be found in section VI.

Another qualification is that it was only in 2014 that the CMS-64 began providing data on enrollment or spending by enrollment category (and, in the case of spending by enrollment category, only for expansion adults or other adults in the *VIII group*).[51] In addition, the definitions of medical service categories are not consistent between MAX (or MSIS) and the other data sources. Adjustments are made to develop a data set that contains not only service-level expenditures that match the CMS-64 data but also expenditures by enrollment group; accordingly, MAX and the CMS-64 are merged together to provide a more complete understanding of Medicaid spending. Since the service definitions are different between these two sources, MAX data are used to estimate spending by enrollment group for each Medicaid service reported in the CMS-64.[52] To develop the enrollment estimates and projections for this report, the CMS-64 enrollment data were used only for the number of expansion adults enrolled.

Finally, OACT reviewed the data sources used in these projections for reasonableness but relied on CMS program components and the States to ensure the quality of the data.

[51] The *VIII group* refers to enrollees who are eligible under section 1902(a)(10)(A)(i)(VIII) of the Social Security Act, including expansion adults.

[52] Certain services in the CMS-64 for which there is little to no history are combined with other services assumed to have a matching underlying distribution of spending by eligibility category.

B. KEY ASSUMPTIONS

The primary demographic, economic, and health cost inflation assumptions underlying the Medicaid projections shown in this report are the same as those used by the Social Security and Medicare Boards of Trustees in their 2018 reports to Congress.[53] Final 2019 Medicare premium amounts were used in place of projected premium amounts to more accurately reflect anticipated expenditures.

The price assumptions used to develop the Medicaid expenditure projections are derived from the assumptions included in the Social Security and Medicare Trustees Reports. While these price assumptions are specifically meant to measure the changes in the prices that Medicare would pay providers, they also generally reflect the projected growth in the prices of health care services.

As noted in section IV of this report, there is no single data source available that tracks all Medicaid prices or price changes. In addition, since States do not have a prescribed methodology for updating provider reimbursement rates, there are no specific or consistent forecasts of the changes in the prices for health care services that can be used across all Medicaid programs. Accordingly, OACT relies on other forecasts from Medicare, which are assumed to be reasonable projections of the underlying growth in health care prices that States would consider when changing provider reimbursement rates within their Medicaid programs.

The principal economic assumptions include growth in average wages and the CPI. These and other assumptions are used to generate health care service input price indices (or *market baskets*) for inpatient hospital and home health care services. These indices serve as indicators of increases in Medicaid payments per service.

It is important to note that these price assumptions may not accurately measure the underlying changes in the prices paid by Medicaid programs year to year. States have significant discretion in setting reimbursement rates and arrangements, and in any given year the changes in rates paid to providers may differ from the changes in the price assumptions that are used to project future price changes for Medicaid expenditures. States may also use other arrangements (such as value-based payments and "shared savings" incentives) that may lead to the effective reimbursement rates differing from these price assumptions. Thus, while these price forecasts are expected to reasonably estimate the changes in prices over time, they may not be precise measures of the actual changes in prices in any State Medicaid program. Moreover, to the extent that any specific price assumption is not an accurate assessment of the change in the price paid for any particular service, the difference between the actual change in price and the change in the price assumption would be

[53] Further information on the Trustees' population projections and economic assumptions is available in the 2018 Social Security and Medicare Trustees Reports, the latter of which can be found at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/downloads/tr2018.pdf.

reflected in the residual factor. While in general the residual factor is meant to represent changes in utilization, it would also incorporate errors in the measurement of prices.

Medicaid enrollment is projected by eligibility category: aged persons, persons with disabilities, children, expansion adults, and other adults. The model measures enrollment by eligibility category as a percentage of the U.S. population by relevant age group (aged—U.S. population aged 65 and over; disabled—U.S. population aged 0-64; children—U.S. population aged 0-19; and adults—U.S. population aged 20-64). Historical enrollment is measured for 1992 through 2013—the period for which reliable enrollment data exist in MSIS (1992-2004) and MAX (2005-2013).

The relationship between the change in the share of the U.S. population enrolled in Medicaid by eligibility category and the change in the national U.S. unemployment rate is measured using a regression model. Analysis conducted in developing this enrollment model has shown that the unemployment rate is the most meaningful factor in analyzing changes in historical Medicaid enrollment. Other economic variables either are not statistically significant or do not improve the accuracy of the model. In addition, changes in the unemployment rate have a strong theoretical relationship with Medicaid enrollment. As the unemployment rate increases, fewer people have jobs, leading in turn to a greater number of people with lower incomes and more individuals likely to be eligible for Medicaid. Moreover, a decrease in the number of people with jobs is likely to lead to fewer people with private health insurance, and as a result more people may enroll in Medicaid for health care coverage. Conversely, as the unemployment rate decreases, an increase in the number of people with jobs is likely to lead to increases in income and more people with private health insurance, and consequently enrollment growth in Medicaid may be slower. The Trustees do not typically forecast economic cycles, and thus the projections of Medicaid enrollment in this report do not exhibit the same cyclical variation that enrollment has experienced historically.

The change in the share of the U.S. enrolled population is projected forward using the results of the regression model and forecasts of the unemployment rate from the 2018 Social Security Trustees Report for each eligibility category. Enrollment is projected using those results and the forecasts of the U.S. population from the 2018 Trustees Report. The projections from the model may be adjusted, in particular for estimates of enrollment in recent years (in this Medicaid report, enrollment is estimated for 2014 through 2017, and for any States missing data in prior years); in estimating historical enrollment, other data or information is often used to adjust the results from the Medicaid enrollment models. Typically, other sources do not provide enrollment at the same level of detail as shown in MAX or in this Medicaid report, but such sources may inform the overall level of enrollment or the growth rate of total enrollment in those historical years.

Changes in the utilization of services and other changes in expenditures not reflected in changes in enrollment or prices are reflected in the *residual* factors in the model. The trend residual approach to projecting Medicaid expenditures begins with an analysis of historical Medicaid expenditures per enrollee on a service-by-service basis. The annual percent change in these per enrollee expenditures is compared to the change in the applicable price indicator (listed below), and the differential, or residual, is calculated. This residual measures the collective impact of changes in utilization and *intensity* (average complexity) of services, case mix effects, and other factors, and it is calculated by service and by eligibility category. For the purpose of developing projected expenditures, the residual may be calculated as the average across all eligibility categories (typically when the residuals across eligibility categories have similar values, or when the amount of spending for one or more eligibility categories is relatively small and there are potential concerns about the credibility of the residual factor). The basis of the projected residual is the historical average of the residual value (either as a weighted average or an unweighted average over the previous several years), but adjustments may be made by gradually increasing or decreasing the residual toward the average residual for a broader category of services (such as all acute care, all long-term care, or all medical services).

The residuals are adjusted to limit the value of any particular service from significantly increasing or decreasing more than the value of all services (or broader categories of services). In general, the residual of all services (or broader categories of services) tends to be more stable, but it is necessary to use residuals by service to account for changes in the Medicaid program as well. Often, these adjustments are made to reflect areas in which there has likely been a shift between services or categories of services in recent history, but projecting those changes to continue at the same rate over 10 years would not necessarily be the best estimate of future expenditures.

One key example concerns the historical shifts of Medicaid expenditures from fee-for-service programs (especially acute care services, such as hospital services, physician and other professional services, and prescription drugs) to managed care. As part of the adjustment, managed care expenditures as a share of total expenditures were reviewed by State and by eligibility category. This review provided more detailed information on the use of managed care across States, as well as some evidence regarding the extent to which recent expenditure growth in managed care programs was driven by the States' expansion of their use of these programs. The analysis suggested that managed care expenditures were likely to continue to grow relatively quickly but, over time, were more likely to slow, as the rate at which States shift expenditures to managed care programs slows. Similarly, the analysis suggested that the residuals for acute care services in general would increase over the same period as the shift from fee-for-service programs decelerates.

Table 5 shows the price indicators currently used to produce Medicaid expenditure projections.

