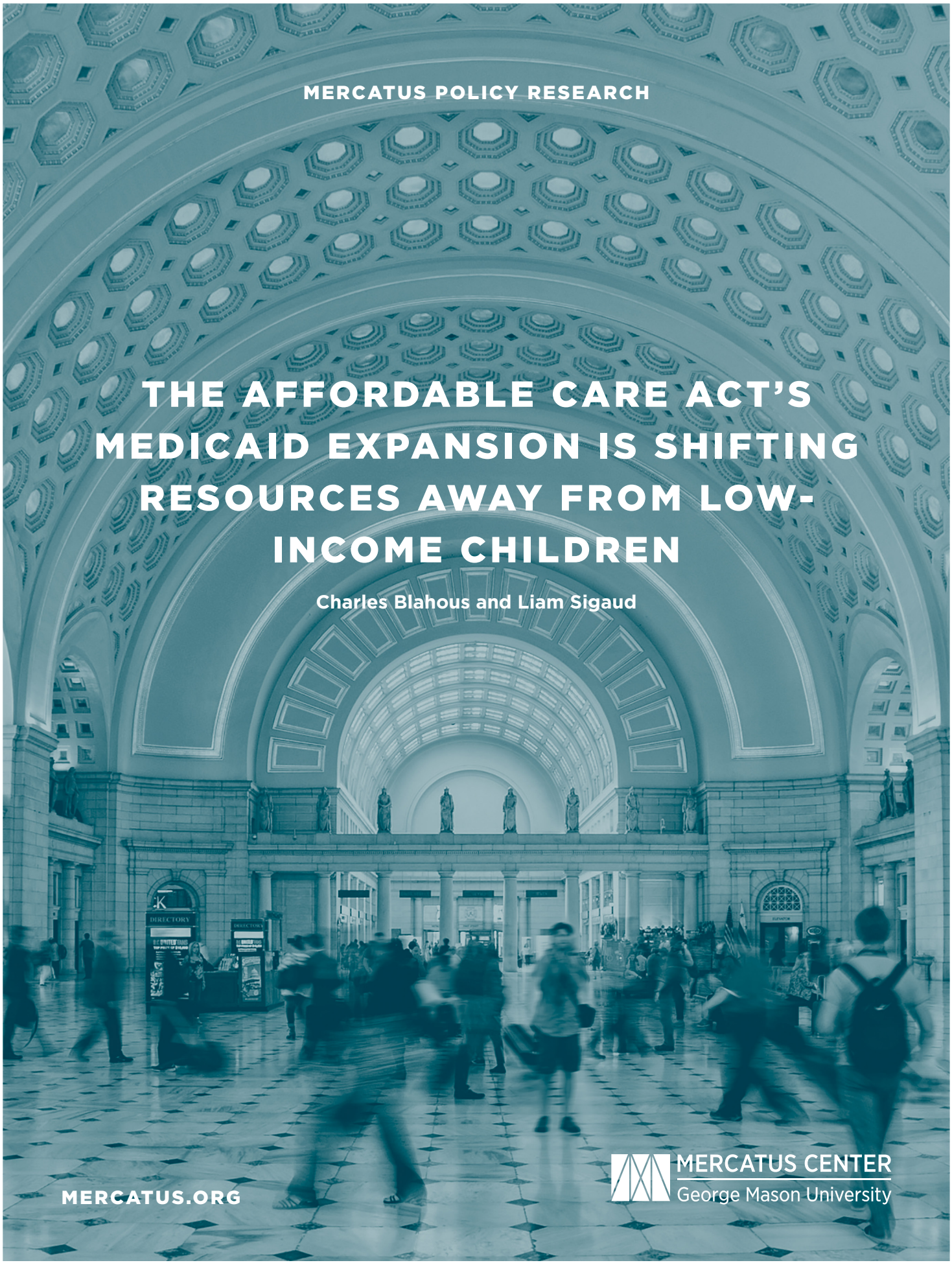

MERCATUS POLICY RESEARCH

THE AFFORDABLE CARE ACT'S MEDICAID EXPANSION IS SHIFTING RESOURCES AWAY FROM LOW-INCOME CHILDREN

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ABSTRACT

In this study, we find that Medicaid expansion under the Affordable Care Act (ACA) is generally associated in expansion states with a shift of program financial resources away from children toward nonaged nondisabled adults. We examine Medicaid expenditures per capita for beneficiary categories including children, aged adults, and the disabled, as well as for nonaged nondisabled adults, who were the focus of the ACA's Medicaid expansion. We compare the growth of per capita expenditures on these groups from fiscal year (FY) 2013 to FY 2019 between states that chose to expand Medicaid on January 1, 2014, and states that had not expanded at the time data were collected. Nonexpansion states exhibited a remarkable stability in the distribution of program resources between these categories, with each category receiving nearly the same percentage of Medicaid financial resources in FY 2019 as in FY 2013. After controlling for changes in the beneficiary population within expansion states, we find that per capita spending growth on Medicaid's previously eligible population was largely similar for expansion states and nonexpansion states but that this overarching similarity masked significant shifts of program financial resources between more specific beneficiary categories within expansion states. The most striking of these shifts was a dramatic shift of financial resources away from children in expansion states. States that expanded Medicaid per the terms of the ACA spent only 5.9% more per capita on children in FY 2019 than they did in FY 2013 compared with growth of 22.7% in per capita spending on children in nonexpansion states and of 27.0% in average healthcare spending per capita for the US population as a whole.

JEL codes: H3, H7, I13, I18, I38

Keywords: Affordable Care Act, children's health, effects of Medicaid expansion, entitlement spending, federal health policy, federal health programs, health policy, Medicaid, Medicaid benefits, Medicaid children, Medicaid eligibility groups, Medicaid expansion, Medicaid spending, Medicaid spending trends, Obamacare, supply constraints in Medicaid

