



Long-Term Forecast of Medicaid Enrollment and Spending in Alaska: FY2020–FY2040

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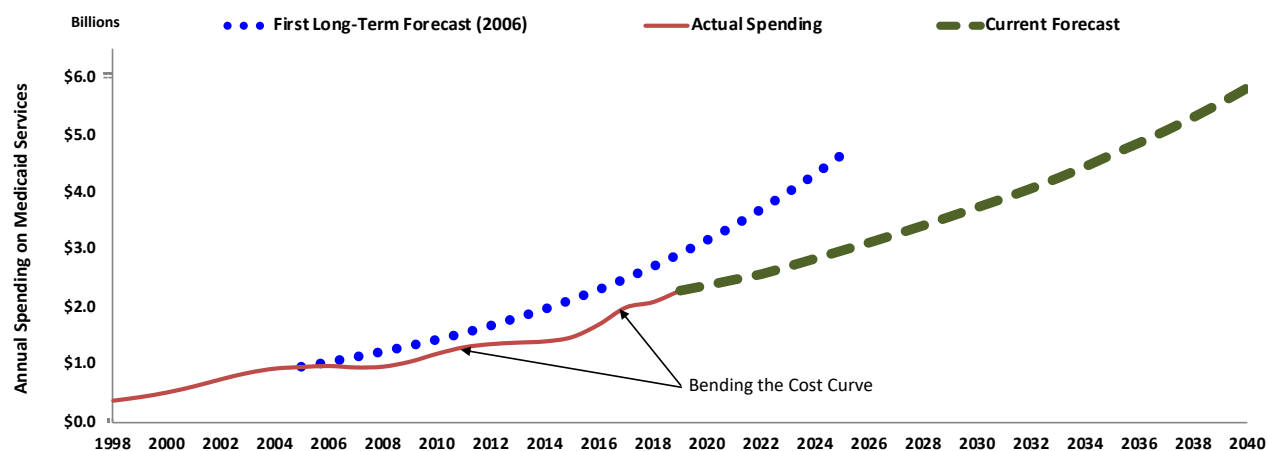
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Executive Summary

This forecast is an update to the *Long-Term Forecast of Medicaid Enrollment and Spending in Alaska: 2005-2025*, which was released in February 2006. In this update, we develop long-term forecasts of enrollment in and spending on services provided by Alaska’s Medicaid program for fiscal year (FY) 2020 through FY2040. The projections presented in this report are based on the Medicaid policies, services offered, and eligibility requirements in place today. While it is likely that Alaska’s Medicaid program will experience changes during the projection period, the forecast informs decision makers about how Medicaid spending in Alaska will likely evolve given the structure of the program as it exists today. The forecast also serves as a benchmark for evaluating the impacts of initiatives introduced by the State of Alaska, including cost containment measures implemented during the forecast period.

Figure 1 shows actual spending on Medicaid services from FY1998 through FY2019 (solid red line), projected spending from the first long-term Medicaid forecast (blue dotted line), and the current projection of Medicaid spending (green dashed line). Actual spending on Medicaid services in FY2019 was about \$652 million less than was projected in the first long-term Medicaid forecast. Much of this difference is attributable to cost savings efforts by the Alaska Legislature and the Alaska Department of Health and Social Services (DHSS), which helped “bend the cost curve” on Medicaid spending.

Figure 1: Spending on Medicaid Services – Actual and Projected

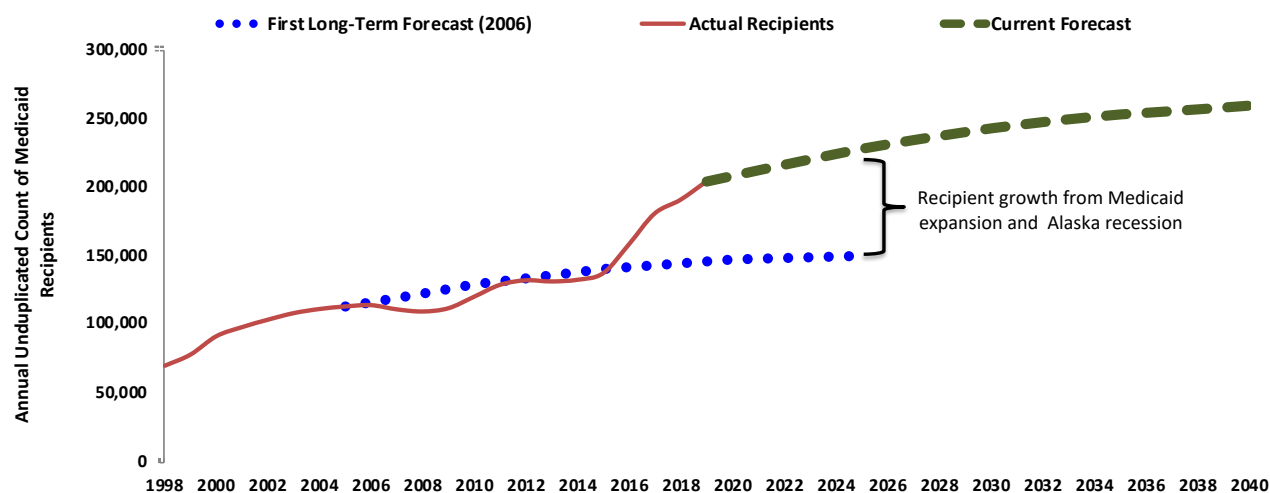


Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Figure 2 shows the number of Medicaid enrollees who received Medicaid services (referred to as “recipients”) each year from FY1998 through FY2019 and the projected number of Medicaid recipients based on the first long-term Medicaid forecast and this

current forecast.¹ Between FY2006 and FY2015, the actual number of Medicaid recipients tracked closely to the number of recipients projected in the 2006 forecast. However, with the initiation of Medicaid expansion in September 2015, other components of the Patient Protection and Affordable Care Act, or the ACA (e.g., the individual mandate), and the Alaska economic recession that began in late 2014 or early 2015, enrollment in Medicaid increased considerably. For the current forecast, we expect the number of Medicaid recipients to continue to grow, but at a decreasing rate through the projection period.

Figure 2: Medicaid Recipients – Actual and Projected

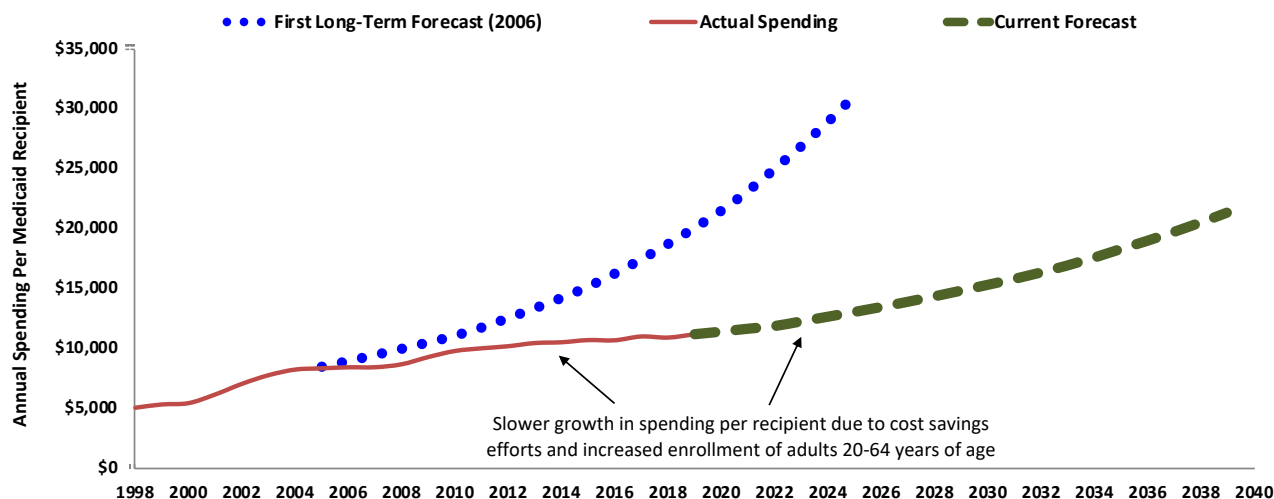


Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Spending on Alaska’s Medicaid program is considerably less today than was projected in the first long-term Medicaid forecast. At the same time, Medicaid enrollment and the number of recipients is much greater today than was predicted. The net effect of lower-than-projected spending and greater-than-projected enrollment is much lower-than-projected average spending per Medicaid recipient. Figure 3 shows actual average annual spending per recipient (red line), as well as projected spending per recipient from the current and the first long-term Medicaid forecasts. The compound effect of lower-than-expected total spending and greater-than-expected enrollment in the Medicaid program is that spending per recipient is currently well below the earlier forecast and is projected to continue to grow at a much slower rate.

¹ The term “Medicaid enrollee” refers to an individual enrolled in the Medicaid program at any time during a fiscal year regardless of whether the individual utilized any services provide by the Medicaid program. The term “Medicaid recipient” refers to a Medicaid enrollee who utilized Medicaid services at least one time during a fiscal year.

Figure 3: Medicaid Spending per Recipient – Actual and Projected



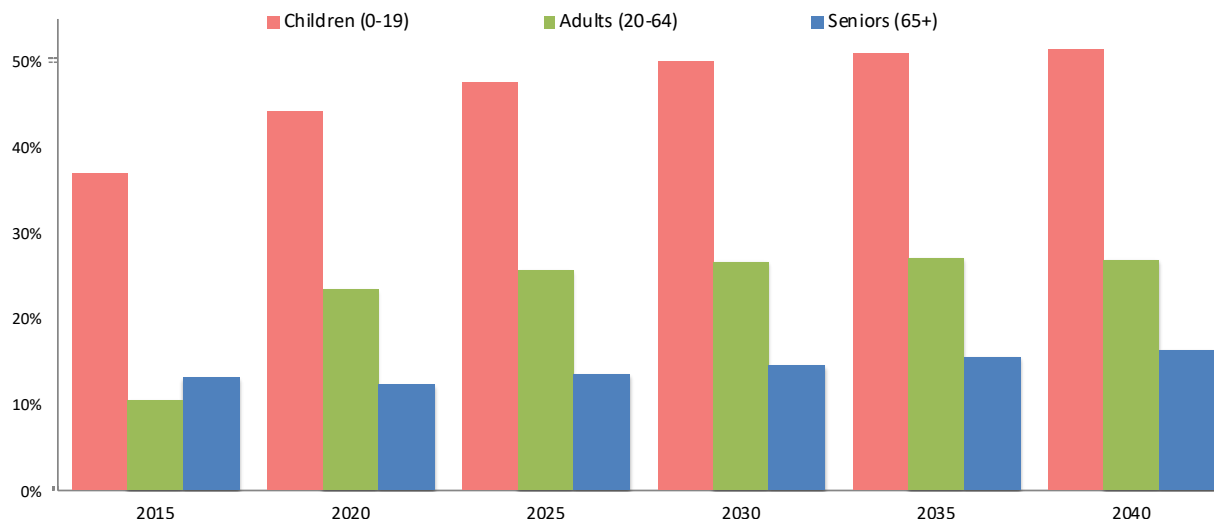
Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Across all age cohorts, the proportion of Alaskans receiving services through the Medicaid program has grown, and we expect it to continue to grow – though at a slower rate – throughout the projection period. Figure 4 shows the proportion of Alaska children,² adults 20–65 years of age, and seniors (65 years of age or older) that received Medicaid services in FY2015 and are projected to receive Medicaid services over the next 20 years. Due primarily to Medicaid expansion, approximately 23 percent of adults 20–65 years of age will receive services through Alaska’s Medicaid program in FY2020, up from just 11 percent in FY2015. We project that 27 percent of Alaska adults 20–65 years of age will be Medicaid recipients by FY2030 and that this proportion will remain roughly constant through FY2040.

We project that the proportion of seniors receiving Medicaid services will grow from 12.5 percent today to 16.5 percent by FY2040, and that the proportion of Alaska children receiving Medicaid services (or services through the Children’s Health Insurance Program [CHIP]) will grow from 44 percent today to 51.5 percent in FY2040.

² Throughout this report, we use three general age categories: children to refer to anyone under 20 years of age, adults (20–64 years of age), and seniors to refer to anyone 65 years of age or older.

Figure 4: Medicaid Recipients as a Proportion of Alaska’s Population for Selected Fiscal Years 2015–2040



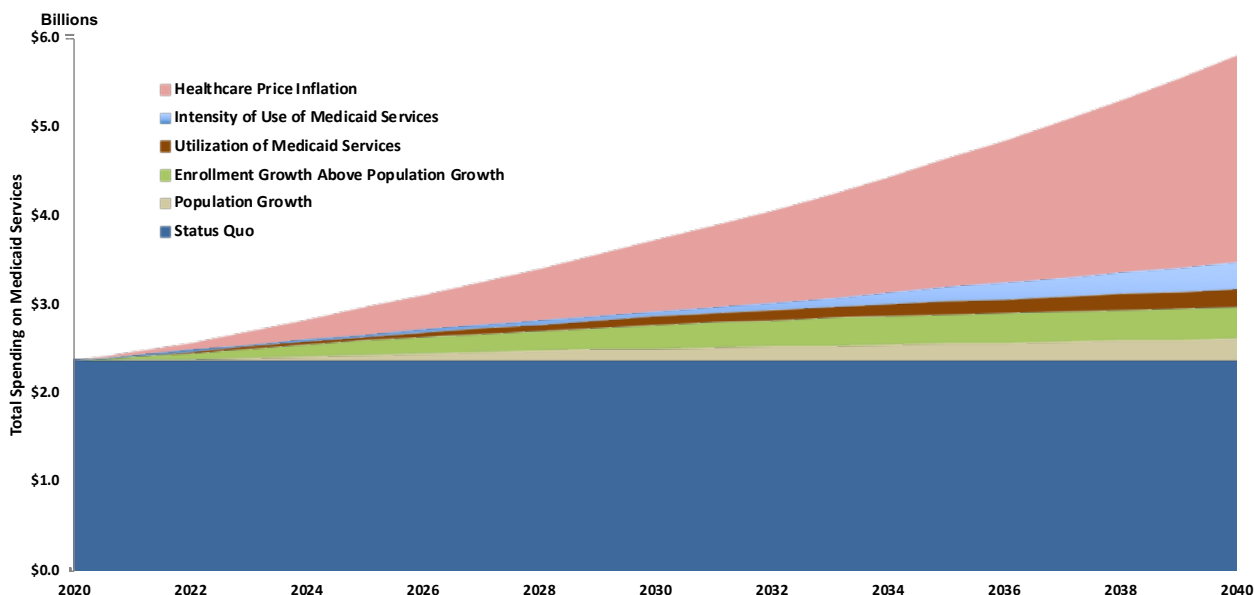
Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

We project that total Medicaid spending will increase on average by 4.6 percent per year between FY2020 and FY2040, reaching nearly \$3.0 billion in FY2025 and \$5.8 billion by FY2040. This projected rate of growth in Medicaid spending is substantially lower than the projected growth rate from the first long-term forecast completed in 2006. In that forecast, spending on Medicaid services was projected to grow on an annual average basis by 7.8 percent, reaching \$4.7 billion by calendar year (CY) 2025.³

As Figure 5 shows, we expect healthcare price inflation to be the primary driver of spending growth in Alaska’s Medicaid program, accounting for about 67 percent of the growth in spending between FY2020 and FY2040. While healthcare price inflation may not directly impact what DHSS pays providers for services in any given year, DHSS has processes in place to work with providers to periodically update the schedule of rates paid for Medicaid services. Rates typically adjust (generally upward) every one to four years, roughly in line with the rate of healthcare price inflation affecting providers.

³ Note: the original long-term Medicaid forecast and each annual update through 2017 was based on calendar year. The forecast was changed to fiscal year beginning with the FY2019 - FY2039 update completed in October 2018.

Figure 5: Spending on Medicaid Services by Component of Growth



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Relative to healthcare price inflation, each of the other components of spending growth will have a relatively small impact on the Medicaid program over the next 20 years. Nevertheless, by FY2040, we project that growth in the population, growth in the take-up rate for Medicaid, and growth in utilization and intensity of Medicaid services will combine to increase spending on the Medicaid program by about \$1.1 billion.

The proportion of the cost of a Medicaid service that the state and federal governments are responsible for, respectively, is a function of the eligibility status of each Medicaid recipient and, in certain cases, the facility in which the recipient receives care. We project that spending on Medicaid services by the State of Alaska and the federal government will each grow on average by about 4.6 percent per year through FY2040 (see Table 1).

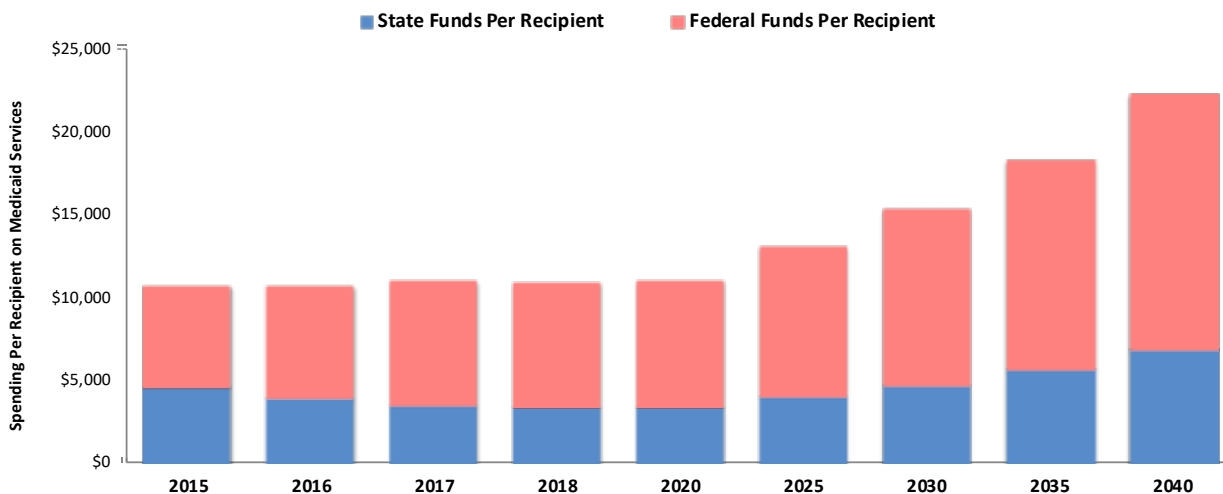
Table 1: Projected State and Federal Spending on Medicaid Services (in Millions \$)

Fund Source	2020	2025	2030	2035	2040	Annual Growth
State and Other Match Funds	\$710.8	\$893.6	\$1,114.8	\$1,392.0	\$1,737.6	4.57%
Federal	\$1,672	\$2,094	\$2,623	\$3,266	\$4,072	4.55%
Total Spending	\$2,383	\$2,988	\$3,737	\$4,658	\$5,809	4.56%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Figure 6 shows recent actual and projected future average spending per Medicaid recipient. Between FY2015 and FY2020, spending per Medicaid recipient was flat, and the proportion paid with state general funds actually decreased. Over the next 20 years, we project average spending per recipient will increase by about 3.4 percent per year due primarily to growth in healthcare price inflation and the aging of Alaska’s population.