Table 5—Price Indicators for Selected Medicaid Types of Service

Type of Service	Price Indicator
Inpatient and outpatient hospital	Medicare hospital input price index (market basket), before the application of productivity adjustment
Physician, clinic, and related services	Medical CPI increase
Institutional long-term care	Maximum of CPI increase and average wage increase
Community long-term care and home and community-based waiver services	Medicare home health input price index, before the application of productivity adjustment
Prescription drugs	CPI increase
Managed care	Medical CPI increase

One exception to the trend residual methodology occurs in the case of some premiums. The costs for Medicare premiums financed by Medicaid are based on the projected premium rates for Medicare Parts A and B in the President's FY 2019 Budget. The proportions of aged and blind or disabled enrollees whose Medicare costs are financed by the States or the Federal government through premium payments are assumed to remain at historical levels.

C. RESIDUAL ANALYSIS RESULTS AND ASSUMPTIONS

This section provides the results of the analysis used to calculate the residual factors for the projections. These factors reflect expenditure changes that exclude changes in enrollment and in prices but include changes in the volume and intensity of services used. The following tables show the historical residual factors and the projected values by eligibility category and by service for the largest five services (as measured by total 2017 expenditures); however, due to the lack of more recent data, the estimates of expenditures by eligibility group are subject to considerable uncertainty.

Table 6—Historical and Projected Residual Factors for Aged Enrollees, Selected Services, Fiscal Years 2012–2027

Fiscal Year	Nursing Facility	Managed Care	Home and Community-Based Waivers	Inpatient Hospital	Personal Care
Historical Data:					
2012	10.8%	28.2%	−6.6%	−15.4%	−10.6%
2013	−4.1	20.6	−1.3	3.6	2.0
2014	−6.7	−4.8	−3.4	−19.8	−4.8
2015	−13.0	18.8	9.8	5.4	−4.4
2016	−5.9	9.8	5.6	−7.2	−11.0
2017	−5.7	12.5	1.9	−14.2	−0.1
Projections:					
2018	−7.9	13.3	1.1	−8.1	−5.2
2019	−7.2	11.1	1.1	−7.2	−4.6
2020	−6.4	9.0	1.1	−6.3	−4.0
2021	−5.7	6.8	1.1	−5.4	−3.4
2022	−4.9	4.7	1.1	−4.5	−2.7
2023	−4.1	2.5	1.1	−3.6	−2.1
2024	−4.1	2.5	1.1	−3.6	−2.1
2025	−4.1	2.5	1.1	−3.6	−2.1
2026	−4.1	2.5	1.1	−3.6	−2.1
2027	−4.1	2.5	1.1	−3.6	−2.1

Table 6 shows the residual factors for the largest five services for aged enrollees based on estimates of 2017 expenditures; spending for these services constituted an estimated 83 percent of total estimated Medicaid expenditures for aged enrollees, as shown in table 7. (Medicare Part B premiums are shown below, but residual factors are not calculated for Medicare premiums.)

Table 7—Fiscal Year 2017 Selected Service Expenditures for Aged Enrollees
(in billions)

Service	2017 Expenditures
Nursing Facility	$32.4
Managed Care	19.7
Home and Community-Based Waivers	7.8
Medicare Part B Premiums	7.3
Inpatient Hospital	3.1
Personal Care	2.2
Total Expenditures for Aged Enrollees	87.7

Table 8—Historical and Projected Residual Factors for Persons with Disabilities, Selected Services, Fiscal Years 2012–2027

Fiscal Year	Managed Care	Home and Community-Based Waivers	Inpatient Hospital	Prescription Drugs	Nursing Facility
Historical Data:					
2012	28.5%	−3.7%	−15.1%	−15.7%	−8.4%
2013	21.0	−2.1	−2.3	−17.9	−0.1
2014	12.5	−3.0	−19.3	7.1	−5.6
2015	15.3	6.5	−0.3	-1.6	−14.7
2016	11.4	3.7	−9.8	−2.6	−7.9
2017	6.7	2.2	−12.8	−9.7	−5.5
Projections:					
2018	12.9	1.0	−10.4	−4.7	−7.6
2019	7.7	1.0	−9.3	−4.1	−6.9
2020	2.5	1.0	−8.1	−3.6	−6.2
2021	2.5	1.0	−7.0	−3.0	−5.4
2022	2.5	1.0	−5.9	−2.4	−4.7
2023	2.5	1.0	−4.7	−1.9	−4.0
2024	2.5	1.0	−4.7	−1.9	−4.0
2025	2.5	1.0	−4.7	−1.9	−4.0
2026	2.5	1.0	−4.7	−1.9	−4.0
2027	2.5	1.0	−4.7	−1.9	−4.0

Table 8 shows the residual factors for the top five services for persons with disabilities based on estimates of 2017 expenditures; spending for these services constituted an estimated 72 percent of total estimated Medicaid expenditures for persons with disabilities, as shown in table 9. (Prescription drug expenditures shown in table 9 do not include Medicaid prescription drug rebates.)

Table 9—Fiscal Year 2017 Selected Service Expenditures for Persons with Disabilities
(in billions)

Service	2017 Expenditures
Managed Care Organizations	$69.2
Home and Community-Based Waivers	44.3
Inpatient Hospital	19.7
Prescription Drugs	11.4
Nursing Facility	10.3
Total Expenditures for Persons with Disabilities	216.0

Table 10—Historical and Projected Residual Factors for Child Enrollees, Selected Services, Fiscal Years 2012–2027

Fiscal Year	Managed Care	Inpatient Hospital	Prescription Drugs	Physician	Outpatient Hospital
Historical Data:					
2012	−1.0%	−10.6%	−14.5%	−14.8%	−13.3%
2013	13.3	5.9	−17.7	−8.5	3.6
2014	12.5	−13.7	3.3	−2.4	−9.4
2015	15.5	1.7	−3.3	−17.3	−10.4
2016	11.5	−7.4	−3.2	−11.7	−10.1
2017	11.6	−13.2	−7.2	−8.4	−6.3
Projections:					
2018	9.5	−7.1	−4.8	−10.0	−8.5
2019	5.4	−5.1	−3.3	−7.2	−6.2
2020	1.4	−3.1	−1.9	−4.5	−3.8
2021	1.4	−3.1	−1.9	−4.5	−3.8
2022	1.4	−3.1	−1.9	−4.5	−3.8
2023	1.4	−3.1	−1.9	−4.5	−3.8
2024	1.4	−3.1	−1.9	−4.5	−3.8
2025	1.4	−3.1	−1.9	−4.5	−3.8
2026	1.4	−3.1	−1.9	−4.5	−3.8
2027	1.4	−3.1	−1.9	−4.5	−3.8

Table 10 shows the residual factors for the top five services for the child population based on estimates of 2017 expenditures; spending for these services constituted an estimated 84 percent of total estimated Medicaid expenditures for children, as shown in table 11. (Prescription drug expenditures shown in table 11 do not include Medicaid prescription drug rebates.)

Table 11—Fiscal Year 2017 Selected Service Expenditures for Child Enrollees
(in billions)

Service	2017 Expenditures
Managed Care Organizations	$69.9
Inpatient Hospital	10.8
Prescription Drugs	4.1
Physician Services	2.5
Outpatient Hospital	2.6
Total Expenditures for Children	107.2

Table 12—Historical and Projected Residual Factors for Adult Enrollees, Selected Services, Fiscal Years 2012–2027

Fiscal Year	Managed Care	Inpatient Hospital	Outpatient Hospital	Prescription Drugs	Physician
Historical Data:					
2012	−0.7%	−16.4%	−15.3%	−15.9%	−19.3%
2013	5.0	4.2	11.2	−13.3	−14.3
2014	15.8	−4.4	−9.3	−25.1	−3.8
2015	12.0	10.5	−5.7	−4.8	−20.5
2016	7.8	−15.4	−14.4	−2.6	−9.5
2017	13.2	−11.9	−11.8	−4.1	−10.3
Projections:					
2018	9.2	−5.7	−8.9	−7.6	−12.6
2019	5.4	−4.0	−6.4	−5.5	−9.2
2020	1.5	−2.4	−4.0	−3.3	−5.8
2021	1.5	−2.4	−4.0	−3.3	−5.8
2022	1.5	−2.4	−4.0	−3.3	−5.8
2023	1.5	−2.4	−4.0	−3.3	−5.8
2024	1.5	−2.4	−4.0	−3.3	−5.8
2025	1.5	−2.4	−4.0	−3.3	−5.8
2026	1.5	−2.4	−4.0	−3.3	−5.8
2027	1.5	−2.4	−4.0	−3.3	−5.8

Table 12 shows the residual factors for the top five services for the adult population based on estimates of 2017 expenditures; spending for these services constituted an estimated 93 percent of total estimated Medicaid expenditures for adults, as shown in table 13. (Prescription drug expenditures shown in table 13 do not include Medicaid prescription drug rebates.)