The Affordable Care Act (ACA) was enacted into federal law on March 23, 2010, and one of its chief purposes was to substantially expand health insurance coverage in the United States. There were two primary methods by which the ACA's authors sought to expand coverage: first, the creation of private health insurance marketplaces supported by federal subsidies, and second, a substantial expansion of Medicaid, the joint federal-state program that provides health insurance primarily for low-income individuals. A 2012 US Supreme Court ruling rendered the ACA's Medicaid expansion optional for states, with the consequence that some states moved swiftly to expand Medicaid under the terms of the ACA, whereas others did not.

Medicaid expansion sharply increased the number of enrollees in expansion states without a commensurate increase in the numbers of Medicaid service providers. Given that many Medicaid enrollees were already reporting difficulties accessing certain forms of care before the ACA, the question arises as to whether Medicaid enrollment expansion has increased wait times, delays, barriers, or other access problems in expansion states for populations that were Medicaid eligible before expansion. In this study, we take a first step in exploring these questions by examining patterns in Medicaid spending on different beneficiary categories and where they have differed between expansion and nonexpansion states after enactment of the ACA. Although we do not find evidence of a general shift of resources away from previously eligible populations where expansion occurred, we do find strong evidence of a shift of financial resources away from certain enrollee populations, most notably low-income children, in expansion states.

BACKGROUND

Before the ACA, states participating in Medicaid were required to provide Medicaid health insurance coverage for low-income pregnant women and children as well as to parents, caretakers, and aged as well as disabled individuals who met eligibility

requirements for certain other federal income-assistance programs.[1] Federal law had also expressly provided states with the option of covering other specific populations, including "many in these same demographic groups but with higher incomes, as well as certain 'medically needy' individuals."[2] Some states covered these optional populations, whereas others did not, leading to substantial variation in Medicaid coverage between states even before the ACA.