Figure 6: Average State and Federal Spending Per Medicaid Recipient by Fiscal Year*



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* FY2015 – FY2018 are actuals, FY2020 – FY2040 are projected.

I Introduction

Medicaid is an entitlement program established by Title XIX of the Social Security Act in 1965 to provide payment for healthcare services for low-income citizens. Medicaid is jointly funded by the federal government and individual states, with each state managing its own program. Participation in the Medicaid program is optional, but all states choosing to participate in the program must follow certain federal guidelines pertaining to eligibility and services provided. The federal government covers at least 50 percent of the cost of most services.⁴ In state fiscal year (FY) 2014 and FY2015, the federal government paid approximately 57 percent of the cost of Alaska's Medicaid program.⁵ Federal participation has since increased to nearly 70 percent in FY2019, and we expect it to remain at about that level throughout the 20-year projection period (through FY2040).

People qualify for Medicaid by meeting income standards and specified eligibility requirements related to age, family status, and disability status. Traditionally, Medicaid covered only aged,⁶ blind, or disabled persons, children, and adults with dependent children. Medicaid expanded coverage in 1998 through the Children's Health Insurance Program (CHIP) to children whose family income is too high to qualify for regular Medicaid, but too low to afford private health insurance. In Alaska, the Division of Health Care Services administers CHIP and the Division of Public Assistance manages enrollment for regular Medicaid and CHIP.⁷ Alaska Medicaid reimburses hospitals, physicians, and other healthcare providers for providing healthcare services to Medicaid enrollees. It operates as a fee-for-service program, meaning that it reimburses (pays) providers per unit of service rendered according to established rates of payment.

I.1 Medicaid Expansion

In January 2014, the Affordable Care Act (ACA) extended Medicaid eligibility to adults under 65 years of age without dependent children who are not disabled and meet certain income requirements (commonly referred to as "Medicaid expansion." Alaska did not expand its Medicaid program at that time. However, then-Governor Bill Walker expanded

⁴ The few services for which the federal government does not cover at least 50 percent of the cost are referred to as "state-only" services.

⁵ The overall rate of federal financial participation (58%) is an average of multiple Federal Medical Assistance Percentage (FMAP) rates weighted by the amount of spending associated with each rate. See subsection State Spending on Medicaid Services on page 30 for a discussion of the rate of federal financial participation associated with each FMAP.

Unless otherwise stated, all references to fiscal year are state fiscal year, which begins July 1 and ends June 30. In comparison, federal fiscal years begin October 1 and end September 30. For example, FY2020 began July 1, 2019 and will end June 30, 2020.

⁶ Under Medicaid descriptions of eligibility, "aged" refers to persons 65 years of age or older. Throughout this report, we refer to this population as "seniors" except when referring to Medicaid eligibility.

⁷ Both divisions are within the Department of Health and Social Services (DHSS).

Medicaid in September 2015. In CY2016, the federal government paid 100 percent of the cost of Medicaid services provided to those enrolled through expansion. In CY2017, federal participation dropped to 95 percent and to 94 percent in CY2018. It dropped to 93 percent in CY2019, and then to 90 percent for CY2020, where it is scheduled to remain.⁸

Medicaid expansion may also have impacted the Alaska Medicaid program indirectly by allowing individuals with disabilities to enroll in Medicaid through Medicaid expansion eligibility (i.e., by being below the income threshold) rather than waiting for a disability determination. Prior to Medicaid expansion, adults under 65 years of age without dependent children could only qualify for Medicaid based on being determined as having a qualified disability and meeting income requirements specific to the individual's living arrangement.⁹

1.2 Other Impacts of the ACA

The ACA has affected many aspects of the U.S. healthcare system, including the Medicaid program.

Modified Adjusted Gross Income (MAGI)

The ACA changed the way that financial eligibility is determined for children, parents and other caretakers, and pregnant women. For these groups, as well as for those who enroll in Medicaid through expansion, financial eligibility for Medicaid is now determined based on the MAGI standard, which is consistent across states and is tied to how people report income on their taxes. The MAGI standard simplifies the process for determining Medicaid eligibility by moving the process online for most applications, eliminating documentation requirements with applicant attestation, and eliminating the asset test for most non-senior applicants.¹⁰ The likely result for Alaska's Medicaid program is that the MAGI standard has led to higher rates of Medicaid enrollment.

No Wrong Door

The "no wrong door" provision of the ACA allows an individual to complete a single streamlined application in order to determine eligibility for a host of entitlement programs, including Medicaid, CHIP, and qualified health plans (QHP) available on the

⁸ Many adults enrolled through Medicaid expansion are American Indian and Alaska Native (AI/AN). When these enrollees receive services from a qualifying Medicaid provider, the federal government reimburses the State of Alaska 100 percent of the cost of the services. Thus, even as the federal financial participation rate for Medicaid expansion has decreased each year through CY2020, the State of Alaska still receives 100 percent reimbursement from the federal government for many of the services provided to recipients enrolled through expansion.

⁹ For information on income eligibility for Medicaid, see <http://dhss.alaska.gov/dpa/Pages/medicaid/>

¹⁰ Each state is responsible for conducting third-party verification for a certain proportion of applicants. Prior to 2014, Medicaid eligibility determination also considered the value of the applicant's assets. The MAGI standard also includes a 5 percent disregard of income.

federal or individual state health exchanges, as well as other assistance programs. Rather than apply individually for these programs, the single application is screened for eligibility into multiple programs, ensuring that it does not go through a “wrong door.” Thus, some low-income individuals who apply for individual insurance through the federal health exchange may learn they are eligible for Medicaid and/or other assistance programs. The likely result for Alaska’s Medicaid program is that the no wrong door provision has led to higher rates of Medicaid enrollment.

Insurance Mandate

The ACA restricts the ability of insurance companies to set insurance rates based on an individual’s preexisting medical condition or on the expected healthcare needs of the individual. Recognizing that this restriction will be a financial burden to insurance providers, the ACA included the individual mandate requiring most Americans to have a basic level of health insurance coverage. The rationale for the individual mandate was that by requiring all individuals to maintain a basic level of health insurance, the financial risks associated with providing health insurance would be spread across a wider population even though healthcare utilization and costs are heavily weighted toward seniors and those with chronic medical conditions. Without the individual mandate, many younger, healthier adults would forego health insurance coverage because of the cost, leaving those with greater medical needs in the insurance pool. Congress repealed the individual mandate in December 2017. The repeal took effect beginning in January 2019, and there is no longer a federal requirement to maintain health insurance coverage.¹¹ We believe that the repeal of the insurance mandate is having a moderating effect on enrollment growth in the Medicaid program, which we incorporated into the enrollment forecast.

1.3 Recent Initiatives That May Affect Alaska’s Medicaid Program in the Next Few Years

Over the past few years, the state initiated reforms to the Medicaid program as part of Senate Bill (SB) 74, passed by the Alaska Legislature in 2016 with the purpose of enacting comprehensive reform of Alaska’s Medicaid program.¹² Additional initiatives associated with healthcare cost containment and treatment for substance abuse and behavioral health were initiated through legislation in FY2019.

Behavioral Health System Reform

Due to significant gaps in the continuum of care in Alaska’s behavioral health system, both on the prevention and lower acuity treatment side of care, and in terms of a shortage of in-

¹¹ For information on the ACA individual mandate to purchase health insurance, please see <http://kff.org/infographic/the-requirement-to-buy-coverage-under-the-affordable-care-act/>

¹² More information and updates on these initiatives are available on the Alaska Department of Health and Social Services (DHSS) Medicaid Redesign website. http://dhss.alaska.gov/HealthyAlaska/Pages/Redesign/Redesign_news.aspx

patient treatment beds, The Alaska 1115 waiver demonstration project proposes to develop a full continuum of care in each region of the state. SB 74 directed DHSS to apply for an 1115 waiver¹³ to improve access to services, improve population health outcomes, contain costs, and increase the types of behavioral health providers that may provide services to Medicaid recipients. DHSS received approval for its 1115 waiver application in November 2018 for the Substance Use Disorder portion of the waiver and in September 2019 for the Behavioral Health portion of the waiver. Another prong of the behavioral health system reform initiative is to improve accountability and the use of evidence-based practices through a contract with an Administrative Services Organization. While the Substance Use Disorder component of the 1115 waiver was implemented in July 2019, the Behavioral Health services and the Administrative Services Organization components were implemented by January 1, 2020.

Health Care and Tribal Health Services Reforms

Alaska's Medicaid program currently operates primarily on a fee-for-service provider reimbursement basis. The Coordinated Care Demonstration Project Initiative is intended to test new healthcare delivery and payment models to determine the most cost effective and highest quality approach for Alaska. The Medicaid program awarded a contract to a provider to test the Patient-Centered Medical Home model in Anchorage. The Division of Health Care Services will analyze and report the efficacy of these demonstration projects.

Medicaid services provided to American Indians and Alaska Natives (AI/ ANs) through a federal or tribal health facility are reimbursed to the state at 100 percent federal financial participation (FFP). In February 2016, the Centers for Medicare and Medicaid Services (CMS) issued State Health Official Letter #16-002, which updated its policy regarding federal funding for services "received through" a federal/tribal facility and provided to Medicaid-eligible AI/ ANs. This change in federal policy authorizes 100 percent federal funding for services provided to AI/ AN Medicaid recipients in a non-federal/tribal facility if the recipient's tribal health organization has a care coordination agreement established with the non-tribal facility and there is documentation of a referral and an exchange of records for the care received. SB 74 directed DHSS to fully implement this policy. With the department's continued partnership with tribal health organizations and over 1,700 care coordination agreements signed between tribal and non-tribal providers, the department to-date has been able to save over \$180 million in state general funds through implementation of this policy.

¹³ Section 1115 of the Social Security Act gives the Secretary of Health and Human Services authority to waive certain requirements of Medicaid and to allow states to use federal Medicaid funds in ways that are not otherwise allowed under federal rules. The authority is provided at the Secretary's discretion for demonstration projects that the Secretary determines promote Medicaid program objectives.

Senior and Disability Services Reforms

SB 74 authorized the Alaska Medicaid program to implement two new State Plan options for long term services and support: 1915(k) Community First Choice and the 1915(i) Home and Community-Based Services benefit. After a thorough analysis and with community stakeholder involvement, the department moved forward with the 1915(k) option, but decided not to implement 1915(i) due to budgetary concerns. In lieu of the 1915(i) option, the department has implemented the 1915(c) waiver. Both initiatives became operational October 1, 2018 (FY2019). The Community First Choice option provides enhanced personal care services, including skills training to foster independence and self-care, for recipients who meet institutional level of care criteria. The 1915(c) waiver – the Individualized Supports Waiver – provides services under a per-individual annual dollar cap to recipients with intellectual and developmental disabilities who meet institutional level of care criteria. In FY2021, the Department expects to transfer Chore Services out of Home and Community Based (HCB) Waiver Services and into the Community First Choice program, in order to receive an additional 6 percent in federal financial participation.

1.4 The Long-Term Medicaid Forecast

In this study, we develop long-term forecasts of spending for 20 categories of services provided through Alaska’s Medicaid program. We also develop forecasts of spending by gender, American Indian or Alaska Native (AI/AN) status,¹⁴ and for twelve age groups. This document presents the results of the FY2020-FY2040 projection of enrollment in and spending on the Medicaid program in Alaska. It is the thirteenth update to the original long-term Medicaid forecast, which DHSS engaged the Lewin Group to conduct in April 2005.

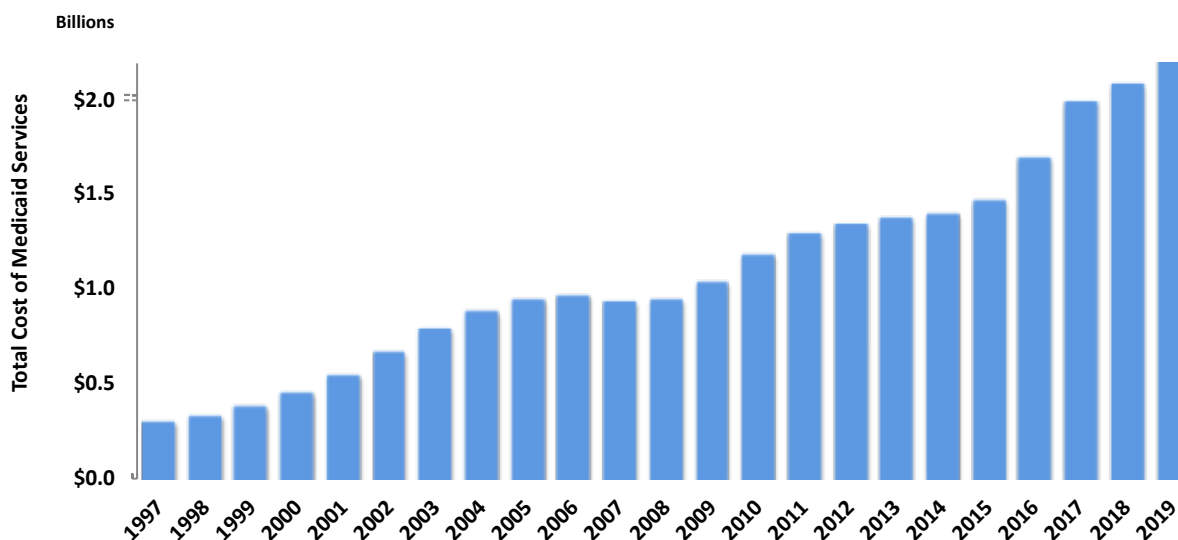
The purpose of this forecast is to serve as a benchmark and inform the Alaska Legislature and DHSS of the projected long-term trends in Medicaid enrollment and spending under the assumption that the current mix of Medicaid services remains constant and that eligibility criteria do not change. The forecast does not assume or consider possible future changes in Medicaid policies, services offered, or eligibility requirements; rather, we develop the forecast as if the policies, services offered, and eligibility requirements in place today will remain in place throughout the forecast period. While it is likely Alaska’s Medicaid program will experience changes during the projection period, the assumption of no change is necessary to show how Medicaid spending in Alaska will likely evolve given the structure of the program as it exists today.

¹⁴ Alaska Native, American Indian, and other race categories are based on self-identification of Medicaid enrollees. In FY2019, 90,751 Medicaid enrollees reported their race as either Alaska Native or American Indian. Of these, 3,569 (3.9%) identified as American Indian.

1.5 Recent Historical Trends in Medicaid Spending

Spending on Alaska’s Medicaid program grew rapidly from FY1997 through FY2005, increasing an average of 16 percent per year (see Figure 7).¹⁵ The rate of growth in spending slowed greatly beginning in FY2006 due at least in part to program changes put in place by DHSS following the release of the *Long-Term Forecast of Medicaid Enrollment and Spending in Alaska: 2005-2025* in January 2006. However, due at least in part to the severe national economic recession beginning in 2008, enrollment in and spending on Medicaid again increased rapidly in Alaska. Between FY2008 and FY2011, spending on Medicaid increased on average by 10.7 percent per year before slowing again in FY2012.

Figure 7: Total Cost of Medicaid Services by Fiscal Year in Which Service Occurred



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Between FY1997 and FY2015, spending on Medicaid increased on an average annual basis by 9.1 percent. Part of this growth—3.4 percentage points—was due to growth in Medicaid enrollment, which grew from 90,130 (annual unduplicated count) in FY1997 to 164,947 in FY2015. In addition, approximately 4.2 percentage points of the 9.1 percent average annual spending increase was due to healthcare price inflation.¹⁶ The remainder—1.5 percentage points—was due to growth in utilization and intensity of use of Medicaid services.¹⁷ For our purposes, we define utilization as the number of Medicaid service categories a recipient uses during a fiscal year (regardless of “how much” of the service

¹⁵ FY1997 is the earliest year for which we had data on spending.

¹⁶ Healthcare price inflation (also commonly referred to as medical care cost inflation) is a measure of growth in prices charged for healthcare services. While the cost of services provided to Medicaid enrollees may differ from prices paid by private insurance, in the long run, the cost of services should trend at roughly the same rate for public and private insurance providers.