Table 13—Fiscal Year 2017 Selected Service Expenditures for Adult Enrollees
(in billions)

Service	2017 Expenditures
Managed Care Organizations	$59.8
Inpatient Hospital	12.8
Outpatient Hospital	3.7
Prescription Drugs	2.5
Physician Services	2.0
Total Expenditures for Adults	86.7

Table 14—Historical and Projected Price Factors and Unemployment Rates, Fiscal Years 2011–2027

Fiscal Year	Medical Consumer Price Index	Consumer Price Index	Home Health Input Price Index	Inpatient Price Index	Wages	Unemployment Rate (CY)
Historical Data:						
2011	3.1%	2.7%	2.1%	2.6%	2.9%	8.9%
2012	3.5	2.0	2.3	3.0	3.3	8.1
2013	2.8	1.6	2.3	2.6	1.7	7.4
2014	2.4	1.5	2.3	2.5	3.1	6.2
2015	2.6	0.1	2.5	2.9	3.6	5.3
2016	3.6	0.6	2.4	2.4	1.6	4.9
2017	4.1	1.8	2.7	2.7	2.4	4.4
Projections:						
2018	3.8	2.2	1.5	2.9	3.5	3.9
2019	4.1	2.4	2.8	3.7	4.1	3.7
2020	4.3	2.6	3.5	3.8	4.5	3.6
2021	4.2	2.6	3.5	3.8	4.5	3.7
2022	4.2	2.6	3.5	3.7	4.5	3.9
2023	4.2	2.6	3.5	3.7	4.4	4.0
2024	4.2	2.6	3.5	3.7	4.3	4.1
2025	4.2	2.6	3.4	3.7	4.3	4.2
2026	4.2	2.6	3.4	3.7	4.3	4.2
2027	4.2	2.6	3.3	3.6	4.2	4.2

D. DATA FOR SELECTED FIGURES

The following tables provide the data underlying selected figures in the report.

Table 15—Past and Projected Medicaid Expenditures for Medical Assistance Payments, by Type of Payment, Fiscal Years 2000–2027
(Data for Figure 3)
(in billions)

Fiscal Year	Acute Care FFS	Long-Term Care FFS	Capitation Payments & Premiums	Disproportionate Share Hospital Payments
Historical Data:				
2000	$80.6	$70.5	$32.8	$15.6
2001	90.3	77.9	36.5	15.9
2002	105.4	85.8	43.2	15.9
2003	116.1	90.0	47.6	14.3
2004	127.3	91.7	52.2	17.2
2005	131.4	82.8	58.6	17.1
2006	121.3	101.1	65.0	17.1
2007	130.1	102.3	72.6	16.0
2008	131.7	108.1	82.8	17.1
2009	140.7	115.7	93.5	17.8
2010	151.2	117.2	104.3	17.6
2011	161.3	119.5	116.9	17.3
2012	148.0	119.3	132.5	17.1
2013	152.6	119.4	151.8	16.4
2014	152.2	116.3	191.6	18.1
2015	159.7	112.8	240.9	18.6
2016	150.3	115.8	272.8	19.7
2017	145.8	116.5	301.7	15.1
Projections:				
2018	141.5	112.9	324.5	16.9
2019	140.7	112.3	347.0	19.4
2020	146.2	116.4	376.2	14.6
2021	152.1	121.3	408.4	8.6
2022	158.4	126.7	438.1	9.1
2023	165.1	132.6	468.8	9.7
2024	172.1	138.7	501.6	10.2
2025	179.6	145.0	536.5	10.7
2026	187.4	151.5	573.3	22.7
2027	195.7	158.2	612.8	23.2

Table 16—Past and Projected Numbers of Medicaid Enrollees, by Category, Fiscal Years 2000–2027
(Data for Figure 4)
(in millions of person-year equivalents)

Fiscal Year	Aged	Disabled	Children	Adults	Expansion Adults	Territories[54]
Historical Data:						
2000	3.6	6.7	16.1	6.9	n/a	0.9
2001	3.7	6.9	17.3	7.7	n/a	0.9
2002	4.0	7.2	19.1	8.9	n/a	1.0
2003	4.3	7.5	20.9	9.7	n/a	1.0
2004	4.4	7.7	21.9	10.1	n/a	1.0
2005	4.6	8.0	22.5	10.5	n/a	1.0
2006	4.5	8.2	22.6	10.5	n/a	1.0
2007	4.5	8.3	22.3	10.2	n/a	1.0
2008	4.6	8.6	22.8	10.8	n/a	1.0
2009	4.7	8.9	24.4	11.9	n/a	1.0
2010	4.9	9.2	26.4	13.1	n/a	1.0
2011	5.1	9.7	27.2	13.8	n/a	1.0
2012	5.3	10.1	27.9	14.7	n/a	1.0
2013	5.4	10.3	28.1	15.0	n/a	1.0
Projections:						
2014	5.5	10.4	28.2	15.1	4.3	1.5
2015	5.6	10.5	28.1	15.2	9.1	1.3
2016	5.7	10.5	28.0	15.3	11.2	1.4
2017	5.8	10.6	27.9	15.4	12.2	1.4
2018	6.0	10.7	28.1	15.6	12.2	1.4
2019	6.2	10.8	28.4	15.7	12.6	1.4
2020	6.4	11.0	28.9	15.8	13.2	1.4
2021	6.6	11.1	29.3	15.9	13.3	1.4
2022	6.9	11.2	29.6	16.0	13.4	1.4
2023	7.1	11.3	30.0	16.1	13.4	1.4
2024	7.3	11.4	30.3	16.1	13.5	1.4
2025	7.5	11.5	30.5	16.2	13.5	1.4
2026	7.7	11.6	30.8	16.2	13.6	1.4
2027	8.0	11.7	31.0	16.3	13.6	1.4

[54] Territory enrollment is projected to remain level at about 1.4 million persons from 2016 to 2027, despite the projected reduction in Federal expenditures for Territory Medicaid programs due to the expiration of additional funds provided by the Affordable Care Act and the Bipartisan Budget Act of 2018. These projections are based on the assumption that Territories will provide additional funding or make other program changes to maintain enrollment levels as Federal funding is reduced.