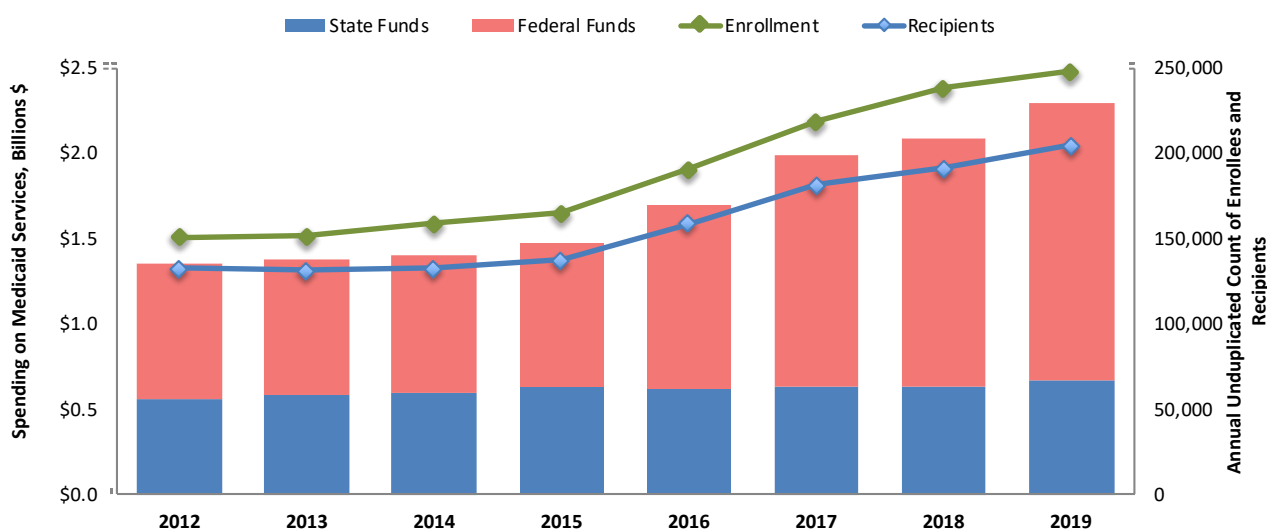
¹⁷ The remainder is computed as $9.1 - 3.4 - 4.2 = 1.5$ percentage points.

the recipient uses), and we define intensity of use as the amount of a service category the recipient uses during the year.

Recent Historical Trends in State Medicaid Spending

While total spending on Medicaid services has increased significantly in the past few years, general fund spending by the State of Alaska has grown slowly. Figure 8 shows total spending on Medicaid services for FY2012 through FY2019, split by state and federal funding, and the trend in Medicaid enrollment and number of recipients over this same period.¹⁸

Figure 8: Spending on Medicaid Services, Enrollment in the Medicaid Program, and Recipients of Medicaid Services, FY2012 - FY2019



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

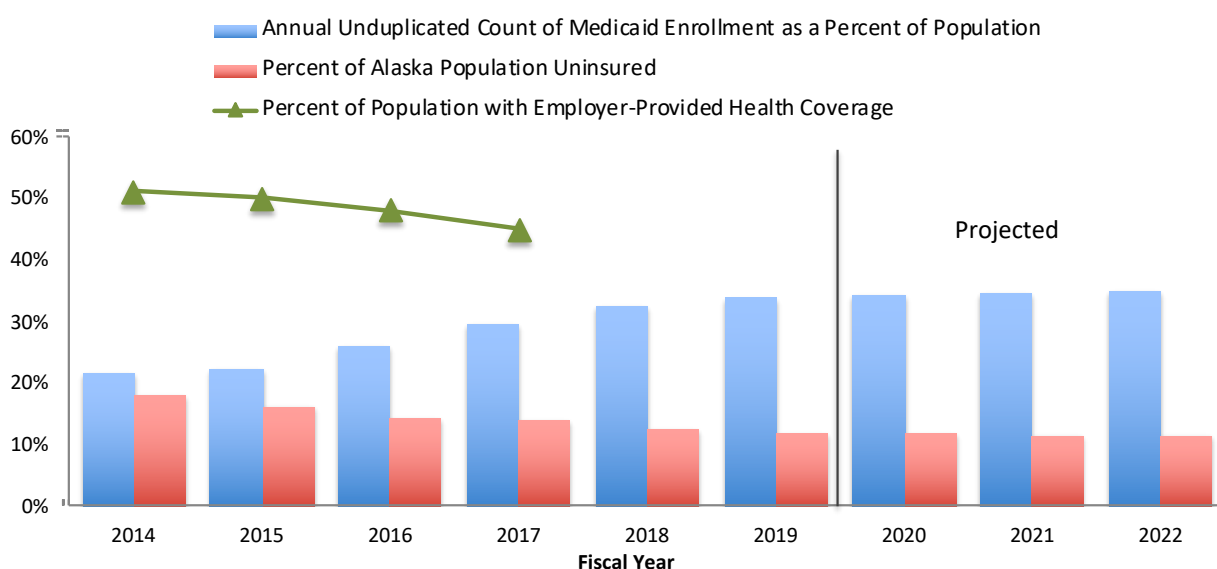
The Role of Medicaid in Providing Health Insurance to Alaskans

Medicaid's role as a provider of healthcare insurance in Alaska has grown significantly. In FY1998, 14 percent of Alaskans were enrolled in Medicaid all or part of the year, and by FY2019, the proportion of Alaskans enrolled in Medicaid had grown to nearly 34 percent. Due to Medicaid expansion and other components of the ACA, growth in the proportion of Alaskans enrolled in Medicaid was especially strong between FY2015 and FY2019. Data from the Kaiser Family Foundation and the U.S. Census indicate that the proportion of

¹⁸ State spending includes Unrestricted General Fund, Designated General Fund, and Other; Enrollment is annual unduplicated count.

uninsured Alaskans decreased from 18.5 percent in CY2013 to 12.6 percent in CY2018.¹⁹ Evergreen Economics projects that the proportion of Alaskans without health insurance coverage will continue to decline to about 11 percent in FY2022. The proportion of Alaskans receiving health insurance through an employer decreased from 52 percent in CY2013 to 44 percent in CY2017.²⁰ Potential reasons for the decline in employer-provided health insurance coverage include the on-going economic recession in Alaska and shifting by employees to the federal health insurance exchange or to the Medicaid program.

Figure 9: Recent Trends in Medicaid Enrollment and Employer-Provided Health Coverage



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group and the Kaiser Family Foundation (<https://www.kff.org/state-category/health-coverage-uninsured/>)

Error! Reference source not found. shows per-capita spending on healthcare services in Alaska and per-enrollee and per-recipient spending on Medicaid services from FY2010 through FY2019.²¹ Since 2010, spending per Medicaid enrollee has grown by only 0.6 percent per year, and spending per Medicaid recipient has grown by 1.5 percent annually. Comparatively, spending per capita on all healthcare services by all Alaskans grew by 4.7 percent annually between FY2010 and FY2019.

¹⁹ Henry J. Kaiser Family Foundation. "State Health Facts: Health Coverage & Uninsured."

<https://www.kff.org/state-category/health-coverage-uninsured/>

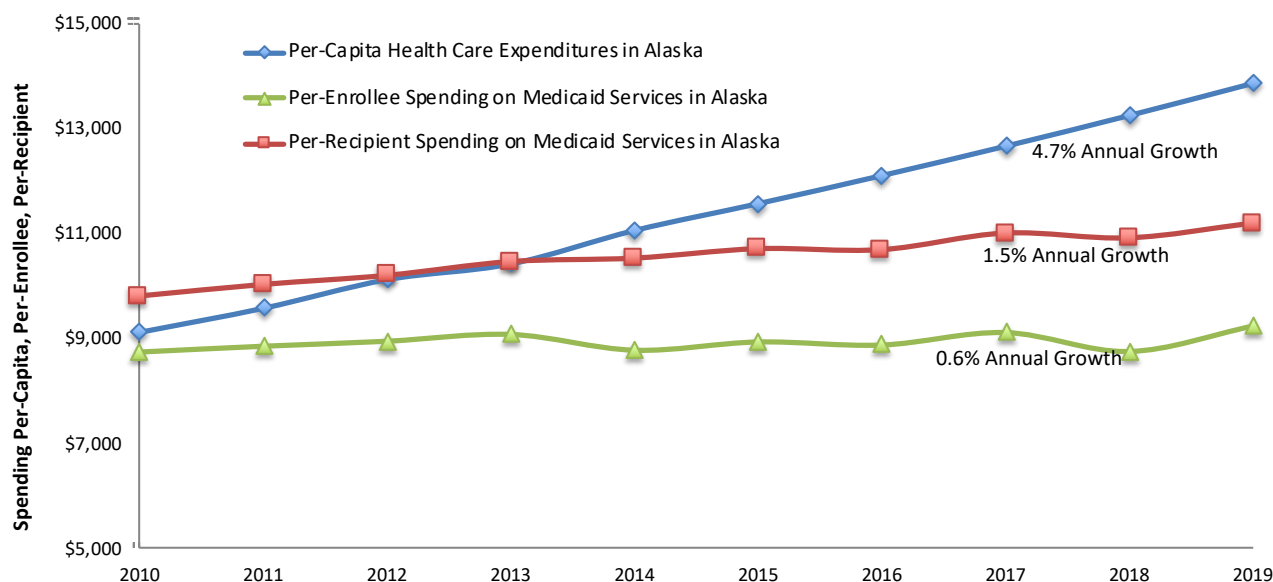
United States Census Bureau, "Health Insurance Coverage in the United States: 2018."

<https://www.census.gov/library/publications/2019/demo/p60-267.html>

²⁰ Ibid.

²¹ Ibid.

Figure 10: Per-Capita Spending on All Healthcare Services in Alaska and Per-Enrollee and Per-Recipient Spending on Medicaid Services



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group and the Kaiser Family Foundation (<https://www.kff.org/state-category/health-coverage-uninsured/>)

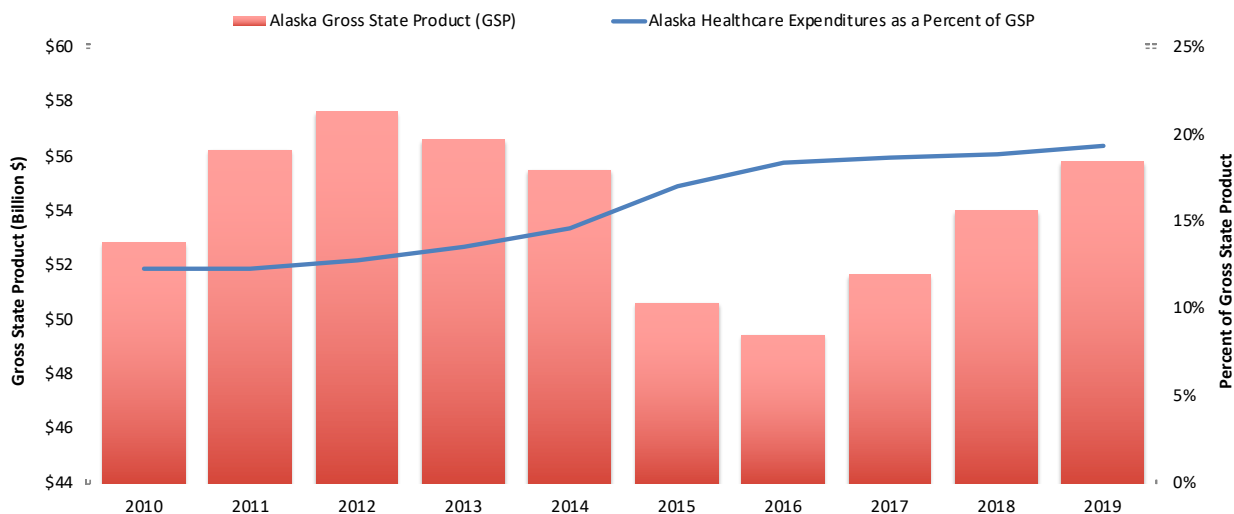
Medicaid Enrollment and the Economy

As an entitlement program that provides payment for healthcare services for low-income citizens, it stands to reason that enrollment in the Medicaid program and spending on Medicaid services is affected by local, regional, and national economic conditions. During periods of strong economic growth, labor force participation grows, average hours worked increases, and wages rise. Likewise, when the economy experiences a downturn, employment decreases, those still employed may work fewer hours, and wages for many employees may stagnate. At such times, individuals and families are more likely to qualify for Medicaid. It is unclear if Alaska is exiting the recession that began in late 2014 or 2015. Alaska’s annualized gross state product (GSP) for the first quarter of 2019 was 7.2 percent smaller in real terms than it was in 2012 when Alaska’s economy was at its peak. However, GSP grew 3.4 percent (on an annualized basis) between the first quarter of 2018 and the first quarter of 2019.

Figure 11 shows the Alaska GSP from CY2010 through CY2019 and healthcare spending in Alaska as a proportion of GSP. In CY2010, total healthcare expenditures were \$6.5 billion and accounted for 12 percent of Alaska’s GSP. In CY2018, total healthcare expenditures had surpassed \$10 billion and accounted for about 19 percent of GSP, which was nearly identical to the national rate. This rapid growth was due to contraction of Alaska’s overall economy – especially the value of oil and gas production – coinciding with strong

investment in the healthcare sector and growth in private and public spending on healthcare services.

Figure 11: Alaska Gross State Product and Healthcare Spending as a Percentage of GSP



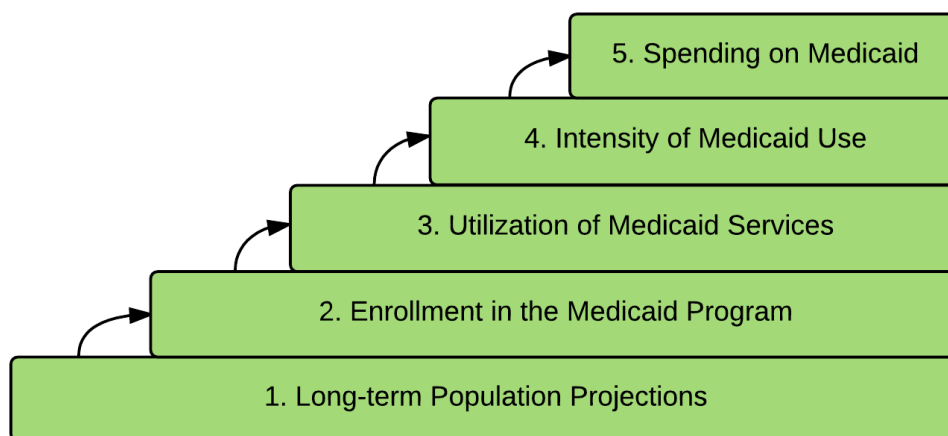
Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group and the U.S. Bureau of Economic Analysis.

Note: GSP estimated for 2019 based on first two quarters; assumes 3.4 percent growth rate between 2018 and 2019.

2 Overview of Projections: FY2020-FY2040

The long-term Medicaid forecast follows a highly structured modeling approach in which we develop annual estimates of spending on Medicaid services in five steps, with each successive step building on the results of the previous step.²² As Figure 12 shows, the foundation of the Medicaid spending forecast is the long-term projection of Alaska’s population, which, for this update, is based on the Alaska Department of Labor and Workforce Development’s (DOLWD) most recent population forecast.²³ In subsequent steps, we project enrollment in the Medicaid program, utilization of Medicaid services, intensity of use of Medicaid services, and finally, total spending on Medicaid. We summarize the results of each step of the long-term Medicaid forecasting in the same systematic fashion.

Figure 12: The Five Steps to Develop the Alaska Long-Term Medicaid Forecast



2.1 Long-Term Population Projections

The population of Alaska has changed substantially in the years since statehood. In 1960, one year after Alaska became a state, the population was 230,400,²⁴ and about one in five Alaskans (44,237) lived in Anchorage.²⁵ By the time Alaska started its Medicaid program

²² A detailed discussion of the analytical methods used to develop the forecast is contained in *Long-Term Forecast of Medicaid Enrollment and Spending in Alaska: Appendix of Methods*.

²³ Alaska Department of Labor and Workforce Development. *Alaska Population Projections 2017 to 2045*. June 2018. <http://live.laborstats.alaska.gov/pop/projections.cfm>

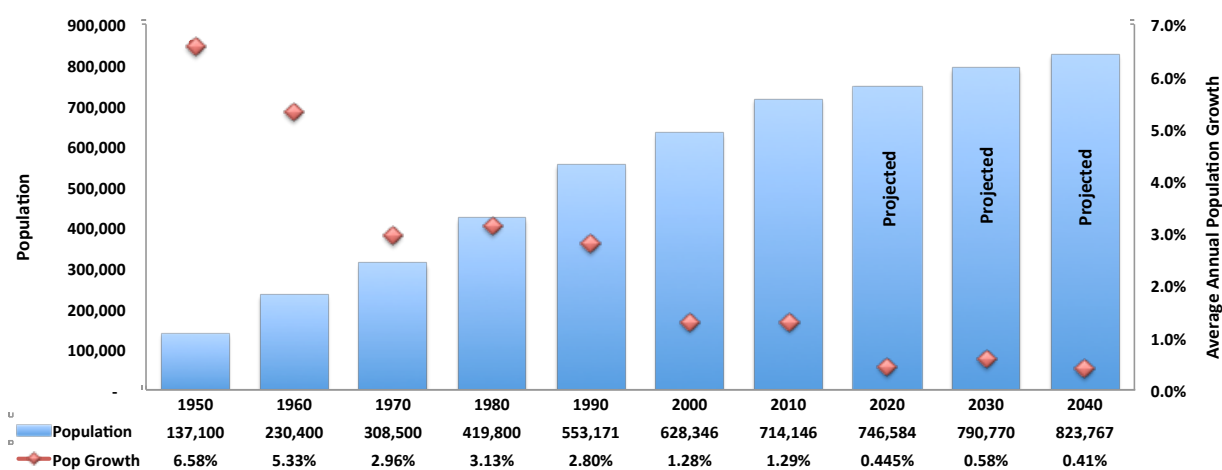
²⁴ Alaska Department of Labor and Workforce Development. *Alaska Population Overview: 2010 Census and 2011 Estimates*. October 2012. <http://live.laborstats.alaska.gov/pop/estimates/pub/1011popover.pdf>

²⁵ U.S. Department of Commerce Bureau of the Census. *1960 Census of Population, Advance Reports: General Social and Economic Characteristics*. 1962. <http://www2.census.gov/prod2/decennial/documents/15611103.pdf>

in 1972, the population of the state had increased to about 330,000.²⁶ Population continued to grow quickly through the 1970s and 1980s in part due to the construction of the Trans-Alaska Pipeline from 1975 to 1977 and other projects related to the oil industry.²⁷ By 1990, the state’s population had grown to 553,171, and two in five Alaskans (226,338) lived in Anchorage.²⁸

As Alaska’s population has grown, its rate of growth has continued to slow (see Figure 13). Between 1990 and 2010, population growth averaged just less than 1.3 percent per year, but slowed further to 0.45 percent per year between 2010 and 2017. The Alaska DOLWD projects population will grow by about 0.58 percent annually through 2030 and by 0.41 percent per year between 2030 and 2040.²⁹

Figure 13: Alaska's Population and Annual Growth Rates from 1950–2040



Source: U.S. Census Bureau; Alaska Department of Labor and Workforce Development

The Alaska DOLWD projects the distribution of residents by gender and age to change over the next two decades as the female population grows slightly faster than the male population and the overall population ages. While the ratio of males to females has moved closer to the national average over the past decades, there were still 106 males in Alaska for every 100 females in 2019; by 2040, the Alaska DOLWD projects there will be 104 males

²⁶ See the Alaska Department of Labor and Workforce Development’s report *Alaska Population Overview 2009 Estimates*, p. 13, available at <http://live.laborstats.alaska.gov/pop/estimates/pub/09popover.pdf>

²⁷ For more information on the impact of the Trans-Alaska Pipeline, see <http://alyeska-pipeline.com/TAPS/PipelineFacts>

²⁸ U.S. Department of Commerce Bureau of the Census. *1990 Census of Population and Housing: Population and Housing Unit Counts, Alaska*. 1992. <http://www.census.gov/prod/cen1990/cph2/cph-2-3.pdf>

²⁹ Alaska Department of Labor and Workforce Development. *Alaska Population Overview: 2010 Census and 2011 Estimates*. October 2012. <http://live.laborstats.alaska.gov/pop/estimates/pub/1011popover.pdf>

for every 100 females.³⁰ We expect this to have a small effect on the Medicaid program as adult females, who tend to incur higher average annual costs than adult males, enroll in the Medicaid program at a greater rate.³¹ In addition, the senior population is growing at a faster rate than the population as a whole and, though seniors enroll in Medicaid at a much lower rate than children and at a slightly lower rate than adults under 65 years of age, the per-enrollee costs associated with caring for seniors are higher than for children or adults under 65 years of age.

Table 2: Alaska’s Projected Population by Age Cohort for Selected Years 2020–2040

Age Group	2020	2025	2030	2035	2040	Avg. Annual Change
Children (0-19)	209,481	213,170	213,413	216,375	220,453	0.26%
Adults (20-64)	439,271	435,870	440,950	453,319	468,359	0.32%
Seniors (65+)	97,828	121,354	136,414	138,671	134,957	1.62%
Total Population	746,580	770,394	790,777	808,365	823,769	0.49%

Source: Analysis by Evergreen Economics of data from the Alaska Department of Labor and Workforce Development.

2.2 Enrollment in the Medicaid Program

Enrollment refers to the number of individuals who both meet the eligibility requirements for Medicaid and register to receive Medicaid services during a fiscal year – regardless of whether the individual receives Medicaid services during the fiscal year or not. There are three primary factors that determine growth in Medicaid enrollment: (1) population growth, (2) changes in the demographic characteristics of the population, and (3) changes in Medicaid eligibility requirements. For the purposes of this report, we assume that eligibility requirements as they exist today will remain constant over the 20-year projection period.

More than half of Alaska children were enrolled in the Medicaid program during all or some portion of FY2019, compared to only one in four adults under 65 years of age and one in seven senior Alaskans. Nevertheless, with components of the ACA going into effect in January 2014 – including Medicaid expansion in September 2015 – the focus of the Medicaid program has expanded to cover a much wider swath of the population. Since

³⁰ Ibid; nationally, there are 103 females for every 100 males.

³¹ There is little difference in average annual spending on Medicaid services for male and female children. For adults under 65 years of age, higher average annual spending on females is due primarily to pregnancy and post-pregnancy services. For seniors, higher average annual spending on females is due to a greater average lifespan of women and the high cost of senior care for Medicaid enrollees 85 years of age and older.

FY2016, the Alaska Medicaid program has covered more adults (of any age) than children, and we expect this to continue through FY2040.

Medicaid recipients refers to individuals enrolled in Medicaid that received any Medicaid services during a fiscal year regardless of the type or “amount” of services received. In developing the forecast, we project both enrollment and recipients. In presenting the results of the forecast, we consider both enrollees and recipients, but focus greater attention on recipients because – by definition – these are the Medicaid enrollees that are utilizing Medicaid services.

Between FY2005 and FY2010, enrollment in Medicaid grew on average by only 0.4 percent per year. The slow growth in overall enrollment was due entirely to a reduction in enrollment by children (-0.23 percent per year), while growth in the adults under 65 years of age cohort and the senior cohort increased by 1.8 percent and 2.0 percent per year, respectively. Medicaid enrollment grew by 4.1 percent per year between FY2010 and FY2015, due in part to a “snapback” response to enrollment declines for children that occurred in FY2008 and FY2009.

Medicaid enrollment increased rapidly between FY2014 and FY2019, due primarily to the introduction of the Affordable Care Act (ACA), which led to increases in Medicaid enrollment across the country. The ACA included changes to the Modified Adjusted Gross Income (MAGI) standard used to determine Medicaid and CHIP eligibility, which made it easier for individuals to qualify for either program. In addition, the insurance mandate in the ACA³² and the “no wrong door” feature of the federal healthcare exchange allowed consumers to complete a single streamlined application to determine eligibility for a subsidized health plan, CHIP, or Medicaid. In September 2015, the State of Alaska launched Medicaid expansion, which led to a substantial increase in enrollment of adults under 65 years of age. Alaska has also been in an economic recession since late 2014 or early 2015. Two recently published studies found that participation in and spending on Medicaid services increases during economic recessions.³³

We expect growth in Medicaid recipients to slow considerably through the projection period (see Table 3), as the effects of Medicaid expansion and other ACA-based changes to the Medicaid program will largely have already occurred. Over the next five years, we

³² For information on the ACA “individual mandate” to purchase health insurance, please see <http://kff.org/infographic/the-requirement-to-buy-coverage-under-the-affordable-care-act/>

³³ Benitez, J.A., V. Perez, and E. Seiber. "Medicaid as a Safety Net: Does Medicaid Generosity Mitigate the Effects of Unemployment During Economic Downturns?" Proceedings from the 7th Conference of the American Society of Health Economists, June 12, 2018.

Snyder, L., and R. Rudowitz. "Trends in State Medicaid Programs: Looking Back and Looking Ahead." The Kaiser Family Foundation, June 21, 2016.

expect the number of Medicaid recipients will increase on average by about 2 percent per year, but will increase much faster for seniors (6.2% per year).

Table 3: Average Annual Growth in Medicaid Recipients by Age Cohort

Age Cohort	FY2015-2020	FY2020-2025	FY2025-2030	FY2030-2035	FY2035-2040
Children (0-19)	3.0%	1.8%	1.0%	0.7%	0.5%
Working Age	16.4%	1.6%	1.1%	0.8%	0.6%
Seniors	4.5%	6.2%	4.0%	1.7%	0.4%
All Ages	8.6%	2.0%	1.3%	0.8%	0.5%

Source: Alaska Department of Labor and Workforce Development.

Nearly all children in Alaska *eligible* for Medicaid were enrolled in Medicaid at some point in FY2019. This represents more than half of all Alaska children. In comparison, one in four adults were enrolled in Medicaid in FY2019. It is likely that some eligible adults were not enrolled in Medicaid in FY2019 due to having health insurance from another source or, despite the insurance mandate provision of the ACA, were uninsured. Over the next 20 years, we expect growth in Medicaid enrollment to outpace growth in population for all age cohorts, but given the greater opportunity for growth in the adult population (20 and older), we anticipate more adults enrolling in Medicaid than children.

Table 4 shows the forecast for enrollment and recipients by age cohort through FY2040, with FY2015 as a benchmark (the year before Medicaid expansion). We expect Medicaid enrollment to reach 315,287 by FY2040 and recipients to reach 261,446 – nearly one in three Alaskans.

Table 4: Medicaid Enrollment and Recipients by Age Cohort for Selected Fiscal Years 2015–2040

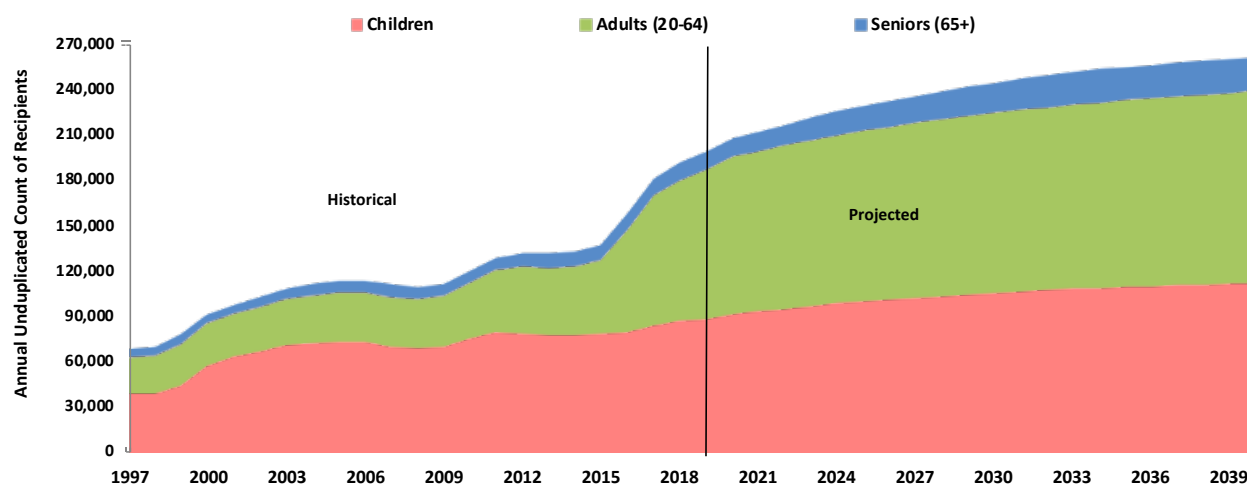
Age Cohort	Measure	2015	2020	2025	2030	2035	2040
Children (0-19)	Enrollees	94,799	110,714	120,956	127,192	131,824	134,953
	Recipients	79,725	92,596	101,429	106,682	110,572	113,210
Adults (20-64)	Enrollees	58,959	128,420	137,378	145,134	150,972	155,287
	Recipients	48,254	103,135	111,515	117,700	122,488	126,091
Seniors (65+)	Enrollees	11,189	14,097	18,856	22,871	24,705	25,046
	Recipients	9,790	12,199	16,461	20,035	21,749	22,145
Total Ages*	Enrollees	164,947	253,231	277,189	295,197	307,501	315,287
	Recipients	137,769	207,930	229,405	244,417	254,809	261,446

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Due to rounding, some totals may not precisely match the sum of components shown in table.

The number and distribution of Medicaid recipients by age has changed considerably over the past two decades and will continue to do so in the future (see Figure 14). The share of children as a percentage of all participants who received Medicaid (or Title XXI) services increased in the late 1990s and continued to increase until 2004, when children accounted for 67 percent of recipients. Growth in Medicaid recipients over this period was due in part to the introduction of Denali KidCare (DKC) in 1999, which expanded Medicaid eligibility for persons under 18 whose families met certain income requirements. In 2003, DKC eligibility standards were reduced, and between FY2004 and FY2007, the income eligibility requirements were not adjusted for inflation, resulting in some individuals losing eligibility for Medicaid.

Figure 14: Medicaid Recipients by Age Cohort, Annual Unduplicated Count



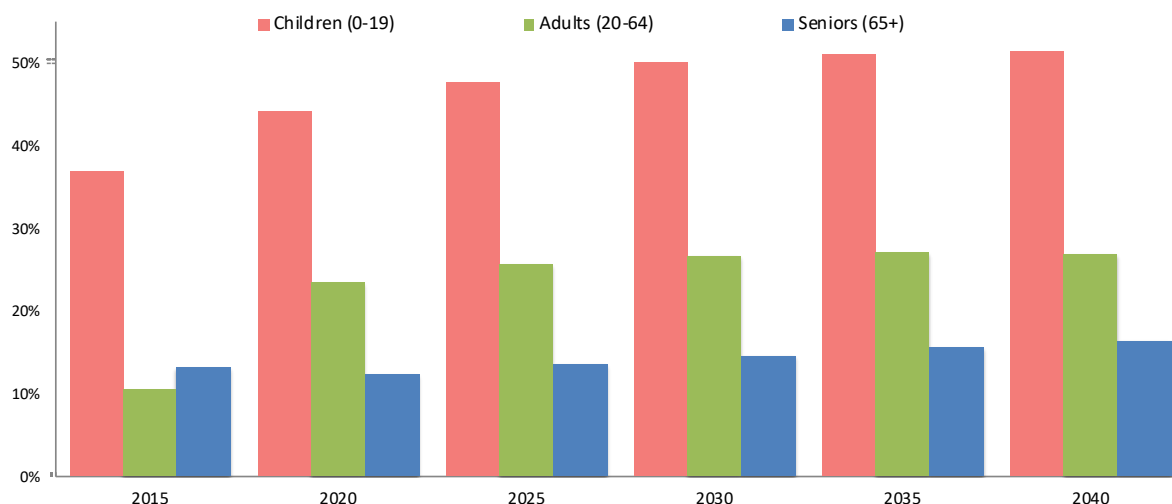
Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

With the rapid growth beginning in FY2016 in the number of recipients who are adults under 65 years of age, the proportion of Medicaid recipients who are children has since dropped. With slower projected growth in Alaska's population and Medicaid recipients over the next 20 years, we project the share of recipients that are children will slowly decrease to 43 percent by FY2040. The share of Medicaid recipients who are adults under the age of 65 was about 50 percent in FY2019. We expect this proportion to remain fairly steady over the projection period, decreasing only slightly to 48 percent by FY2040. In comparison, we project the senior cohort's share of Medicaid recipients to grow from about 6 percent in FY2019 to 8.5 percent by FY2040.

Across all age cohorts, the proportion of Alaskans receiving Medicaid services has grown, and we expect it to continue to grow throughout the projection period due to increases in the take-up rate for those eligible for Medicaid. Figure 15 shows the proportion of Alaska children, adults under 65 years of age, and seniors who were Medicaid recipients in FY2015 and projected to be recipients over the next 20 years. We project the proportion of

Alaskans receiving Medicaid services will continue to slowly grow between FY2020 and FY2040.

Figure 15: Medicaid Recipients as a Proportion of Alaska’s Population, FY2015 – FY2040



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Table 5 shows the forecast of enrollment and recipients by broad eligibility category. On a percentage basis, growth will be greatest for the *Aged or Disabled* eligibility group. Comparatively, we expect slower enrollment and recipient growth through Medicaid expansion and other eligibility categories.

Table 5: Medicaid Recipient for Selected Eligibility Groups FY2020 – FY2040

Eligibility Group	Measure	2020	2025	2030	2035	2040	Annual Growth
Aged or Disabled	Enrollees	32,892	37,959	42,260	44,857	46,227	1.72%
	Recipients	29,757	34,540	38,454	40,817	42,063	1.75%
Medicaid Expansion*	Enrollees	59,004	65,626	71,220	75,408	77,885	1.40%
	Recipients	44,329	48,034	52,129	55,194	57,007	1.27%
All Other Eligibilities	Enrollees	161,336	173,603	181,718	187,236	191,177	0.85%
	Recipients	146,164	159,668	167,874	173,514	177,394	0.97%
Total**	Enrollees	253,232	277,188	295,198	307,501	315,289	1.10%
	Recipients	220,250	242,243	258,457	269,526	276,465	1.14%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* An individual’s Medicaid eligibility can change during a fiscal year. The forecast of enrollment through Medicaid expansion is comprised of persons projected to be (a) enrolled in Medicaid through expansion at end of the fiscal year, or (b) enrolled in Medicaid through expansion during an earlier month of the fiscal year and not enrolled through traditional Medicaid during any month.

** Due to rounding, some totals may not precisely match the sum of components shown in table.

2.3 Utilization of Medicaid Services

The term “utilization” has multiple meanings in healthcare. For our purposes, we define utilization as the annual unduplicated count of Medicaid enrollees who received a particular Medicaid service during a fiscal year. We refer to a Medicaid enrollee who received a Medicaid service as a recipient, and we count an enrollee as a recipient only once per year for any given service category regardless of the number of times during the year the individual utilized the service or the intensity of the service received.³⁴ For the long-term Medicaid forecast, we project the number of Medicaid enrollees who will use each Medicaid service category – without regard for the intensity of use – during each of the 20 years of the forecast period.³⁵

In the first long-term Medicaid forecast completed in February 2006 and in each subsequent forecast, Medicaid services were organized into the same 20 Medicaid service categories. These categories are listed in Table 6 and are described in the appendix of this report.

Table 6: Service Category Designations Used in the Long-Term Medicaid Forecast

Dental	Inpatient Hospital	Pharmacy
DME ³⁶ / Supplies	Inpatient Psychiatric	Physician / Practitioner
EPSDT ³⁷	Lab / X-Ray	Residential Psychiatric / BRC ³⁸
Family Planning	Nursing Home	Therapy / Rehabilitation
HCB ³⁹ Waiver	Outpatient Hospital	Transportation
Health Clinic	Outpatient Mental Health	Vision
Home Health / Hospice	Personal Care	

Table 7 shows the five service categories projected to experience the greatest level of utilization through the projection period. We expect utilization of the Physician/Practitioner Services and Outpatient Hospital service categories to outpace overall growth in utilization, while we expect utilization of the Pharmacy, Dental, and Health Clinic service categories to grow at a slower rate.

³⁴ In any given year, 5 percent to 10 percent of Medicaid enrollees are not recipients. That is, though enrolled in the Medicaid program, they did not utilize any Medicaid services. We count an enrollee as a recipient if he or she used a Medicaid service that resulted in a paid claim.

³⁵ We consider “intensity of use” in the subsequent step of the long-term Medicaid forecast.