Table 17—Projected Medicaid Expenditures: Comparison of 2017 versus 2018 Actuarial Reports on the Financial Outlook for Medicaid, Fiscal Years 2000–2027
(Data for Figure 5)
(in billions)

Fiscal Year	2018 Report	2017 Report
Historical Data:		
2000	$206.2	$206.2
2001	229.0	229.0
2002	258.2	258.2
2003	276.2	276.2
2004	296.3	296.3
2005	315.9	315.9
2006	315.1	315.1
2007	332.2	332.2
2008	351.9	351.9
2009	378.6	378.6
2010	401.5	401.5
2011	427.0	427.4
2012	431.0	431.2
2013	456.0	455.6
2014	494.7	494.7
2015	549.1	552.3
2016	577.3	575.9
2017	600.0	592.2
Projections:		
2018	616.1	629.3
2019	639.4	667.4
2020	672.7	703.9
2021	709.2	741.7
2022	751.3	786.3
2023	798.5	834.2
2024	839.6	884.4
2025	888.8	937.7
2026	952.1	1,005.7
2027	1,007.9	n/a

Table 18—Past and Projected Medicaid Expenditures as Share of GDP, Fiscal Years 1966–2027, Selected Years
(Data for Figure 7)
(in billions)

Fiscal Year	Total Expenditures	Expenditures as Share of GDP
Historical Data:		
1966	$0.9	0.1%
1970	5.1	0.5
1975	13.1	0.8
1980	25.2	0.9
1985	41.3	1.0
1990	72.2	1.2
1995	159.5	2.1
2000	206.2	2.0
2001	229.0	2.2
2002	258.2	2.4
2003	276.2	2.4
2004	296.3	2.5
2005	315.9	2.5
2006	315.1	2.3
2007	332.2	2.3
2008	351.9	2.4
2009	378.6	2.6
2010	401.5	2.7
2011	427.0	2.8
2012	431.0	2.7
2013	456.0	2.8
2014	494.7	2.9
2015	549.1	3.1
2016	577.3	3.1
2017	600.0	3.1
Projections:		
2018	616.1	3.1
2019	639.4	3.0
2020	672.7	3.1
2021	709.2	3.1
2022	751.3	3.1
2023	798.5	3.2
2024	839.6	3.2
2025	888.8	3.2
2026	952.1	3.3
2027	1,007.9	3.3

E. FINANCIAL MANAGEMENT REPORT DATA

Table 19—CMS-64 Financial Management Report, Net Services, Medical Assistance Payments, Fiscal Year 2017

Service Category	Total	Federal	State
Inpatient Hospital - Reg. Payments	$32,635,238,073	$20,048,467,816	$12,586,770,257
Inpatient Hospital - DSH	12,127,799,800	7,194,615,653	4,933,184,147
Inpatient Hospital - Sup. Payments	14,458,736,794	8,576,146,443	5,882,590,351
Inpatient Hospital - GME Payments	2,369,202,828	1,427,262,377	941,940,451
Mental Health Facility Services - Reg. Payments	2,436,866,283	1,433,020,975	1,003,845,308
Mental Health Facility - DSH	3,018,108,548	1,693,590,433	1,324,518,115
Certified Community Behavior Health Clinic Payments	55,944,643	41,575,228	14,369,415
Nursing Facility Services - Reg. Payments	39,881,131,197	22,982,807,296	16,898,323,901
Nursing Facility Services - Sup. Payments	3,426,532,651	2,023,484,737	1,403,047,914
Intermediate Care Facility - Public	4,432,256,180	2,507,432,556	1,924,823,624
Intermediate Care - Private	4,686,037,285	2,660,844,052	2,025,193,233
Intermediate Care Facility - Individuals with Intellectual Disabilities (ICF/IID): Supplemental Payments	119,704,710	60,703,067	59,001,643
Physician & Surgical Services - Reg. Payments	7,893,676,081	5,112,596,691	2,781,079,390
Physician & Surgical Services - Sup. Payments	852,204,116	537,280,471	314,923,645
Physician & Surgical Services - Evaluation and Management	3,986,790	3,986,789	1
Physician & Surgical Services - Vaccine codes	1,795,674	1,704,269	91,405
Outpatient Hospital Services - Reg. Payments	10,631,409,521	7,091,672,229	3,539,737,292
Outpatient Hospital Services - Sup. Payments	3,386,213,648	2,120,435,165	1,265,778,483
Prescribed Drugs	22,072,633,588	14,518,114,338	7,554,519,250
Drug Rebate Offset - National	−17,303,019,822	−10,788,384,011	−6,514,635,811
Drug Rebate Offset - State Sidebar Agreement	−879,246,448	−632,612,488	−246,633,960
MCO - National Agreement	−15,013,998,301	−10,567,394,467	−4,446,603,834
MCO - State Sidebar Agreement	−279,263,255	−173,183,476	−106,079,779
Increased ACA OFFSET - Fee for Service	−672,568,975	−672,568,975	0
Increased ACA OFFSET - MCO	−729,630,197	−729,630,197	0
Dental Services	3,951,407,867	2,421,518,432	1,529,889,435
Other Practitioners Services - Reg. Payments	1,602,569,812	954,661,863	647,907,949
Other Practitioners Services - Sup. Payments	8,303,051	4,258,944	4,044,107
Clinic Services	5,228,173,191	3,370,976,544	1,857,196,647
Laboratory/Radiological	1,316,002,911	897,479,228	418,523,683
Home Health Services	3,210,005,430	1,850,030,725	1,359,974,705
Sterilizations	45,358,970	37,635,717	7,723,253
Abortions	65,077	37,494	27,583
EPSDT Screening	965,849,621	592,992,377	372,857,244
Rural Health	1,228,941,764	818,273,692	410,668,072
Medicare - Part A	3,252,882,123	1,768,168,655	1,484,713,468
Medicare - Part B	14,041,404,874	8,134,763,190	5,906,641,684
120% - 134% Of Poverty	870,189,894	870,189,894	0
Coinsurance	1,044,519,254	628,972,894	415,546,360
Medicaid - MCO	274,338,391,949	176,190,340,257	98,148,051,692
Medicaid MCO - Evaluation and Management	−162,546,078	−162,546,078	0
Medicaid MCO - Vaccine codes	−1,666,275	−1,666,275	0
Medicaid MCO - Community First Choice	7,954,367,019	4,512,825,252	3,441,541,767
Medicaid MCO - Preventive Services Grade A OR B, ACIP Vaccines and their Admin	179,970,055	120,433,155	59,536,900
Medicaid MCO - Certified Community Behavior Health Clinic Payments	2,299,036	1,668,276	630,760
Prepaid Ambulatory Health Plan	1,447,577,394	987,160,364	460,417,030
MCO PAHP - Evaluation and Management	−15,910	−14,392	−1,518
MCO PAHP - Vaccine codes	0	0	0
MCO PAHP - Community First Choice	0	0	0
MCO PAHP - Preventive Services Grade A OR B, ACIP Vaccines and their Admin	0	0	0

Service Category	Total	Federal	State
Prepaid Inpatient Health Plan	13,280,875,908	8,796,568,293	4,484,307,615
MCO PIHP - Evaluation and Management	0	0	0
MCO PIHP - Vaccine codes	0	0	0
MCO PIHP - Community First Choice	0	0	0
MCO PIHP - Preventive Services Grade A OR B, ACIP Vaccines and their Admin	0	0	0
Medicaid PIHP - Certified Community Behavior Health Clinic Payments	3,283	2,768	515
Medicaid - Group Health	1,491,389,761	1,334,771,759	156,618,002
Medicaid - Coinsurance	464,059,308	439,998,709	24,060,599
Medicaid - Other	723,779,190	636,398,418	87,380,772
Home & Community-Based Services - Reg. Pay. (Waiv)	45,082,533,468	25,184,507,891	19,898,025,577
Home & Community-Based Services - St. Plan 1915(i) Only Pay.	675,891,751	353,574,185	322,317,566
Home & Community-Based Services - St. Plan 1915(j) Only Pay.	109,423,613	67,540,366	41,883,247
Home & Community Based Services State Plan 1915(k) Community First Choice	7,202,296,043	4,334,102,351	2,868,193,692
All-Inclusive Care Elderly	1,609,749,734	881,514,509	728,235,225
Personal Care Services - Reg. Payments	7,437,808,908	4,164,136,557	3,273,672,351
Personal Care Services - SDS 1915(j)	212,965,935	122,387,166	90,578,769
Targeted Case Management Services - Com. Case-Man.	2,230,944,849	1,234,034,329	996,910,520
Case Management - State Wide	572,489,562	333,537,073	238,952,489
Primary Care Case Management	348,140,911	234,886,557	113,254,354
Hospice Benefits	2,097,125,838	1,254,183,300	842,942,538
Emergency Services for Undocumented Aliens	1,534,984,217	899,592,805	635,391,412
Federally-Qualified Health Center	4,672,693,928	3,096,190,605	1,576,503,323
Non-Emergency Medical Transportation	1,961,626,508	1,311,969,647	649,656,861
Physical Therapy	179,749,238	106,604,950	73,144,288
Occupational Therapy	102,106,506	61,952,497	40,154,009
Services for Speech, Hearing & Language	259,880,473	161,528,655	98,351,818
Prosthetic Devices, Dentures, Eyeglasses	346,929,275	223,747,724	123,181,551
Diagnostic Screening & Preventive Services	−4,627,011	1,908,304	−6,535,315
Preventive Services Grade A OR B, ACIP Vaccines and their Admin	95,962,572	59,706,354	36,256,218
Nurse Mid-Wife	21,563,069	15,889,469	5,673,600
Emergency Hospital Services	1,560,663,155	1,024,012,496	536,650,659
Critical Access Hospitals	621,121,429	426,694,212	194,427,217
Nurse Practitioner Services	259,956,546	175,536,835	84,419,711
School Based Services	3,528,509,579	2,014,795,258	1,513,714,321
Rehabilitative Services (non-school-based)	3,595,824,266	2,311,409,979	1,284,414,287
Private Duty Nursing	744,960,913	444,245,418	300,715,495
Freestanding Birth Center	4,246,223	2,919,392	1,326,831
Health Home w Chronic Conditions	933,952,286	524,571,979	409,380,307
Tobacco Cessation for Preg Women	186,509	126,705	59,804
Other Care Services	25,114,608,370	13,775,501,479	11,339,106,891
Balance	579,210,178,554	356,481,176,173	222,729,002,381
Collections	−6,966,238,948	−4,010,980,522	−2,955,258,426
64.21U Adjustments	5	3	2
Total Net Expenditures	572,243,939,611	352,470,195,654	219,773,743,957
Total Newly Eligible	63,895,558,711	62,368,600,167	1,526,958,544
Total Not Newly	3,487,047,079	3,374,811,111	112,235,968
Total VIII Group	67,382,605,790	65,743,411,278	1,639,194,512