³⁶ Durable Medical Equipment

³⁷ Early and Periodic Screening, Diagnosis, and Treatment

³⁸ Behavioral Rehabilitation Centers

³⁹ Home and Community Based Waiver

Table 7: Most Frequently Utilized Medicaid Service Categories for Selected Fiscal Years

Service Category	2020	2025	2030	2035	2040	Annual Growth
Pharmacy	134,938	147,719	158,400	166,905	173,194	1.26%
Physician/Practitioner	134,460	150,430	163,821	174,441	182,406	1.54%
Outpatient Hospital	131,565	147,439	160,758	171,225	179,103	1.55%
Dental	95,869	105,708	113,405	119,195	123,382	1.27%
Health Clinic	49,385	53,702	57,252	60,101	62,235	1.16%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group; counts shown in the table represent the number of Medicaid enrollees who received services from the respective service category at least once during the fiscal year.

There is and we believe there will continue to be substantial variability among enrollees in the rate of service utilization, with approximately 5 percent to 10 percent of enrollees not utilizing any Medicaid services during a fiscal year and a small number of recipients utilizing 10 or more different service categories. Some of this variability is explained by age, with children utilizing on average two Medicaid service categories per year, adults under 65 years of age utilizing about four categories, and seniors utilizing on average just over five categories each year. Projected growth in the utilization of Medicaid services over the next 20 years is due in part to growth in enrollment, but is also a function of the greater healthcare needs of an aging Medicaid population.

In FY1997, the average number of Medicaid service categories utilized by a Medicaid enrollee was 2.3. In FY2018, each Medicaid enrollee utilized 3.2 service categories on average and, though slowing, we project that by FY2040, the average rate of service utilization will reach nearly 3.5 Medicaid service categories per enrollee.

2.4 Intensity of Use of Medicaid Services

While utilization refers to the number of different Medicaid service categories a recipient uses, intensity of use refers to the *amount* of a particular service a recipient receives. To estimate intensity of use, we analyzed spending per Medicaid enrollee for each of the 20 service categories for each fiscal year from 1997 through 2018. Over this period, Alaska and the rest of the U.S. experienced substantial healthcare price inflation, which averaged nearly 4 percent per year, but fluctuated year-to-year with a low of 2.4 percent in FY1998 to a high of 5.9 percent in FY2004. To isolate the effects of intensity of use, we removed the price effects associated with inflation, resulting in annual estimates of spending as if there were no increases in healthcare prices. With inflation removed, year-to-year differences in

average spending per Medicaid recipient represent changes in the intensity of service provided to recipients.⁴⁰

We used the resulting inflation-adjusted spending data to develop statistical models to explain intensity of use as a function of (1) demographic characteristics and (2) a time-trend. We then used the coefficients estimated in these models to predict intensity of use for each of the 20 service categories through FY2040. On a weighted average basis across the 20 service categories, we project intensity of use will increase on average by only about 0.45 percent per year through FY2040. It is worth noting that, while these estimates of average growth in the intensity of Medicaid services are very small relative to historical (and expected future) growth in Medicaid price inflation, separating the inflation component from the intensity of use component is challenging given the aggregate level at which healthcare price inflation is measured.⁴¹

2.5 Total Spending on Medicaid Services

The final step (see Figure 12) of the Alaska long-term forecasting model is to develop estimates of total spending for each Medicaid service category through FY2040. To do this, we first project the annual rate of healthcare price inflation for Alaska through FY2040. We then integrate these estimates of healthcare price growth into our annual estimates of growth in population (Step 1 of Figure 12), enrollment (Step 2), utilization (Step 3), and intensity of use (Step 4) to obtain a projection of total spending on Medicaid services for each year through FY2040. We project that total Medicaid spending will increase on average by 4.6 percent per year between FY2020 and FY2040 (see Table 8 and Figure 16), reaching \$5.8 billion by FY2040.

Table 8: Medicaid Spending by Age Cohort for Selected Fiscal Years (Millions \$)

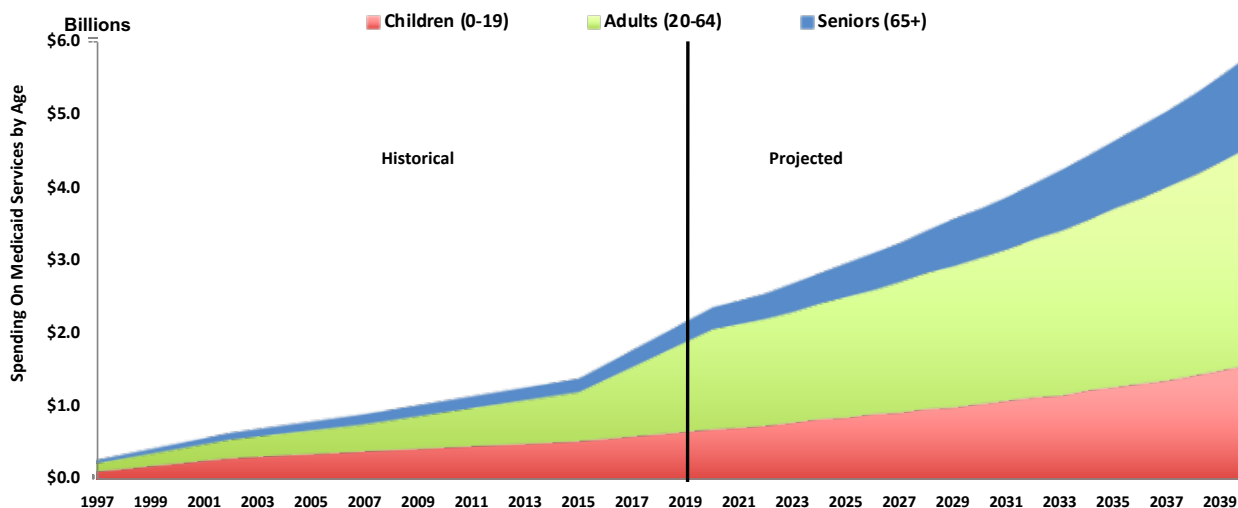
Age Group	2020	2025	2030	2035	2040	Annual Growth
Children (0-19)	\$696.2	\$859.9	\$1,041.4	\$1,265.4	\$1,563.8	4.1%
Adults (20-64)	\$1,383.3	\$1,661.3	\$2,017.5	\$2,457.9	\$2,995.1	3.9%
Seniors (65+)	\$303.4	\$466.5	\$678.5	\$934.6	\$1,250.5	7.3%
Total	\$2,382.9	\$2,987.7	\$3,737.4	\$4,657.8	\$5,809.3	4.6%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

⁴⁰ We used calendar year 2000 as the base year. The choice of base year does not impact the estimates of healthcare price inflation.

⁴¹ We relied on the Medical Care component of the All Urban Consumer Price Index for Anchorage as the measure of historical healthcare price inflation. www.bls.gov/cpi

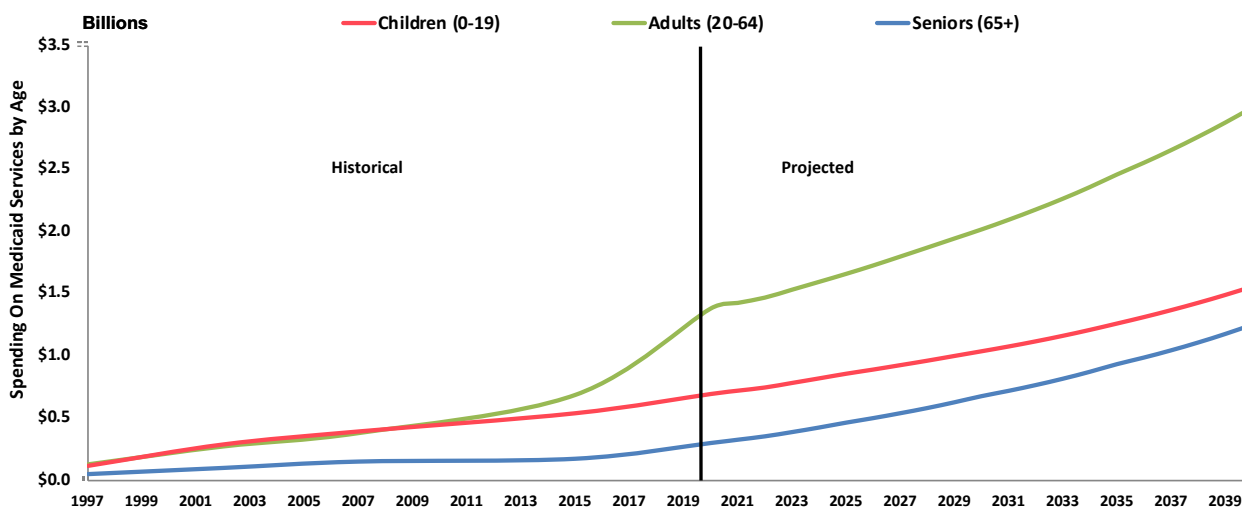
Figure 16: Total Spending on Medicaid Claims by Age Cohort FY2020–2040



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

We expect the annual rates of growth in Medicaid spending to differ for children, adults under 65 years of age, and seniors, and to generally decrease over the forecast period. Figure 17 shows historical and projected spending on Medicaid services by age group from FY1997 through FY2040. Through much of the historical period, total annual spending on children and adults under 65 years of age was about the same. However, by FY2013, the two trend lines began to diverge as spending on Medicaid services for adults under 65 years of age grew faster than spending on children.

Figure 17: Total Spending on Medicaid Services by Age Cohort, FY1997–2040

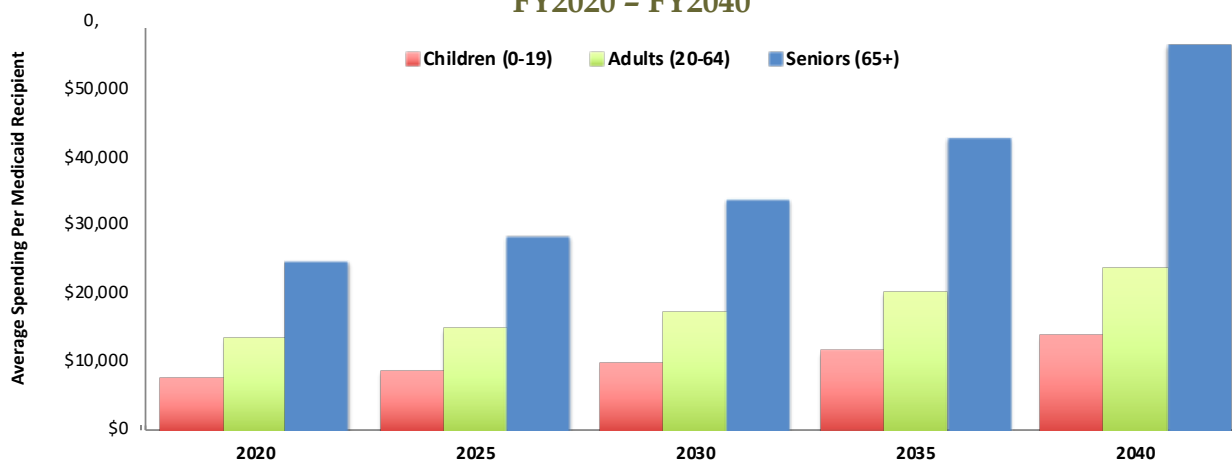


Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

With Medicaid expansion in September of 2015, the gap widened significantly, and we expect the gap in spending to continue to widen through the projection period. We also expect the rate of growth in spending on seniors to outpace spending on children. However, our projection of growth in spending on seniors is lower than in any previous long-term forecast due to cost containment efforts by the Alaska Legislature and DHSS over the past decade, slower growth in Alaska’s senior population as forecast by the Alaska DOLWD, and slowing growth in the rate of Medicaid enrollment by seniors.

Figure 18 shows projected spending per Medicaid recipient by age group for selected years. This figure is extremely informative, as it shows the important role age plays in the cost of healthcare services. For FY2020, we estimate the average per-recipient cost of Medicaid services for children and adults under 65 years of age will be about \$7,500 and \$13,400, respectively. Comparatively, the average cost per senior recipient will be about \$25,000 – nearly twice the average cost of an adult under the age of 65 and more than three times the average cost per child. By FY2040, we project average spending per child will be about \$13,800, the average cost per adult under the age of 65 will be \$23,800, and the average cost per senior recipient will be \$56,500.

Figure 18: Average Spending Per Recipient on Medicaid Services by Age Cohort, FY2020 - FY2040



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

As Alaska’s population ages, its Medicaid population also ages. Even without any increases in the number of persons enrolled in Medicaid, the cost of providing Medicaid services will rise due to the positive relationship between age and spending on healthcare services. In FY2000, the average age of a Medicaid enrollee in Alaska was 21 and the median age was 14; in FY2015, the average age was 23 and the median age was 16. We project that by FY2040, the average age of a Medicaid enrollee will be 29 and the median age will be 24.

Table 9 shows project spending by broad category of Medicaid services.⁴² We project that spending on Medical/Other and Long-Term Care services will outpace spending on Behavioral Health services and that Medical/Other services will slightly increase its share of overall spending on Medicaid services.

Table 9: Spending on Medicaid Services for Selected Fiscal Years (Millions \$)

Service	2015	2020	2025	2030	2035	2040	Annual Growth*
Medical/Other	\$842	\$1,537	\$1,936	\$2,425	\$3,049	\$3,866	4.7%
Long-Term Care	\$461	\$573	\$726	\$931	\$1,163	\$1,420	4.6%
Behavioral Health	\$171	\$272	\$326	\$382	\$446	\$523	3.3%
Total**	\$1,474	\$2,383	\$2,988	\$3,737	\$4,658	\$5,809	4.6%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Average annual growth rate between FY2020 and FY2040.

** Due to rounding, some totals may not precisely match the sum of components shown in the table.

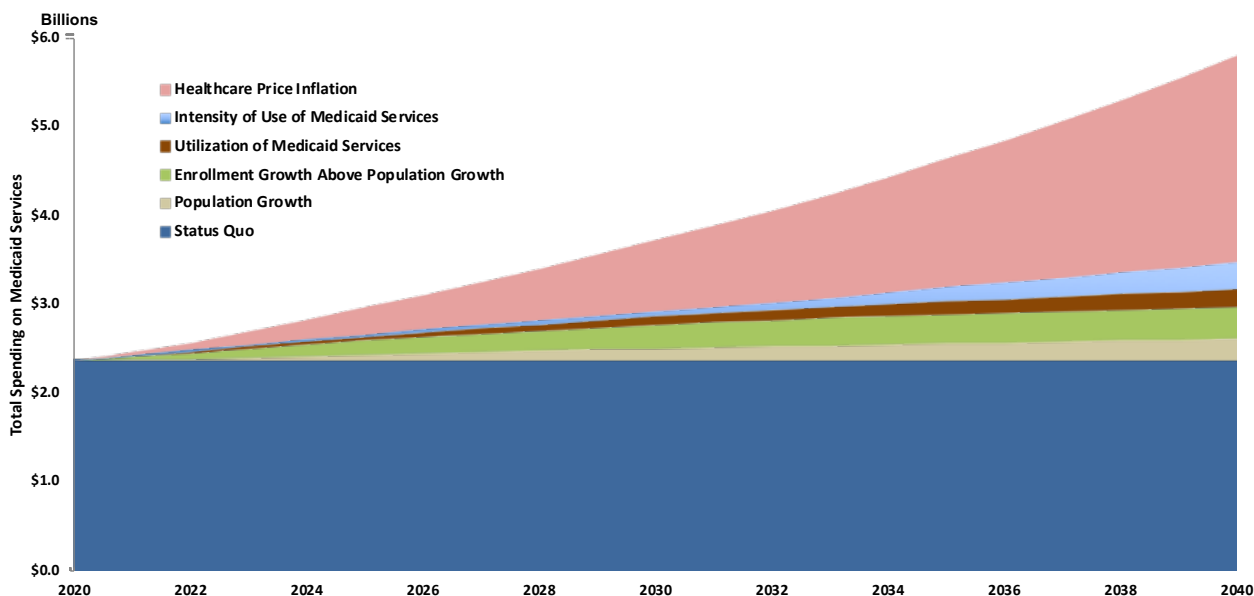
Figure 19 shows our forecast of total spending on Medicaid services by factor affecting spending growth. The figure begins with the *status quo*, which is simply the unchanging level of spending if there were no external or internal factors affecting spending over the next 20 years. The status quo assumes that everything about the Medicaid program remains unchanged from FY2020 to FY2040. Figure 19 then shows how the spending forecast builds off of this base. The components of spending growth are as follows:

- **Population Growth** represents the additional spending due to growth in the population under the assumption that the rate of Medicaid participation will remain the same for each of the 240 sub-populations considered in the forecast.
- **Enrollment Growth Above Population Growth** is the incremental effect on Medicaid spending due to growth in the rate at which Alaskans enroll in Medicaid.
- **Utilization of Medicaid Services** represents the incremental impact on spending associated with Medicaid enrollees using, on average, a greater number of Medicaid services.
- **Intensity of Use of Medicaid Services** represents the incremental impact on spending associated with greater use of specific Medicaid services possibly, but not necessarily, due to changes in medical technology or practices, or increases in the scope of medical services within a Medicaid service category.

⁴² See Table 16 in the appendix for a description of the services contained within each broad service category.

- **Healthcare Price Inflation** is the rate at which prices for medical services increase over time not related to changes in the scope or scale of the service provided.

Figure 19: Spending on Medicaid Services by Component of Growth



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

As Figure 19 shows, we expect healthcare price inflation to be the primary driver of spending growth in Alaska’s Medicaid program, representing nearly 40 percent of total spending and 67 percent of additional spending in FY2040. Healthcare price inflation may not directly impact what DHSS pays providers for services provided to Medicaid recipients in any given year. Rather, DHSS has processes in place to work with providers to periodically update the schedule of rates paid for Medicaid services. Rates typically adjust (generally upward) every one to four years, roughly in line with the rate of healthcare price inflation affecting providers.

Relative to healthcare price inflation, each of the other components of spending growth will have a relatively small impact on the Medicaid program over the next 20 years. Nevertheless, by FY2040, we project that growth in the population, growth in enrollment above population growth, and growth in utilization and intensity of Medicaid services will combine to increase spending on the Medicaid program by more than \$1.1 billion.

State Spending on Medicaid Services

So far, the focus of our spending analysis has been Alaska’s Medicaid program as a whole. However, the state and federal governments share the funding of the Medicaid program. The proportion of the cost of a Medicaid service that the state and federal governments are responsible for is a function of the eligibility status of each Medicaid recipient and, in certain cases, the facility in which the recipient receives care. For example, if a Medicaid

recipient who is also American Indian or Alaska Native and receives services through a facility of the Indian Health Service (IHS), including tribal health organizations, the federal government will pay 100 percent of the cost of the services. However, if that same Medicaid recipient received services from a non-IHS facility, then the federal government will likely pay a smaller portion of the cost of the service.⁴³

Each Medicaid service received by an enrollee is eligible for one or more of the following Federal Financial Participation (FFP) rates:

- Regular FMAP (Federal Medical Assistance Percentage):⁴⁴ 50 percent FFP
- Enhanced FMAP for CHIP:⁴⁵
 - 88 percent FFP through Federal Fiscal Year (FFY) 2019
 - 76.5 percent FFP beginning in FFY2020
 - 65 percent FFP beginning in FFY2021
- Breast and Cervical Cancer (BCC): 65 percent FFP
- Family Planning: 90 percent FFP
- Indian Health Service (IHS): 100 percent FFP
- Medicaid Expansion:⁴⁶
 - CY2016: 100 percent FFP
 - CY2017: 95 percent FFP
 - CY2018: 94 percent FFP
 - CY2019: 93 percent FFP
 - CY2020 and beyond: 90 percent FFP
- State-Only Services: 0 percent FFP

⁴³ In State Health Official letter #16-002 dated February 26, 2016, the Centers for Medicare and Medicaid Services (CMS) updated its policy regarding federal funding for services “received through” an IHS/tribal facility and furnished to Medicaid-eligible American Indians and Alaska Natives. This change in federal policy on tribal Medicaid reimbursement authorizes 100 percent federal funding for services provided to American Indian and Alaska Native (AI/AN) individuals eligible for Medicaid. The new federal policy allows the state to claim 100 percent federal reimbursement for Medicaid services provided to AI/AN Medicaid recipients in non-tribal facilities if the recipient’s tribal health organization has a care coordination agreement established with the non-tribal facility and there is documentation of a referral and an exchange of records for the care received. Projected spending by the State of Alaska in this forecast accounts for this change in policy by CMS.

⁴⁴ CMS sets each state’s FMAP rate based on a three-year average of state-level per capita personal income, ranked among states.

⁴⁵ Before federal fiscal year 2016, the enhanced FMAP rate was 65 percent.

⁴⁶ Recipients enrolled through Medicaid expansion who are also Indian Health Service beneficiaries will always receive 100 percent FFP for qualifying services (see footnote 43).

When a Medicaid service received by a Medicaid recipient is eligible for more than one FFP rate, DHSS receives the rate with the highest federal participation. The majority of Medicaid spending receives the Regular FMAP rate of 50 percent federal reimbursement; however, most of the growth in Medicaid spending has received either the Medicaid expansion or IHS FMAP rate. FFP rates are set at the federal level and, though they do change periodically, are largely outside of state control. We assume the FFP rates shown above will not change during the projection period. We project that spending on Medicaid services will grow on average by nearly 4.6 percent per year through FY2040, and that the rate of growth in spending will be roughly equal for the State of Alaska and the federal government (see Table 10).⁴⁷

Table 10: Projected State and Federal Spending on Medicaid Services (in Millions \$)

Fund Source	2020	2025	2030	2035	2040	Annual Growth
State and Other Match Funds	\$710.8	\$893.6	\$1,114.8	\$1,392.0	\$1,737.6	4.57%
Federal	\$1,672	\$2,094	\$2,623	\$3,266	\$4,072	4.55%
Total Spending*	\$2,383	\$2,988	\$3,737	\$4,658	\$5,809	4.56%

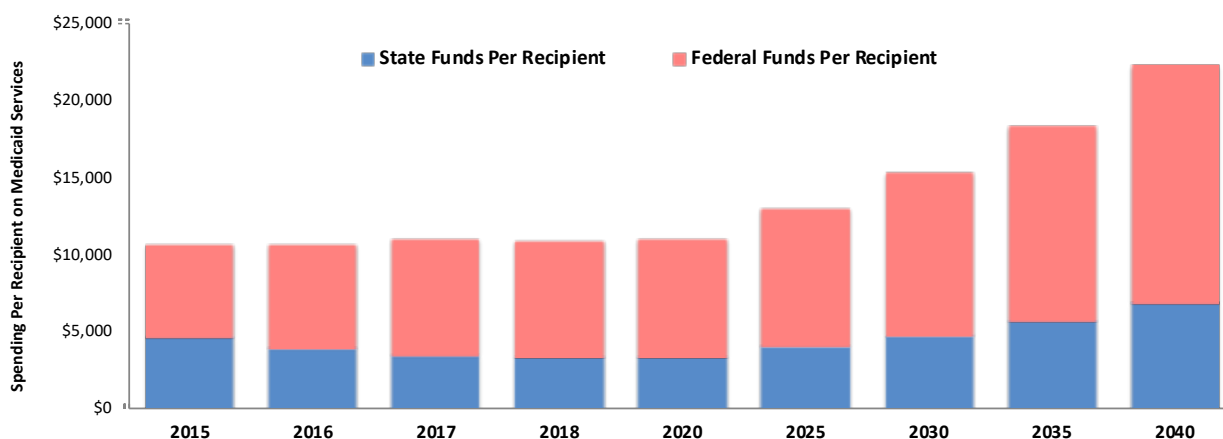
Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Due to rounding, some totals may not precisely match the sum of components shown in table.

Figure 20 shows recent actual and projected future average spending per Medicaid recipient. Between FY2015 and FY2018, spending per Medicaid enrollee was basically flat, and the proportion paid with state general funds actually decreased. Over the next 20 years, we project average spending per recipient will increase by about 3.4 percent per year due primarily to healthcare price inflation and the aging of Alaska’s population.

⁴⁷ This is despite expected ongoing savings to the State of Alaska associated with (a) the shifting of some services received by AI/AN adults enrolled through Medicaid expansion to the 100 percent federal IHS match rate, and (b) a change in CMS policy regarding care coordination agreements established between tribal health organizations and non-tribal facilities.

Figure 20: Average State and Federal Spending Per Medicaid Recipient by Fiscal Year*



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.
* FY2015 – FY2018 are actuals, FY2025 – FY2040 are projected.

In FY2019, the average per-recipient rate of federal financial participation was nearly 71 percent. We project that even with the decrease in the rate of federal participation for services provided to Medicaid recipients enrolled through expansion and the decrease in the enhanced FMAP for those enrolled through CHIP from the current 88 percent FFP back to 65 percent FFP, the overall rate of federal participation for the Medicaid program will be about 69 percent by 2040.⁴⁸

Other Medicaid Payments and Offsets

Throughout this report, we have focused on enrollment in the Medicaid program, utilization and intensity of use of Medicaid services, and spending on services provided to Medicaid recipients. There are, however, other payments associated with the Medicaid program that are not directly tied to services provided to individual recipients. These other costs can be broadly classified into two categories:

1. Premium payments for Medicare Part A and Part B; and
2. Supplemental Hospital Payments including disproportionate share hospital (DSH) and upper payment limit programs paid to qualifying hospitals that serve a large number of Medicaid or uninsured individuals, continuing care agreement payments, and tribal dental encounter payments made to IHS and tribal clinics.

The share of total Medicaid spending attributed to these other payments varies from year to year, but has trended downward over the past 14 years. For example, in FY2005, other costs and payments accounted for 13 percent of total Medicaid spending. In more recent

⁴⁸ In federal fiscal years 2016 through 2019, the CHIP matching rate was increased by 23 percentage points for all states, ranging from 88 percent to 100 percent.

years, these other payments have accounted for around 7 percent of total Medicaid spending. In addition, there are offsetting recoveries such as third-party liability collections and drug rebates, which are credited to the Medicaid program and are roughly equal to about 2 percent of annual spending on Medicaid services.

It is likely that the Medicaid program will experience more changes in the future, and payments allowed by CMS today may be disallowed in later years.⁴⁹ DSH payments were supposed to be phased out with implementation of the ACA, but this has not happened and likely will not happen in the near future. As an estimate of the combined impact of other Medicaid payments and offsetting recoveries in the future, we increase the annual forecast of spending on Medicaid services by 5 percent (see Table 11).

Table 11: Total Projected Medicaid Spending, FY2020 – FY2040

		2020	2025	2030	2035	2040
Spending on Medicaid Claims	Federal	\$1,804	\$2,272	\$2,826	\$3,523	\$4,418
	State Match	\$677	\$853	\$1,070	\$1,335	\$1,663
	Total	\$2,481	\$3,125	\$3,896	\$4,858	\$6,081
Other Medicaid Payments	Federal	\$62	\$78	\$97	\$121	\$152
	State Match	\$62	\$78	\$97	\$121	\$152
	Total	\$124	\$156	\$195	\$243	\$304
Total Spending on Medicaid	Federal	\$1,866	\$2,350	\$2,924	\$3,644	\$4,570
	State Match	\$739	\$931	\$1,167	\$1,457	\$1,815
	Total*	\$2,605	\$3,281	\$4,091	\$5,101	\$6,385

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Due to rounding, some totals may not precisely match the sum of components shown in table.

2.6 Spending on Medicaid Enrollees with Chronic Conditions

Generally speaking, Alaska’s healthcare system, like healthcare systems across the U.S., was organized to provide acute medical care.⁵⁰ However, throughout the U.S., increasing numbers of people suffer from one or more chronic diseases or conditions that require ongoing medical care along with educational programs and training to assist them in

⁴⁹ FairShare and ProShare are two examples of supplemental payment programs that have been discontinued in recent years.

⁵⁰ National Research Council (US); Institute of Medicine (US); Woolf SH, Aron L, editors. *U.S. Health in International Perspective: Shorter Lives, Poorer Health*. Washington, DC: National Academies Press (US); 2013. 4, Public Health and Medical Care Systems. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK154484/>

managing their chronic condition(s).⁵¹ The U.S. National Center for Health Statistics defines chronic conditions as diseases or other medical conditions lasting three months or more.⁵² The Centers for Disease Control (CDC) defines chronic conditions as those that last one or more years and require ongoing medical attention or limit activities of daily living or both.⁵³

Using data from a national survey on health care expenditures, researchers at the RAND Corporation estimate that 59 percent of U.S. adults have one or more chronic conditions and that the healthcare services they utilize constitute up to 90 percent of healthcare spending in the U.S.⁵⁴ In March 2017, the Alaska Division of Public Health (DPH) engaged Evergreen Economics to analyze the cost of eight chronic conditions on the Alaska Medicaid program.⁵⁵ In that study, we analyzed the prevalence and cost associated with the following chronic conditions of particular interest to DPH at that time: cancer, diabetes, heart disease, injuries from falls, obesity, opioid abuse, stroke, and tobacco use. Key findings from that analysis included:

- Nearly all (97%) of the Medicaid beneficiaries treated for one or more of the eight chronic conditions were adults 18 years of age or older.
- The likelihood that a Medicaid beneficiary is treated for one or more of the eight chronic conditions increases with age.
- Adult beneficiaries treated for one of the eight chronic conditions represent only 18 percent of all adult Medicaid beneficiaries, but account for 47 percent of spending on Medicaid services for adults (\$565 million of \$1.2 billion).
- An adult beneficiary diagnosed with one or more of the eight chronic conditions incurred on average \$30,000 in Medicaid services in FY2016.

⁵¹ (a) Boren, Suzanne A., Karen A. Fitzner, Pallavi S. Panhalkar, and James E. Specker. 2009. "Costs and Benefits Associated with Diabetes Education: A Review of the Literature." *The Diabetes Educator* 35: 72-96. (b) de Bruin, Simone R., Richard Heijink, Lidwien C. Lemmens, Jeronen N. Struijs, Caroline A. Baan, 2011, "Impact of disease management programs on healthcare expenditures for patients with diabetes, depression, heart failure or chronic obstructive pulmonary disease: A systematic review of the literature." *Health Policy* 101: 105-121. (c) Freeman, Robert, Kristina Lybecker, and D. Wayne Taylor. 2011. "The Effectiveness of Disease Management Programs in the Medicaid Population." Hamilton, Ontario: The Cameron Institute.

⁵² National Health Council. "About Chronic Conditions." <https://nationalhealthcouncil.org/wp-content/uploads/2019/12/AboutChronicDisease.pdf>

⁵³ <https://www.cdc.gov/chronicdisease/about/index.htm>

⁵⁴ Irving, Doug. "Chronic Conditions in America: Price and Prevalence." *RAND Review*. Santa Monica, CA: RAND Corporation, July 12, 2017. <https://www.rand.org/blog/rand-review/2017/07/chronic-conditions-in-america-price-and-prevalence.html>

⁵⁵ A comprehensive description of Evergreen's analytical approach and findings are provided in *The Cost of Eight Chronic Conditions on Alaska's Medicaid Program*, submitted to DHSS on October 18, 2017. http://dhss.alaska.gov/dph/Chronic/Documents/Publications/2017_CostOfChronicConditions_EvergreenEconomics_web.pdf

- An adult beneficiary *not* diagnosed with any of the eight chronic conditions incurred on average \$7,700 in Medicaid services in FY2016.

Given the sizable impact that just these eight chronic conditions have on spending on Medicaid services, DHSS directed Evergreen Economics to integrate into the long-term Medicaid forecast spending on chronic conditions. This update to the long-term forecast represents the first projection of spending on Medicaid services for enrollees diagnosed as having one or more chronic conditions.

Identifying Medicaid Beneficiaries with a Chronic Condition

We analyzed claims data from the Alaska Medicaid Management Information System (MMIS) to identify Medicaid beneficiaries that had a paid claim that included a diagnosis code indicating the beneficiary received treatment for one of the chronic conditions listed in Table 12 during FY2018. There were nearly 11.7 million Medicaid claim records for services provided to beneficiaries in FY2018. Each record corresponds to an individual billable service provided by a hospital, health clinic, or other provider of Medicaid services. Many, but not all, MMIS records also include a medical diagnostic code assigned by a healthcare provider, which indicates the medical reason for the service. We examined the diagnosis code for each Medicaid claim in FY2018 to identify if the service was associated with any of the chronic conditions listed in Table 12.

Table 12: Chronic Conditions Considered in Long-Term Forecast

1	Acquired Hypothyroidism	29	Autism Spectrum Disorders
2	Heart Attack / Ischemic Heart Disease	30	Cerebral Palsy
3	Alzheimer's Disease	31	Cystic Fibrosis
4	Anemia	32	Drug Use Disorders including Opioids
5	Asthma	33	Epilepsy
6	Atrial Fibrillation	34	Fibromyalgia / Chronic Pain and Fatigue
7	Benign Prostatic Hyperplasia	35	HIV AIDS
8	Cataract	36	Intellectual Disabilities
9	Chronic Kidney Disease	37	Learning Disabilities
10	COPD / Bronchiectasis	38	Leukemias / Lymphomas
11	Depression / Depressive Disorders	39	Liver Disease, Cirrhosis, Other Liver Conditions
12	Diabetes	40	Migraine / Chronic Headache
13	Glaucoma	41	Mobility Impairments
14	Heart Failure	42	Multiple Sclerosis / Transverse Myelitis
15	Hip or Pelvic Fracture	43	Muscular Dystrophy
16	Hyperlipidemia	44	Obesity
17	Hypertension	45	Developmental Delays
18	Osteoporosis	46	Peripheral Vascular Disease (PVD)
19	Rheumatoid Arthritis / Osteoarthritis	47	Personality Disorders / Psychotic Disorders
20	Stroke / Transient Ischemic Attack	48	Ulcers
21	Breast Cancer	49	Sensory - Blindness and Visual Impairment
22	Colorectal Cancer	50	Sensory - Deafness and Hearing Impairment
23	Prostate Cancer	51	Spina Bifida / Congenital Anomalies Nervous System
24	Lung Cancer	52	Spinal Cord Injury
25	Endometrial Cancer	53	Tobacco Use

26	ADHD / Hyperkinetic Syndrome	54	Traumatic Brain Injury
27	Alcohol Use Disorders	55	Viral Hepatitis
28	Anxiety Disorders including PTSD		

Each chronic condition is identified by one or more International Classification of Diseases (ICD) diagnosis codes. The ICD codes are updated periodically, with the most recent update occurring on October 1, 2015 with the conversion from ICD-9 to ICD-10.⁵⁶ For each chronic condition, we relied on the CMS Chronic Conditions Data Warehouse to determine which ICD-10 codes indicated the respective chronic condition. This approach to identifying the presence of a chronic condition represents a limitation in the study in that we likely *underestimate* the prevalence of each chronic condition within the Medicaid population because we only observe a beneficiary as having a chronic condition if (a) he or she receives treatment for the condition through the Medicaid program and (b) the care facility assigns a diagnosis code indicating the beneficiary received treatment for the chronic condition.

In FY2018, there were approximately 6.5 million claims and nearly 11.7 million claim lines where each claim line represents a unique procedure, as well as pharmacy prescriptions or other medically prescribed items provided to a Medicaid beneficiary.⁵⁷ In FY2018, nearly 90 percent of Medicaid claims were composed of a single claim line, while a very small proportion (1.8%) were composed of 10 or more claim lines. In 2018, nearly 40 percent of Medicaid claims in the MMIS did not include a diagnosis code. Most of these claims – three out of five – were for pharmacy services, which may or may not be associated with a chronic medical condition.⁵⁸

Evergreen Economics used the following criteria to define a Medicaid beneficiary as having one of the 55 chronic conditions:⁵⁹

- The Medicaid beneficiary had at least one Medicaid claim in FY2018 with a diagnosis code specifying the chronic condition as defined in the CMS Chronic Conditions Data Warehouse; and
- The Medicaid beneficiary incurred at least \$2,000 in Medicaid costs for services received during FY2018.