Table 20—CMS-64 Financial Management Report, Net Services, Administration Costs, Fiscal Year 2017

Service Category	Total	Federal	State
Family Planning	$27,623,735	$24,861,365	$2,762,370
MMIS - Inhouse Activities	115,091,275	103,576,648	11,514,627
MMIS - Private Sector	792,808,309	697,942,118	94,866,191
Skilled Professional Medical Personnel - Single State Agency	281,950,776	211,384,930	70,565,846
Skilled Professional Medical Personnel - Other Agency	432,352,798	324,264,652	108,088,146
Approved MMIS: Inhouse	485,372,203	364,070,759	121,301,444
Approved MMIS: Private	1,722,516,142	1,290,741,308	431,774,834
Mechanized Systems - In-House	58,135,951	29,154,015	28,981,936
Mechanized Systems: Private Sector	392,759,092	197,152,378	195,606,714
Mechanized Systems - Not Approved under MMIS Procedures: Interagency	11,891,485	5,945,745	5,945,740
Peer Review Organizations	279,276,341	209,457,305	69,819,036
TPL - Recovery	4,244,460	2,122,234	2,122,226
TPL - Assignment Of Rights	791,668	395,842	395,826
Immigration Status	1,911,540	1,911,540	0
Nurse Aide Training Costs	18,269,511	9,134,837	9,134,674
Preadmission Screening	110,773,651	83,080,290	27,693,361
Resident Review	19,444,663	14,583,513	4,861,150
Drug Use Review	10,986,917	5,493,492	5,493,425
Outstationed Eligibility	64,296,720	32,550,762	31,745,958
TANF Base	0	0	0
TANF Secondary 90%	0	0	0
TANF Secondary 75%	0	0	0
External Review	29,190,610	21,537,603	7,653,007
Enrollment Brokers	230,090,945	115,045,515	115,045,430
School Based Administration	1,121,021,051	560,510,550	560,510,501
Program Integrity/Fraud, Waste, and Abuse Activities	62,971,483	31,485,822	31,485,661
County/Local ADM Costs	1,880,837,189	940,418,617	940,418,572
Interagency Costs (State Level)	3,621,651,557	1,810,825,920	1,810,825,637
Translation and Interpretation	24,971,118	18,175,253	6,795,865
Health Insurance Technology Administration	0	0	0
HIT: Planning: Cost of In-house Activities	0	0	0
HIT: Planning: Cost of Private Contractors	0	0	0
HIT: Implementation and Operation: Cost of In-house Activities	50,355,665	45,320,121	5,035,544
HIT: Implementation and Operation: Cost of Private Contractors	239,512,429	215,255,301	24,257,128
HIT Incentive Payments: Eligible Professionals	1,022,669,966	1,022,669,966	0
HIT Incentive Payments: Eligible Hospitals	190,870,549	190,870,549	0
Citizenship Verification Technology CHIPRA	0	0	0
CVT Development CHIPRA	0	0	0
CVT Operation CHIPRA	600	450	150
Planning for Health Home for Enrollees with Chronic Conditions	126,766	89,315	37,451
Recovery Audit Contractors Contigency Fee	0	0	0
Recovery Audit Contractors State Administration	4,874,626	2,437,327	2,437,299
Design Development/Installation of Medicaid Elig. Determ. Sys. – Cost of In-house Activities	336,939,242	301,334,873	35,604,369
Design Development/Installation of Medicaid Elig. Determ. Sys. – Cost of Private Sec. Contractors	1,137,764,863	1,019,568,686	118,196,177
Operation of an Approved Medicaid Eligibility Determination Systems – Cost of In-house Activities	117,041,692	87,781,303	29,260,389
Operation of an Approved Medicaid Eligibility Determination Sys. – Cost of Private Sec. Contractors	599,827,659	450,612,830	149,214,829
Eligibility Determination Staff – Cost of In-house Activities	3,872,719,617	2,904,539,771	968,179,846
Eligibility Determination Staff – Cost of Private Sector Contractors	525,247,881	393,935,941	131,311,940
Eligibility Determination Staff – Cost of In-house Activities – 50% FFP	732,648,834	366,324,450	366,324,384
Eligibility Determination Staff – Cost of Private Sector Contractors – 50% FFP	106,243,441	53,121,741	53,121,700

Service Category	Total	Federal	State
Other Financial Participation	6,729,103,214	3,366,668,208	3,362,435,006
Balance	27,832,262,097	17,708,895,790	10,123,366,307
Collections	−11,143,145	−6,857,305	−4,285,840
Total Net Expenditures	27,821,118,952	17,702,038,485	10,119,080,467

F. EXPENDITURES PER ENROLLEE ESTIMATES AND PROJECTIONS

CMS is currently implementing a new data system to replace MSIS: the Transformed Medicaid Statistical Information System, or T-MSIS. This new system will collect and report data from 2014 onwards (although States may have switched from MSIS to T-MSIS at different points in time in 2014 and 2015). T-MSIS is currently not available for use in providing historical data or in projecting Medicaid expenditures or enrollment, due to limited access to the data, incomplete data, and concerns about data quality. As a result, this report does not rely on T-MSIS data in any way. Also unavailable at this time are MAX data derived from T-MSIS data. As a result of the lack of recent data on Medicaid enrollment and expenditures by eligibility group, some of the projections in this report (most notably, the expenditures per enrollee by eligibility group) are less credible.

In the interest of providing the estimates and projections that underlie the projections shown in this report, we have moved detail that was contained in the Analysis section of reports prior to 2017 (section III) to this section of the Appendix (section VI). These estimates and projections are more uncertain than in past reports due to the lack of more recent data, and caution should be exercised in relying on them for any other purposes.

Table 21 shows estimated enrollment and expenditures by eligibility group for 2017.[55] Historically, children have been the largest group of Medicaid enrollees. In 2017, children are estimated to have numbered 27.9 million, representing 38 percent of overall Medicaid enrollment. There were an estimated 15.4 million non-expansion adults (21 percent of enrollment) and an estimated 12.2 million expansion adults (17 percent). Finally, enrollees with disabilities and aged enrollees are estimated to have numbered 10.6 million and 5.8 million (14 percent and 8 percent of Medicaid enrollment, respectively). Another 1.4 million enrollees (2 percent) were estimated for the five U.S. Territories with Medicaid programs (Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands).

[55] There are some differences between Medicaid outlays and Medicaid expenditures, mainly due to timing differences between States paying for services and States receiving Federal funds. Thus, the levels and trends in outlays and expenditures differ slightly.

Table 21—Estimated Enrollment, Expenditures, and Per Enrollee Expenditures, by Enrollment Category, Fiscal Year 2017

Eligibility Group	Enrollment[1] (in millions)	Expenditures (in billions)	Per Enrollee Spending (2017)	Per Enrollee Spending (2016)	Percent Change
Children	27.9	$107.2	$3,836	$3,565	7.6%
Adults	15.4	86.7	5,616	5,162	8.8
Expansion Adults	12.2	69.0	5,669	5,959	−4.9
Persons with Disabilities	10.6	216.0	20,359	19,793	2.9
Aged	5.8	87.7	15,059	14,700	2.4
Subtotal	72.0	566.7	7,871	7,601	3.6
Territories[2]	1.4	2.5	1,828	1,864	−1.9
Collections and Adjustments	—	−7.0	—	—	—
DSH	—	15.1	—	—	—
Administration	—	27.8	—	—	—
Total	73.4	600.0	8,179	8,003	2.2

Totals may not add due to rounding.

[1] Measured in person-year equivalents.

[2] Territory enrollment is estimated and based on the data reported in the CMS-64. Expenditures reflect only the amounts paid by the Federal government and the corresponding Territory share; some Territory programs spend additional amounts beyond what is covered by the Federal allotments and Territory share.

The average per enrollee cost for 2017 is estimated to have been $7,871 (including Federal and State shares, based on person-year equivalent enrollment, and excluding DSH outlays, Territorial enrollees and costs, adjustments, and administration costs). In estimated average benefits for 2017, children in Medicaid received $3,836, non-expansion adults received $5,616, and expansion adults received $5,669. These average costs reflect the relatively healthier status of children and adults enrolled in the program, as compared to aged enrollees and persons with disabilities; however, among adult enrollees, a significant number are pregnant women, whose costs are on average relatively greater than those for other adults. As would be expected, expenditures are substantially greater for the aged and persons with disabilities. Aged beneficiaries received an estimated $15,059 in benefits on average, a 2.4-percent increase from 2016. Beneficiaries with disabilities are estimated to have received an average of $20,359 in benefits, a 2.9-percent increase from 2016.[56]

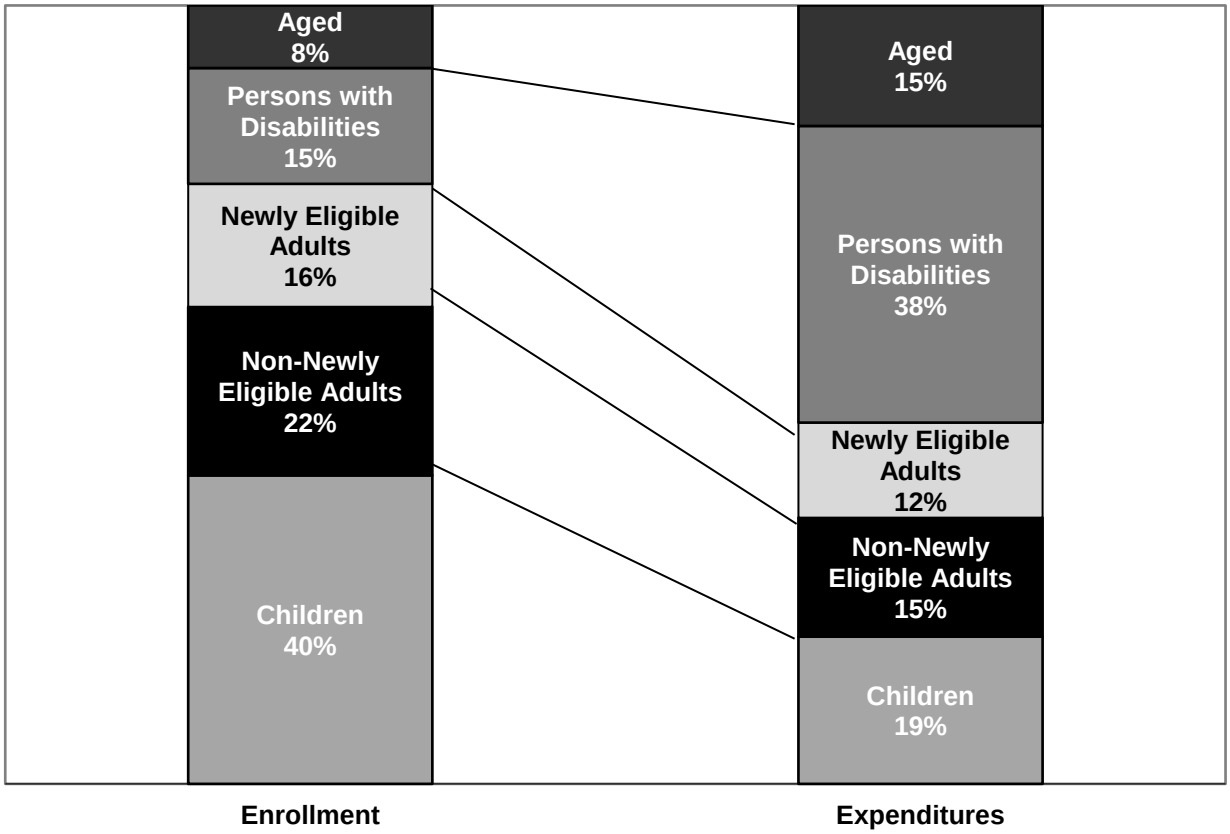
Territory per enrollee expenditures ($1,828 in 2017) are less than those of other populations covered by Medicaid, as costs of care are lower in the Territories and fewer services are provided by Territory programs. The types of services provided also

[56] The average per enrollee costs may also vary substantially among States. These variations may reflect differences in State Medicaid programs (for example, eligibility levels, benefits offered, provider reimbursement rates, or program design) and differences in the overall health care market across States.

vary between the Territories and the States, a factor that may explain a portion of the difference in expenditures.

Figure 8 shows each enrollment group's relative share of enrollment and expenditures in Medicaid in 2017. While enrollees with disabilities and aged enrollees are the smallest enrollment groups in Medicaid, they account for the majority of spending. Conversely, children and adults are the largest enrollment groups in Medicaid, but they account for a relatively smaller share of expenditures.

Figure 8—Estimated Medicaid Enrollment and Expenditures by Enrollment Group, as Share of Total, Fiscal Year 2017



Note: Totals and components exclude DSH expenditures, Territorial enrollees and expenditures, and adjustments. Totals may not add to 100 percent due to rounding.

Combined, spending on aged beneficiaries and beneficiaries with disabilities constituted 53 percent of Medicaid benefit expenditures in 2017, but these groups accounted for only 23 percent of all enrollees. Children and adults represented 77 percent of all enrollees in 2017, while only 46 percent of benefit expenditures were for enrollees in these groups.

These differences between the relative shares of enrollment and expenditures result from per enrollee costs that vary dramatically among the enrollment groups. The differences in average costs, while substantial, actually understate the impact of

differences in health status for these groups. In particular, Medicaid pays almost all health care costs for enrolled children and adults. However, many aged beneficiaries or beneficiaries with disabilities are also enrolled in Medicare, which is the primary payer of benefits before Medicaid; thus, the per enrollee Medicaid estimates are less than the total cost of such beneficiaries' annual health care across all payers.[57]

Per enrollee benefit costs are estimated to have risen from $7,601 to $7,871 (an increase of 3.6 percent from 2016), as costs for children (who constitute the majority of Medicaid enrollment) grew at faster rates than in recent history. Meanwhile, expansion adults saw a decrease of 4.9 percent in per enrollee cost—from $5,959 in 2016 to $5,669 in 2017.