⁵⁶ Note: The full acronyms are ICD-9-CM and ICD-10-CM, where “CM” stands for Clinical Modification. It is a common practice to drop the “-CM.” ICD-10 codes provide greater specificity about the medical encounter; there are approximately 68,000 ICD-10 codes.

⁵⁷ Procedures include direct medical services and non-medical services such as transportation to a medical center, personal care services, and hospital stays.

⁵⁸ It is our understanding that diagnosis codes associated with pharmacy claims are maintained in a database not accessible through the MMIS.

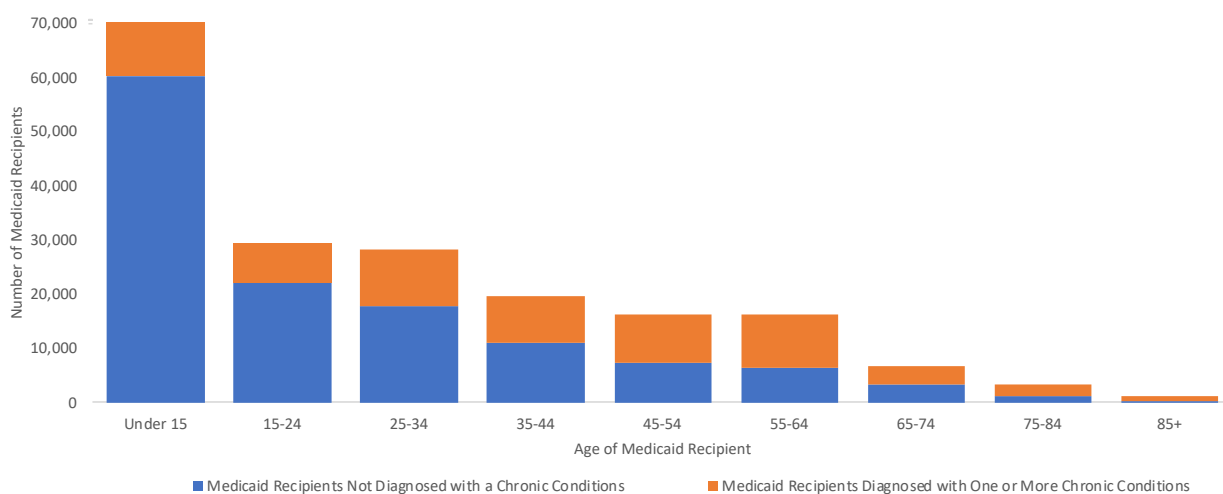
⁵⁹ These criteria were developed by Evergreen Economics specific for this analysis.

In FY2018, the unduplicated count of Medicaid enrollees was 238,398. Applying these criteria, we identified 61,672 Medicaid beneficiaries as being diagnosed with one or more chronic conditions in FY2018.

Characteristics of Beneficiaries with Chronic Conditions

Figure 21 shows the distribution of Medicaid recipients by age and whether the recipient was diagnosed with one or more chronic conditions. The prevalence of being diagnosed with a chronic condition increases with age. Children under 15 years of age constituted nearly 37 percent of the Medicaid recipients in FY2018, but only about 16 percent of recipients with a diagnosed chronic condition.

Figure 21: Distribution of Medicaid Recipients by Age and Diagnoses of One or More Chronic Conditions



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

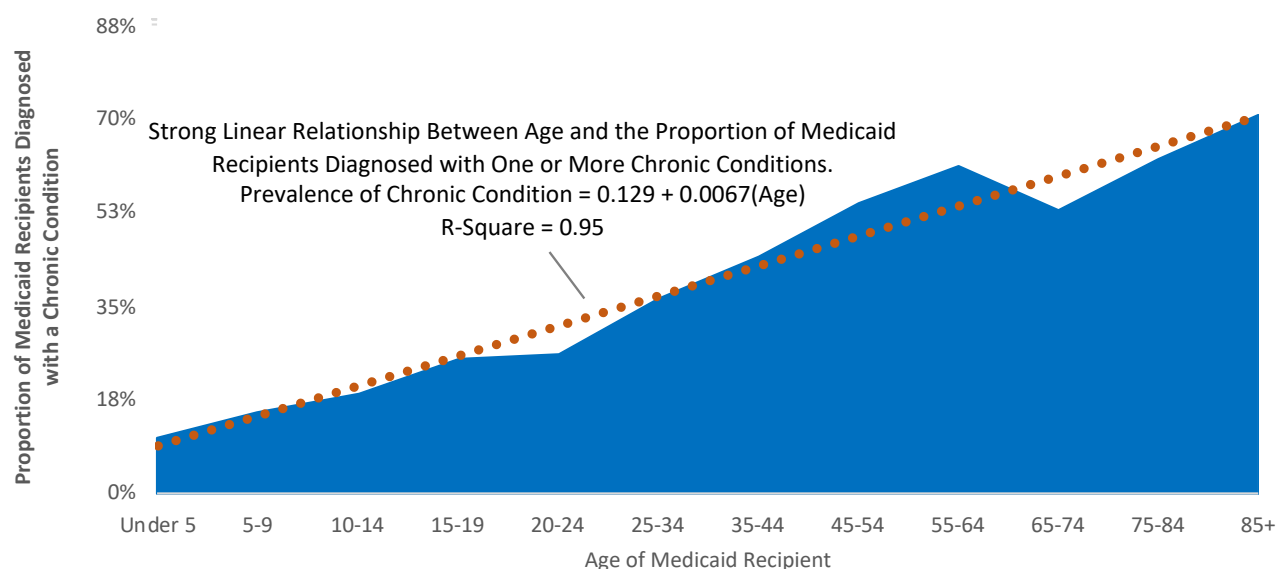
The prevalence of chronic conditions is similarly low for adults 20 to 24 years of age, but then increases substantially for adults 25 years of age and older. This finding is consistent with other studies that have found that the prevalence of chronic disease increases with age and/or is linked to the aging process.⁶⁰ Nearly 60 percent of Medicaid recipients 65 years of age or older were diagnosed with a chronic condition in FY2018.

Figure 22 shows more clearly the relationship between the age of a Medicaid recipient and the prevalence of chronic conditions. Less than 10 percent of children under five years of age were diagnosed with a chronic condition in FY2018, while 71 percent of adults 85 years of age or older were diagnosed with one or more chronic conditions. Included in Figure 22 is a linear trend line that quantifies the strong linear relationship between age

⁶⁰ See, for example, "Multiple Chronic Conditions Among Adults aged 45 and Over: Trends Over the Past 10 Years," <https://www.cdc.gov/nchs/products/databriefs/db100.htm>

and prevalence of a chronic condition diagnosis.⁶¹ The “slope” of this trend line is 0.0067, which indicates that (on average) each year of age increases the prevalence of being diagnosed with a chronic condition by 0.67 percent percentage points, holding all other factors constant. This is not to say that age necessarily causes chronic conditions, but rather age is related (and may be a contributing factor) to the increased prevalence of chronic conditions. Some chronic conditions, such as dementia and osteoporosis, are directly attributable to aging, while many other chronic conditions are age-related, but substantially impacted by family genetics, environmental factors, and lifestyle.

Figure 22: Proportion of Recipients with One or More Diagnosed Chronic Conditions



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

⁶¹ The R-square for this linear relationship is 0.976, which indicates that about 98 percent of the variation in the prevalence of a diagnosis of a chronic condition is explained by variation in the age of the Medicaid enrollee.

As is discussed earlier in this report (see, for example, Figure 18), average spending per Medicaid recipient increases with age. This is primarily due to the increasing prevalence of chronic conditions as an individual ages. Table 13 shows average spending per recipient by age for *all* Medicaid recipients (column b). While the relationship is not perfect, column b shows a strong positive relationship between age and spending on Medicaid services. In comparison, column c shows that for Medicaid recipients *without a diagnosis of a chronic condition*, average spending drops after the Under 5 age cohort and is essentially flat through the 65 – 74 age group. Across all ages, average spending per Medicaid recipient *without a diagnosis of a chronic condition* is much lower than the average spending for all enrollees. On average, the difference is \$7,060 (\$10,951 - \$3,891 = \$7,060).

Column d of Table 13 shows average spending per Medicaid recipient diagnosed with one or more chronic conditions. On average, spending on Medicaid services for a recipient with one or more chronic condition diagnoses is nearly seven times greater than for a Medicaid enrollee *without a diagnosis of a chronic condition* (\$25,699 versus \$3,891). Column e shows the incremental cost of chronic conditions per enrollee by age. These incremental costs represent how much additional Medicaid services are required by recipient with one or more chronic conditions relative to recipients *without a diagnosis of a chronic condition*.

Table 13: Spending Per Recipient on Medicaid Services and Incremental Cost of Chronic Conditions, FY2018

a.	b.	c.	d.	e.
Age of Recipient	Average Spending Per Medicaid Recipient			Incremental Cost of Chronic Condition (d – c)
	All Recipients	Without a Diagnoses for a Chronic Condition	One or More Chronic Condition Diagnoses	
Under 5	\$7,656	\$5,510	\$26,000	\$20,490
05-09	\$5,065	\$2,765	\$17,932	\$15,167
10-14	\$6,939	\$2,688	\$25,311	\$22,623
15-19	\$10,023	\$3,247	\$30,550	\$27,302
20-24	\$9,178	\$4,310	\$22,907	\$18,597
25-34	\$11,284	\$4,395	\$23,256	\$18,861
35-44	\$12,281	\$3,604	\$23,226	\$19,622
45-54	\$15,403	\$3,525	\$25,191	\$21,666
55-64	\$17,677	\$3,590	\$26,778	\$23,188
65-74	\$14,915	\$3,101	\$25,376	\$22,275
75-84	\$26,357	\$7,828	\$37,759	\$29,931
85+	\$48,105	\$20,100	\$60,632	\$40,532
All Recipients	\$10,951	\$3,891	\$25,699	\$21,635

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Table 14 shows the total incremental cost of chronic conditions by age cohort, which is computed by multiplying the per-enrollee incremental costs by the number of recipients within each age cohort diagnosed with one or more chronic conditions. Total spending on Medicaid services in FY2018 for *all* Medicaid recipients was \$2.09 billion. Of this, we estimate that \$1.33 billion represents the total incremental cost of providing Medicaid services to recipients diagnosed with one or more chronic conditions.

Table 14: Total Incremental Cost of Chronic Conditions on Medicaid Spending, FY2018

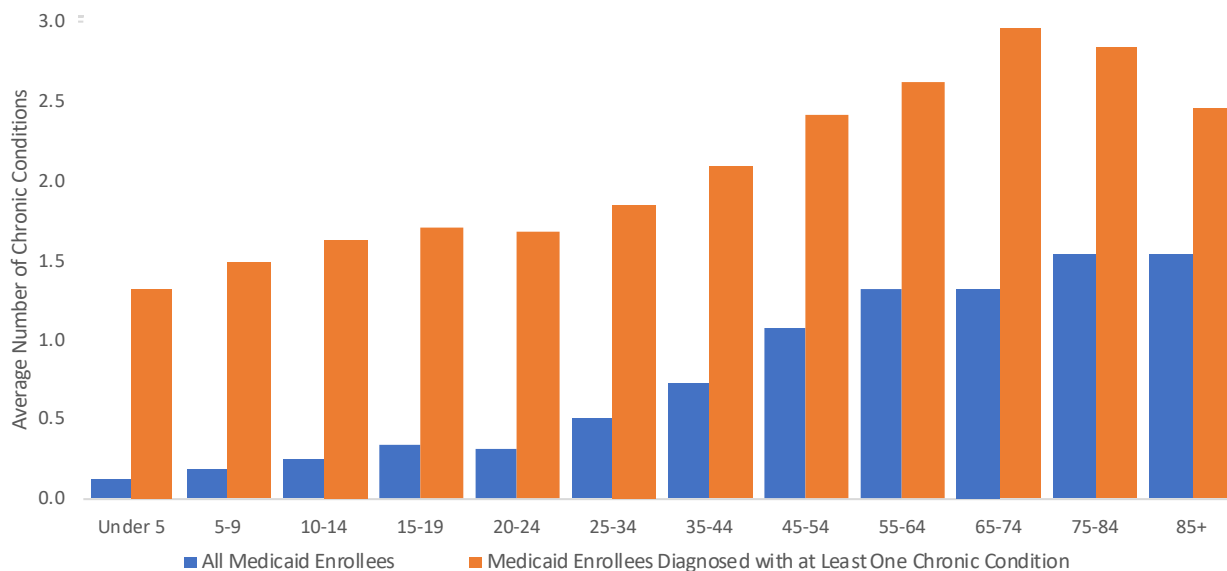
a.	e.	f.	g.
Age of Recipient	Incremental Cost of Chronic Conditions Per Recipient	Recipients with One or More Diagnosed Chronic Conditions	Total Incremental Cost of Chronic Conditions (e * f)
Under 5	\$20,490	2,696	\$55,239,805
05-09	\$15,167	3,538	\$53,659,227
10-14	\$22,623	3,910	\$88,457,294
15-19	\$27,302	4,409	\$120,376,024
20-24	\$18,597	3,084	\$57,353,246
25-34	\$18,861	10,167	\$191,758,106
35-44	\$19,622	8,646	\$169,651,690
45-54	\$21,666	8,768	\$189,968,451
55-64	\$23,188	9,913	\$229,865,085
65-74	\$22,275	3,614	\$80,502,220
75-84	\$29,931	1,997	\$59,772,106
85+	\$40,532	930	\$37,695,156
All Recipients	\$21,635	61,672	\$1,334,298,408

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Figure 23 shows the average number of chronic conditions per Medicaid enrollee (blue bars) and the average number of chronic conditions per Medicaid enrollee diagnosed with at least one chronic condition (orange bars). Except for a slight dip for the 20-24 age cohort, the average number of diagnosed chronic conditions consistently increases with age for all Medicaid enrollees, reaching a maximum of 1.53 chronic conditions on average for enrollees 75 years of age or older. For Medicaid enrollees diagnosed with any chronic condition, the average number of diagnosed chronic conditions also tends to increase with age, reaching a peak of about three chronic conditions for those in the 65-75 age cohort, before declining. Referred to as co-chronic or multiple-chronic conditions, it is well documented in the literature that the prevalence of co-chronic conditions increases with

age.⁶² The data are not clear as to why the average number of chronic conditions declines after the 65-74 age cohort (for Medicaid enrollees with at least one chronic condition). However, many of these chronic conditions are associated with increased mortality and, therefore, Figure 23 may show reduced survival rates beyond the 65-74 age cohort for Medicaid enrollees with at least one chronic condition.

Figure 23: Average number of Diagnosed Chronic Conditions by Age, FY2018



Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Table 15 shows the distribution of Medicaid recipients by the number of diagnosed chronic conditions, the average spending per recipient, and total spending on all recipients. Sixty-eight percent of Medicaid recipients have no diagnosed chronic conditions and account for only 24 percent of total spending on Medicaid services. In comparison, about 14 percent of recipients have one diagnosed chronic condition and account for just over 23 percent of spending; 8.4 percent of Medicaid recipients have two diagnosed chronic conditions but account for nearly 20 percent of spending on Medicaid services. Average spending per recipient with one diagnosed chronic condition is just over six times greater than the average spending for recipient with no diagnosed chronic conditions. For Medicaid recipients with two diagnosed chronic conditions, average spending per recipient is nine times greater.

⁶² See, for example, Adams ML. "Differences Between Younger and Older US Adults with Multiple Chronic Conditions." *Preventing Chronic Disease* 2017, Vol. 14. DOI: https://www.cdc.gov/pcd/issues/2017/16_0613.htm

For Medicaid recipients with more than one diagnosed chronic condition, each additional chronic condition is associated with an increase in average spending per recipient of about \$6,700 (with a range of \$4,600 to \$7,800 per each diagnosed chronic condition).