Projections

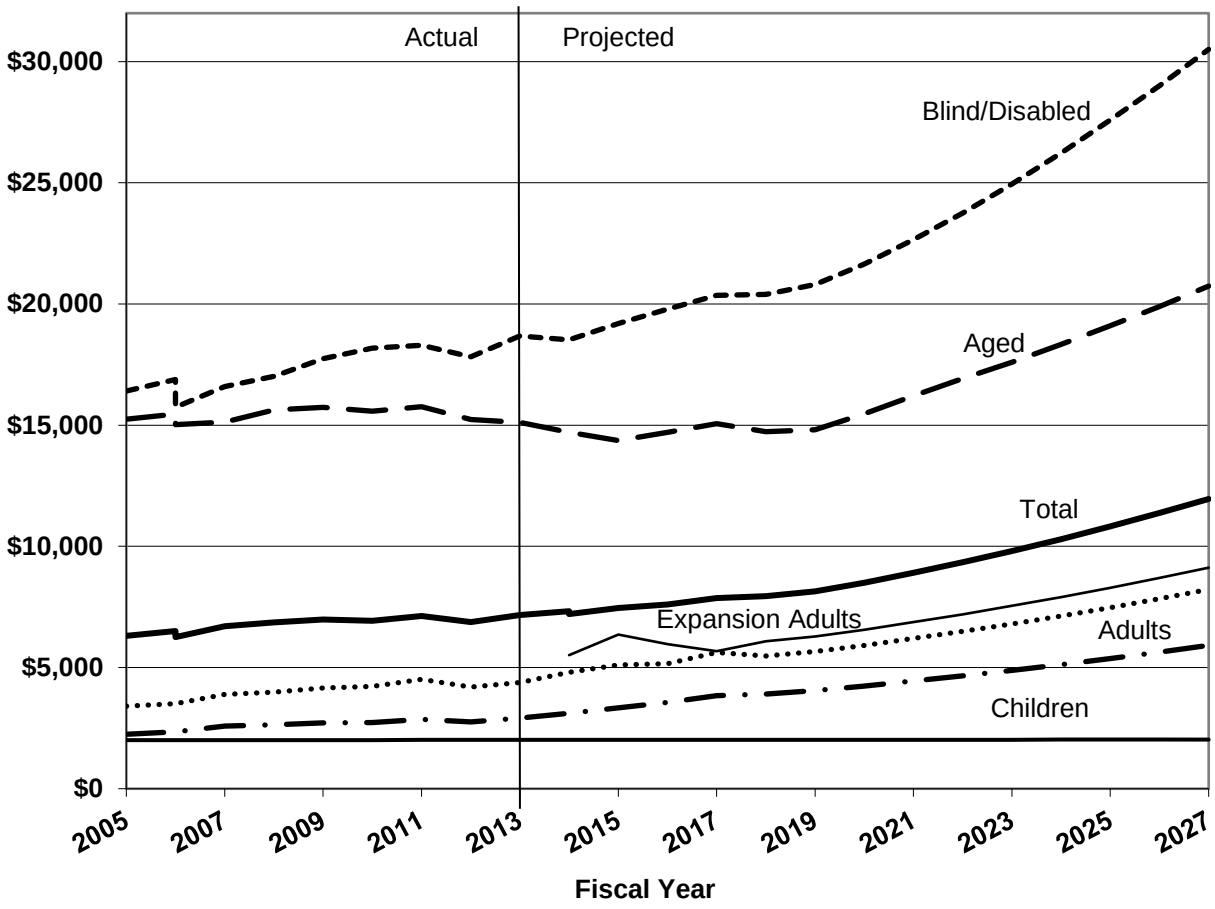
Per Enrollee Costs

As stated previously in the report, the most recent data on enrollment and expenditures by eligibility group are from 2013 or 2014 for most States. Given the lack of more recent credible data, estimates of expenditures per enrollee by eligibility category are less credible than in past reports, and readers should be aware that actual per enrollee expenditures could vary significantly from those provided below.

The average costs of benefits for all enrollees are projected to increase over the next 10 years. Figure 9 displays historical and projected average Medicaid benefit expenditures per enrollee for all enrollees collectively and by eligibility group.

[57] In 2013, Medicaid expenditures for persons eligible for Medicare and full Medicaid benefits (full-benefit dual-eligible beneficiaries) amounted to $118.9 billion, and Medicare expenditures for these persons were $193.5 billion, for a total of $312.4 billion in expenditures between both programs. Medicaid accounted for about 38 percent of the total spending on full-benefit dual-eligible beneficiaries. In addition, for persons eligible for Medicare and limited Medicaid benefits (generally payments for Medicare premiums or cost sharing), Medicaid benefits are typically an even smaller proportion of their total benefits ($2.1 billion of $47.9 billion, or 4.4 percent, in 2013). See Exhibit 3 in *Data Book: Beneficiaries Dually Eligible for Medicare and Medicaid*, Medicare Payment Advisory Commission and Medicaid and CHIP Payment and Access Commission, 2018.

Figure 9—Past and Projected Medicaid Expenditures on Medical Assistance Payments Per Enrollee, by Enrollment Category, Fiscal Years 2005–2027[58]



Note: Per enrollee amounts for 2013-2017 are based on actual expenditures and estimated enrollment.

In 2018, per enrollee benefit costs are estimated to have increased 0.9 percent, down from growth of 3.6 percent in 2017. For most populations, per enrollee costs grew in 2018. Costs are estimated to have increased for expansion adults (from $5,669 to $6,089, 7.4 percent), children (from $3,836 to $3,911, 1.9 percent), and enrollees with disabilities ($20,359 to $20,398, 0.2 percent). For aged and adult enrollees, estimated per enrollee costs decreased from $15,059 to $14,735 (−2.1 percent) and from $5,616 to $5,482 (−2.4 percent), respectively, in 2017; these trends are described in more detail later in this section of the report.

Per enrollee benefit costs are projected to grow somewhat more rapidly from 2018 through 2027 than they did in the previous 10 years.[59] For aged Medicaid enrollees,

[58] The data for this graph can be found in table 17 of section VI.D.

[59] The years from 2007 to 2015 are used as a reference as they cover a sufficiently long period to compare long-term trends while excluding the effects of the start of the Medicare prescription drug program in 2006, which significantly lowered Medicaid per enrollee costs, especially for aged enrollees and persons with disabilities.

benefit costs per enrollee fell from $15,124 in 2007 to $15,059 in 2017 (an average annual growth rate of −0.2 percent over the period) but are projected to reach $20,740 in 2027 (an average annual rate of 3.3 percent over 2018 to 2027). Per enrollee benefit costs for persons with disabilities increased from $16,589 in 2007 to $20,359 in 2017 (an average annual growth rate of 1.7 percent) and are projected to reach $30,507 in 2027 (4.1-percent average annual growth over 2018 to 2027).

The slow rate of growth of long-term care expenditures in recent history contributed to limited growth in the benefit costs for aged enrollees and persons with disabilities, as these individuals receive the vast majority of long-term care services. Expenditures for institutional long-term care (primarily nursing facility services) grew very slowly, while costs for community long-term care (including home and community-based waiver services) grew relatively quickly in comparison. Slow cost growth for long-term care through fee-for-service programs was partially offset by increasing managed care expenditures, especially for managed long-term care services. During and immediately after the 2007-2009 recession, States took stronger actions to limit Medicaid expenditure growth, including freezing or reducing provider reimbursement rates.[60]

Aged enrollees are projected to experience the lowest average per enrollee benefit cost growth over the next 10 years compared to other enrollee groups, due in large part to projected relatively slower growth in the cost of long-term care services. States are expected to continue to use more home and community-based long-term care to postpone enrollees' need for long-term care facilities as long as possible. In addition, States are projected to shift long-term care expenditures from fee-for-service programs into managed care. As a result, managed care expenditures are expected to grow quickly and to constitute a larger share of benefits for aged enrollees.

While average benefit cost growth is expected to be slower over the next 10 years for aged enrollees than for other populations in Medicaid, it is expected to be faster than in recent history. States have instituted fewer provider reimbursement rate freezes and reductions and have allowed for more recent rate increases, and these increases are expected to continue in the future.[61]

Benefit costs per enrollee for adults (excluding the expansion adults) are projected to grow at a similar rate over the next 10 years as in the last decade. Adult per enrollee costs increased from $3,894 in 2007 to $5,616 in 2017 (a 4.4-percent annual average growth rate), and they are projected to increase to $8,222 by 2027 (a 3.9-percent average annual growth rate). Benefit costs per enrollee for children are also expected to grow slightly more rapidly over the next decade, having grown from $2,591 in 2007 to $3,836 in 2017 (a 4.6-percent average annual growth rate), and such costs are projected to grow to $5,916 by 2027 (a 4.4-percent average annual growth rate). As

[60] V. Smith, *et al.*, "Implementing Coverage and Payment Initiatives: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2016 and 2017."
[61] *Ibid.*

was the case for aged enrollees, States took steps to control Medicaid expenditure growth that occurred during and after the 2007-2009 recession, especially in limiting or reducing provider reimbursement rates, but more recently States have implemented fewer rate reductions and freezes and more rate increases, which are expected to continue.[62] The Affordable Care Act also provided for temporary increases in primary care physician payments in CYs 2013 and 2014, which contributed to faster growth in expenditures for physician services in those years, particularly among children and adults (as many aged enrollees and enrollees with disabilities receive physician services through Medicare). Estimated spending for managed care represented more than 60 percent of Medicaid expenditures for adults and children in 2015, and, for these enrollees, this type of care is expected to continue to be the fastest growing service category over the next 10 years.

Although the average benefit costs for expansion adults were greater than those for other adults in 2014 and 2015, per enrollee costs for the expansion adults are estimated to have declined in 2016 and to have continued declining through 2017, when relative costs for these individuals are expected to have been lower than those for non-expansion adults. After 2017, per enrollee costs for expansion adults are projected to grow at a similar rate as those for other adults. More detail on these projections is provided below.

Enrollment Mix

The growth in average Medicaid benefit expenditures per enrollee for all enrollment categories is significantly affected by the relative proportion of enrollment across these categories. In this report, the *enrollment mix* is defined as the contribution of the change in these relative proportions to the growth in Medicaid benefit expenditures per enrollee. This concept is similar to *age-gender mix* effects in other health care plans or programs (which measure the contribution to health care expenditures of changes in the relative proportion of enrollees by age and by gender in a plan). The enrollment mix differs in that it does not specifically consider gender and considers age in only broad ranges, but it does take into account the disability status of enrollees.

The enrollment mix is an important consideration in analyzing and projecting Medicaid benefit expenditures. While the effects of age-gender mix on other programs are usually relatively small and do not change significantly from year to year, the effect of enrollment mix on Medicaid expenditures can be substantially larger or smaller and may vary greatly from year to year. This variation can occur because Medicaid enrollment categories experience substantially different average costs—average Medicaid costs for aged enrollees and persons with disabilities are much

[62] *Ibid.*

greater than those of child and adult enrollees—and because the enrollment growth for these groups may vary among categories and may fluctuate annually.

For this report, the enrollment mix is measured as the difference between the increase in Medicaid benefit expenditures per enrollee and the increase in Medicaid benefit expenditures per enrollee if enrollment were held constant each year. To calculate this difference, enrollment was set at 2017 levels for each enrollment category.[63]

From 2008 to 2017, Medicaid benefit expenditures per enrollee grew at an average annual rate of 1.6 percent (including expansion adults). The effects of changes in enrollment mix over this time period reduced spending growth by an average of 2.0 percentage points per year; that is, excluding the impacts of changes in enrollment, Medicaid benefit expenditures per enrollee would have grown 3.6 percent per year. The majority of the difference is attributable to the introduction of the expansion adults starting in 2014, as the average expenditures per enrollee for expansion adults were less than that of the overall Medicaid population (1.2 percent of the 2.0 percent). The effects of the changes in enrollment mix on spending ranged from −1.9 percent to 0.5 percent over these 10 years, excluding 2014 when the addition of expansion adults significantly lowered the overall average expenditures per enrollee. The negative effects were the result of relatively faster enrollment growth for children and adults than for aged enrollees and persons with disabilities, especially from 2008 to 2010, and the addition of expansion adults in 2014 and 2015.

While Medicaid benefit expenditures per enrollee are projected to grow more rapidly from 2018 to 2027 at an average annual rate of 4.3 percent, changes in enrollment mix are projected to increase this growth by an average of about 0.2 percentage point per year over this time period. The enrollment mix effect is projected to be positive in most years because the projected growth rate of aged Medicaid enrollees is expected to be faster than that of other populations as more members of the baby boom generation reach age 65.

Medicaid benefit expenditures per enrollee grew at an average annual rate of 3.6 percent per year from 2008 through 2017, excluding the effects of changes in the enrollment mix. For 2018 through 2027, such expenditures are projected to increase 4.1 percent per year on average. This difference is the result of two factors: (i) efforts by States to limit Medicaid expenditure growth (most notably, in 2011 and 2012) are not projected to continue with the same intensity into the future; and (ii) medical price inflation is projected to be modestly faster than in recent history—averaging

[63] As the base year for enrollment, 2017 was selected as the most recent year of estimated enrollment. A review of the measurement of enrollment mix using other years as the base year showed no significant differences in results when excluding expansion adults; however, in order to include the impacts that expansion adult trends have on enrollment mix, it was necessary to select a year with expansion adult enrollment.

4.2 percent from 2018 through 2027, as compared to 3.3 percent over the prior 10 years.

Table 22—Past and Projected Medicaid Expenditures on Medical Assistance Payments Per Enrollee, by Enrollment Category, Fiscal Years 2000–2027 (Data for Figure 9)

(in dollars per person-year equivalent enrollee)

Fiscal Year	Aged	Disabled	Children	Adults	Expansion Adults	Average of All Enrollees
Historical Data:						
2000	$14,222	$12,237	$1,819	$2,962	n/a	$5,496
2001	15,068	13,240	1,925	2,968	n/a	5,718
2002	15,682	14,453	2,076	3,123	n/a	5,969
2003	14,782	15,168	2,124	3,169	n/a	5,960
2004	15,314	15,869	2,125	3,311	n/a	6,124
2005	15,254	16,405	2,247	3,407	n/a	6,308
2006	15,023	15,743	2,348	3,503	n/a	6,255
2007	15,124	16,589	2,591	3,894	n/a	6,700
2008	15,631	17,013	2,640	3,987	n/a	6,863
2009	15,738	17,744	2,723	4,162	n/a	6,982
2010	15,577	18,172	2,731	4,225	n/a	6,926
2011	15,757	18,295	2,865	4,517	n/a	7,124
2012	15,235	17,824	2,762	4,192	n/a	6,874
Projections:						
2013	15,110	18,679	2,910	4,385	n/a	7,170
2014	14,708	18,527	3,108	4,802	$5,511	7,204
2015	14,365	19,189	3,341	5,106	6,365	7,456
2016	14,700	19,793	3,565	5,162	5,959[64]	7,601
2017	15,059	20,359	3,836	5,616	5,669	7,871
2018	14,735	20,398	3,911	5,482	6,089	7,945
2019	14,817	20,804	4,052	5,664	6,281	8,145
2020	15,475	21,655	4,238	5,918	6,563	8,496
2021	16,208	22,660	4,442	6,198	6,874	8,908
2022	16,920	23,755	4,656	6,491	7,199	9,344
2023	17,602	24,953	4,882	6,800	7,543	9,807
2024	18,334	26,232	5,121	7,128	7,906	10,301
2025	19,102	27,587	5,374	7,476	8,292	10,825
2026	19,895	29,008	5,638	7,840	8,697	11,375
2027	20,740	30,507	5,916	8,222	9,120	11,955

[64] To avoid distorting the paid trend, per enrollee costs for 2016 through 2020 exclude payments made to the Federal government from the States for risk-sharing arrangements and medical loss ratios (MLRs).