Table 15: Distribution of Medicaid Recipients by the Number of Diagnosed Chronic Conditions and the Cost of Providing Medicaid Services

Diagnosed Chronic Conditions	Medicaid Recipients	Percent of Recipients	Average Spending Per Recipient	Total Spending	Percentage of Spending
0*	129,791	67.8%	\$2,837	\$501,296,127	24.0%
1	27,570	14.4%	\$17,645	\$486,477,312	23.3%
2	16,124	8.4%	\$25,465	\$410,604,265	19.7%
3	8,932	4.7%	\$32,254	\$288,089,707	13.8%
4	4,714	2.5%	\$39,633	\$186,829,362	9.0%
5	2,359	1.2%	\$44,224	\$104,325,558	5.0%
6	1,116	0.6%	\$51,040	\$56,960,894	2.7%
7	467	0.2%	\$56,859	\$26,553,162	1.3%
8 or More	390	0.2%	\$64,314	\$25,082,567	1.2%
All Recipients	191,463	100.0%	\$8,751	\$2,086,218,954	

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Includes 47,788 Medicaid enrollees that received no Medicaid services in FY2018

Projected Spending on Medicaid Services for Recipients with Chronic Conditions

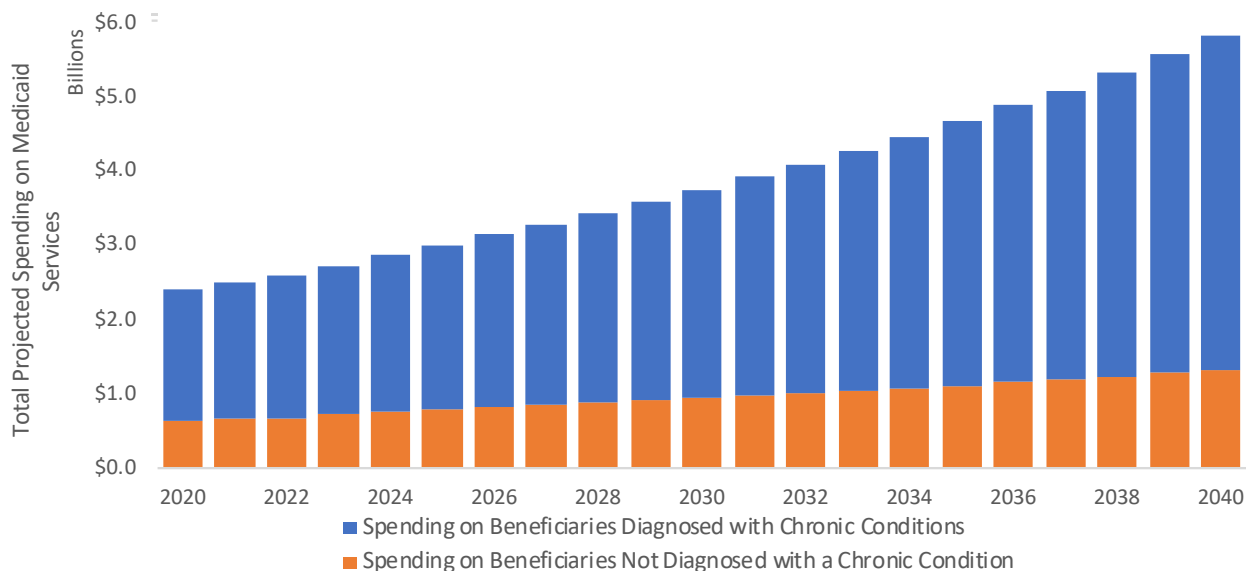
We utilized recipient-level data from the MMIS and enrollee-level data from the Eligibility Information System (EIS) for FY2018 to estimate predictive models of the prevalence of each of the 55 chronic conditions shown in Table 12 based on the demographic characteristics of Medicaid recipients with each respective chronic condition. The models were estimated using logistic regression, a statistical regression approach used for estimating the probability of an event occurring. For our purposes, the event is the presence of a respective chronic condition. We then used the estimated coefficients from these models in conjunction with the forecast of Medicaid enrollment described in Section 2.2 to predict the prevalence of each chronic condition for each year of the projection period (FY2020–FY2040) for each of the 240 enrollment subgroups.⁶³

⁶³ The forecasts of prevalence of chronic conditions, therefore, account for projected changes in the demographic makeup of the Medicaid population, but do not attempt to project changes in prevalence by demographic characteristic.

Next, we utilized data from the MMIS for FY2018 to estimate statistical models to predict average spending per Medicaid recipient based on the recipient’s age, gender, and whether the recipient was diagnosed with each of the 55 chronic conditions.⁶⁴ For each chronic condition, we multiplied the prevalence forecast by the spending forecast to develop a forecast of total spending on each chronic condition for each year of the forecast. Finally, we aggregated spending across the 55 chronic conditions to develop our forecast of total spending on Medicaid services for beneficiaries with one or more chronic conditions.

Figure 24 shows our projection of total spending on Medicaid services from FY2020 through FY2040. Over this period, we project Medicaid spending on recipients diagnosed with one or more chronic conditions will grow from \$1.75 billion (73% of Medicaid spending) to \$4.4 billion (78% of Medicaid spending). Comparatively, spending on recipients not diagnosed with a chronic condition will increase from \$632 million to \$1.3 billion between FY2020 and FY2040, which, though increasing on an average annual basis by 3.7 percent per year, will decrease as a proportion of total spending from 27 percent in FY2020 to 22 percent in FY2040.

Figure 24: Projected Spending on Medicaid Services, FY2020 – FY2040



⁶⁴ These models were estimated using ordinary least squares (OLS) regression.

3 Appendix Tables

Table 16: Medicaid Service Category Descriptions for Long-Term Forecast

Broad Category	Service Category	Description
Behavioral Health	Inpatient Psychiatric Hospital	Inpatient psychiatric hospital services
	Outpatient Mental Health	Outpatient mental health services, psychology services, and drug abuse centers
	Residential Psychiatric/Behavioral Rehabilitation Services	Residential psychiatric treatment centers and behavioral rehabilitation services (BRS)
Long-Term Care	Home & Community Based Waiver	Home and community based long-term care services offered through Medicaid Waivers including Alaska Pioneer Homes, assisted living homes, respite care, adult day care, chore services, residential and day habilitation, nutrition, and meals.
	Home Health/Hospice	Home health services, hospice care, nutrition services, and private duty nursing
	Nursing Home	Skilled nursing and intermediate care facilities including intermediate-care facilities for the intellectually disabled; and temporary long-term care services
	Personal Care	Personal care attendant services including agency-based and consumer-directed programs
Medical/Other	Dental	Dental services for children and adults
	Durable Medical Equipment/Supplies	Durable medical equipment (DME), medical supplies, prosthetics, and orthotics
	Early & Periodic Screening, Diagnosis & Treatment	Early, periodic screening, diagnosis and treatment (EPSDT) including preventive health checkups, immunizations, and medically necessary treatment.
	Health Clinic	Health clinic services including rural health clinics, federally-qualified health clinics and tribal health clinics
	Inpatient Hospital	Inpatient hospital services
	Laboratory/X-Ray	Laboratory, x-ray and diagnostic services
	Other Services	Other services not classified elsewhere
	Outpatient Hospital	Outpatient hospital services, outpatient surgery services, and end-stage renal disease services
	Pharmacy	Prescription drugs
	Physician/Practitioner Services	Physician, podiatrist, advanced nurse practitioner, and midwifery services
	Therapy/Rehabilitation	Outpatient rehabilitation, physical therapy, occupational therapy, speech therapy, audiology, and chiropractic services
	Transportation	Emergency and non-emergency medically necessary transportation and accommodation
	Vision	Optometrist services and eyeglasses

Table 17: Medicaid Eligibility Classification Descriptions

Eligibility Class	Description
AFDC & Related	Eligible for AFDC-based Family Medicare or Transitional Medicaid
Alien (Foreign)	Illegal, sponsored, or amnesty alien
Exams	Disability, waiver, or pregnancy determination pending
Kids in Custody	Children in custody of DHSS
LTC Non-cash	Aged or disabled individual not receiving SSI or cash supplement
Medicare	Eligible for Medicare cost-sharing assistance only
Other Disabled	Working disabled or eligible due to breast/cervical cancer screening
Pregnancy/Post Partum	Eligible during pregnancy and for 60 days after giving birth
SSI/APA/LTC Cash	Eligible for SSI or other state cash supplement
Title XIX Kids	Children under age 19 not eligible for coverage under CHIP
Title XXI Kids	Children under age 19 eligible for coverage under CHIP
Expansion	Non-disabled adults 18 – 64 without dependent children

Table 18: Forecast of Population by Demographic Group

	Fiscal Year					Annual % Change
	2020	2025	2030	2035	2040	
State	746,580	770,394	790,777	808,365	823,769	0.5%
Gender						
Female	362,969	375,302	386,006	395,278	403,222	0.5%
Male	383,611	395,092	404,771	413,087	420,547	0.5%
Native Status						
Native	152,694	159,126	164,906	170,202	175,304	0.7%
Non-Native	593,886	611,268	625,871	638,163	648,465	0.4%
Region						
Northern	122,612	125,323	127,294	128,799	130,032	0.3%
Western	44,846	46,414	48,063	49,873	52,021	0.7%
South Central	96,573	97,673	98,269	98,489	98,411	0.1%
Anchorage/Mat-Su	410,186	428,668	445,375	460,357	473,741	0.7%
Southeast	72,363	72,316	71,776	70,847	69,564	-0.2%
Age Group						
0-4	52,776	53,545	53,914	55,237	56,814	0.4%
5-9	52,535	53,012	53,794	54,175	55,511	0.3%
10-14	54,122	52,738	53,223	54,011	54,400	0.0%
15-19	50,048	53,875	52,482	52,952	53,728	0.4%
20-24	46,950	52,075	55,887	54,506	54,982	0.8%
25-34	110,543	103,187	104,040	113,221	115,916	0.2%
35-44	101,580	112,289	111,207	104,153	105,177	0.2%
45-54	84,607	85,764	98,133	108,624	107,672	1.2%
55-64	95,591	82,555	71,683	72,815	84,612	-0.6%
65-74	66,558	77,370	76,121	64,384	54,794	-1.0%
75-84	24,158	35,244	48,251	56,471	55,474	4.2%
85+	7,112	8,740	12,042	17,816	24,689	6.4%

Source: Analysis by Evergreen Economics of data from the Alaska Department of Labor and Workforce Development.

Table 19: Forecast of Enrollment by Demographic Group

	Fiscal Year					Annual % Change
	2020	2025	2030	2035	2040	
State	253,231	277,189	295,197	307,501	315,287	1.1%
Gender						
Female	128,201	140,812	150,452	157,003	161,067	1.1%
Male	125,031	136,377	144,745	150,498	154,219	1.1%
Native Status						
Native	92,566	102,323	109,616	114,494	117,919	1.2%
Non-Native	160,665	174,866	185,581	193,007	197,368	1.0%
Region						
Northern	32,914	35,653	37,482	38,669	39,285	0.9%
Western	31,603	34,955	37,690	39,755	41,539	1.4%
South Central	33,478	35,948	37,698	38,655	39,118	0.8%
Anchorage/Mat-Su	131,523	145,361	156,065	163,780	168,744	1.3%
Southeast	23,713	25,272	26,262	26,642	26,602	0.6%
Age Group						
0-4	30,881	33,587	35,367	36,899	38,131	1.1%
5-9	29,283	31,960	33,950	34,864	35,832	1.0%
10-14	26,952	28,183	30,088	31,155	31,500	0.8%
15-19	23,598	27,226	27,787	28,907	29,490	1.1%
20-24	18,058	20,469	22,525	22,574	23,021	1.2%
25-34	40,165	41,171	43,142	46,448	47,479	0.8%
35-44	27,912	32,154	33,610	32,785	33,016	0.8%
45-54	20,596	22,226	25,586	28,264	28,419	1.6%
55-64	21,689	21,357	20,271	20,900	23,353	0.4%
65-74	8,698	10,979	11,655	10,357	8,935	0.1%
75-84	3,843	5,899	8,441	10,223	10,380	5.1%
85+	1,557	1,979	2,775	4,125	5,731	6.7%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Table 20: Forecast of Spending by Demographic Group (Millions \$)

	Fiscal Year					Annual % Change
	2020	2025	2030	2035	2040	
State	\$2,382.9	\$2,987.7	\$3,737.4	\$4,657.8	\$5,809.3	4.6%
Gender						
Female	\$1,270.6	\$1,608.9	\$2,042.3	\$2,584.7	\$3,271.2	4.8%
Male	\$1,112.3	\$1,378.8	\$1,695.1	\$2,073.1	\$2,538.1	4.2%
Native Status						
Native	\$1,086.6	\$1,324.4	\$1,585.9	\$1,879.5	\$2,231.9	3.7%
Non-Native	\$1,296.3	\$1,663.4	\$2,151.5	\$2,778.3	\$3,577.4	5.2%
Region						
Northern	\$274.1	\$334.5	\$408.0	\$493.3	\$597.2	4.0%
Western	\$323.7	\$392.6	\$469.8	\$558.5	\$667.4	3.7%
South Central	\$346.0	\$432.2	\$541.5	\$677.3	\$843.0	4.6%
Anchorage/Mat-Su	\$1,187.1	\$1,519.7	\$1,942.5	\$2,471.2	\$3,143.7	5.0%
Southeast	\$252.0	\$308.7	\$375.5	\$457.5	\$558.0	4.1%
Age Group						
0-4	\$214.7	\$260.5	\$314.2	\$381.3	\$474.3	4.0%
5-9	\$124.2	\$152.4	\$186.6	\$225.1	\$280.6	4.2%
10-14	\$159.5	\$188.8	\$233.5	\$282.7	\$345.4	3.9%
15-19	\$197.9	\$258.2	\$307.1	\$376.3	\$463.6	4.3%
20-24	\$119.9	\$157.7	\$206.2	\$243.0	\$304.8	4.8%
25-34	\$367.4	\$418.8	\$509.0	\$654.9	\$823.1	4.1%
35-44	\$284.9	\$384.9	\$469.7	\$515.1	\$597.5	3.8%
45-54	\$274.9	\$338.2	\$448.5	\$575.0	\$670.1	4.6%
55-64	\$336.3	\$361.7	\$384.2	\$469.8	\$599.6	2.9%
65-74	\$123.4	\$187.0	\$244.0	\$270.8	\$303.0	4.6%
75-84	\$100.5	\$156.2	\$242.7	\$370.9	\$496.8	8.3%
85+	\$79.4	\$123.4	\$191.7	\$293.0	\$450.7	9.1%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

Table 21: Forecast of Total Spending on Medicaid (Millions \$)

Service Category	Fiscal Year					Annual % Change
	2020	2025	2030	2035	2040	
Dental	\$109.3	\$138.9	\$174.1	\$218.9	\$277.6	4.8%
DME/Supplies	\$28.5	\$38.0	\$50.2	\$65.4	\$84.8	5.6%
EPSDT	\$22.5	\$28.0	\$33.6	\$40.0	\$47.9	3.8%
HCB Waiver	\$313.9	\$391.1	\$502.4	\$626.6	\$763.9	4.5%
Health Clinic	\$126.4	\$161.2	\$203.5	\$256.9	\$326.3	4.9%
Home Health/Hospice	\$14.4	\$18.7	\$23.5	\$28.8	\$35.5	4.6%
Inpatient Hospital	\$399.3	\$494.3	\$611.7	\$764.0	\$967.4	4.5%
Inpatient Psychiatric	\$20.2	\$24.6	\$29.1	\$34.6	\$41.1	3.6%
Lab/X-ray	\$7.1	\$8.8	\$11.0	\$13.8	\$17.4	4.6%
Nursing Home	\$183.1	\$246.9	\$328.7	\$423.6	\$530.0	5.5%
Other Services	\$1.2	\$1.3	\$1.5	\$1.8	\$2.1	2.8%
Outpatient Hospital	\$305.0	\$386.4	\$485.9	\$611.5	\$776.0	4.8%
Outpatient Mental Health	\$219.9	\$262.6	\$307.9	\$360.0	\$421.9	3.3%
Personal Care	\$61.8	\$69.2	\$76.3	\$83.7	\$90.7	1.9%
Pharmacy	\$174.8	\$216.7	\$269.2	\$337.0	\$425.2	4.5%
Physician/Practitioner	\$206.2	\$260.2	\$327.1	\$412.6	\$524.0	4.8%
Resident Psychiatric/BRC	\$32.2	\$38.7	\$44.7	\$51.8	\$59.9	3.2%
Therapy/Rehabilitation	\$40.3	\$52.0	\$66.2	\$85.2	\$110.8	5.2%
Transportation	\$107.2	\$138.1	\$175.7	\$222.7	\$283.1	5.0%
Vision	\$9.4	\$11.9	\$15.1	\$18.9	\$23.7	4.7%
Total Spending on Medicaid Services	\$2,382.9	\$2,987.7	\$3,737.4	\$4,657.8	\$5,809.3	4.6%
Other Medicaid Payments*	\$119.1	\$149.4	\$186.9	\$232.9	\$290.5	4.6%
Total Spending on Medicaid Program	\$2,502.0	\$3,137.1	\$3,924.3	\$4,890.7	\$6,099.8	4.6%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Includes offsets received by DHSS for drug rebates, third-party liability collections, or other reasons.

Table 22: Forecast of State Spending on Medicaid (in Millions \$)

Service Category	Fiscal Year					Annual % Change
	2020	2025	2030	2035	2040	
Dental	\$30.0	\$38.2	\$47.7	\$60.5	\$77.5	4.9%
DME/Supplies	\$12.8	\$17.2	\$22.6	\$29.6	\$38.6	5.7%
EPSDT	\$4.7	\$5.7	\$6.8	\$8.1	\$9.8	3.8%
HCB Waiver	\$157.4	\$198.8	\$253.1	\$315.6	\$386.4	4.6%
Health Clinic	\$7.0	\$8.0	\$10.1	\$12.8	\$16.4	4.3%
Home Health/Hospice	\$6.6	\$8.6	\$10.7	\$13.1	\$16.4	4.7%
Inpatient Hospital	\$96.1	\$119.5	\$147.7	\$185.9	\$237.6	4.6%
Inpatient Psychiatric	\$8.3	\$10.2	\$12.1	\$14.5	\$17.4	3.8%
Lab/X-ray	\$2.1	\$2.7	\$3.4	\$4.3	\$5.4	4.8%
Nursing Home	\$74.8	\$101.0	\$133.1	\$171.4	\$214.7	5.4%
Other Services	\$0.2	\$0.3	\$0.3	\$0.3	\$0.4	2.9%
Outpatient Hospital	\$60.8	\$76.8	\$96.4	\$122.1	\$156.4	4.8%
Outpatient Mental Health	\$64.1	\$76.5	\$89.4	\$105.1	\$124.4	3.4%
Personal Care	\$30.0	\$33.6	\$36.9	\$40.6	\$44.3	2.0%
Pharmacy	\$47.4	\$59.5	\$73.9	\$93.1	\$118.5	4.7%
Physician/Practitioner	\$55.3	\$70.4	\$88.2	\$112.0	\$143.4	4.9%
Residential Psychiatric/BRC	\$16.5	\$19.8	\$22.8	\$26.6	\$31.0	3.2%
Therapy/Rehabilitation	\$17.7	\$23.1	\$29.4	\$38.1	\$50.1	5.3%
Transportation	\$15.2	\$19.1	\$24.2	\$30.8	\$39.6	4.9%
Vision	\$3.7	\$4.8	\$6.0	\$7.5	\$9.5	4.9%
Total Spending on Medicaid Services	\$710.8	\$893.6	\$1,114.8	\$1,392.0	\$1,737.6	4.6%
Other Medicaid Payments*	\$59.6	\$74.7	\$93.4	\$116.4	\$145.2	4.6%
Total Spending on Medicaid Program	\$770.4	\$968.3	\$1,208.2	\$1,508.5	\$1,882.9	4.6%

Source: Analysis by Evergreen Economics of data provided by the Medicaid Budget Group.

* Includes offsets received by DHSS for drug rebates, third-party liability collections, or other reasons.