The ACA sought to expand the categories of individuals whom all states must cover as a condition of the state's Medicaid participation, essentially requiring that states cover everyone with incomes at or below 138% of the federal poverty level (FPL).[3] Given the categories of individuals (children, pregnant women, parents, the aged, and the disabled) who were already required to be covered before the ACA, the ACA's stipulations in effect meant that the primary focus of Medicaid expansion would be nonaged nondisabled childless adults.

The ACA as enacted, before judicial review by the US Supreme Court, made Medicaid expansion mandatory for Medicaid-participating states.[4] The ACA sought to cushion expansion's financial imposition on states by providing much more generous federal financial support for covering the expansion population than was provided for Medicaid's previously eligible population. Before the ACA, the federal government financed an average of 57% of Medicaid costs, with states financing on average the other 43%; the specific percentages varied—and still do today—by state as a function of relative per capita income within the state.[5] Under the ACA, the federal government would provide nearly all the financing for covering the expansion population—100% during the first years of expansion (2014–2016), gradually reducing to 90% in 2020 and afterward. States that had already covered portions of the ACA's intended adult expansion population, receiving historical federal medical assistance percentage (FMAP) rates before the ACA's enactment, were provided with a transition rate schedule that

1. In practice, these requirements applied to all states, because all states voluntarily participate in Medicaid. Charles Blahous, "The Affordable Care Act's Optional Medicaid Expansion: Considerations Facing State Governments" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, March 2013), 5.
2. Blahous, "The Affordable Care Act's Optional Medicaid Expansion," 5.
3. Technically, the law specifies 133% of the FPL as the income limit, but there is an exclusion of income equal to 5% of the FPL, effectively raising the limit to 138% of the FPL. See Blahous, "The Affordable Care Act's Optional Medicaid Expansion," 8.
4. Again, this would have meant for all states, because all states voluntarily participate in Medicaid.
5. Blahous, "The Affordable Care Act's Optional Medicaid Expansion," 6.

would allow them to receive elevated FMAP rates when the ACA's rate regime was fully phased in.[6]

In June 2012, the US Supreme Court held that the ACA was broadly constitutional but that its mandatory Medicaid expansion was not. States could choose to cover the expansion population defined by the ACA and to receive the elevated FMAP rate if they did so, but they were not required to expand. This led to states making different decisions about Medicaid expansion. As of this writing, 38 states plus the District of Columbia have expanded Medicaid per the terms of the ACA.[7]

Federal legislation during the pandemic further increased FMAP rates, thereby further increasing federal support for states' Medicaid coverage. In 2020 the federal government temporarily increased FMAP rates for previously eligible enrollees in all states and the District of Columbia by 6.2 percentage points.[8] The American Rescue Plan Act (ARPA) of 2021 additionally increased FMAP rates in a number of targeted ways, for example by increasing expansion-population FMAPs by 5 percentage points (from 90% to 95%) for the first two years in any states that elect to expand Medicaid after the ARPA's enactment.

The ACA's Medicaid expansion dramatically increased Medicaid enrollment relative to pre-ACA law. The Congressional Budget Office (CBO) has estimated that roughly 22% (16 million out of 73 million) of Medicaid enrollments of individuals under the age of 65 in 2022 consists of adults newly made eligible for Medicaid by the ACA.[9] Unless there is a commensurate increase in the supply of Medicaid services, such expansion necessarily increases competition among Medicaid enrollees for access to Medicaid services.

Far fewer health providers accept Medicaid coverage than accept private health insurance or Medicare, both before and after the enactment of the ACA. For example, in 2011 through 2013, 73.0% of physicians nationwide were accepting new patients under Medicaid, a percentage that moved only slightly to 74.0%

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6. Robin Rudowitz, "Understanding How States Access the ACA Enhanced Medicaid Match Rates," Kaiser Family Foundation, September 29, 2014, https://www.kff.org/medicaid/issue-brief/understanding-how-states-access-the-aca-enhanced-medicaid-match-rates/.
7. "Status of State Medicaid Expansion Decisions: Interactive Map," Kaiser Family Foundation, November 9, 2022, https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/.
8. "Federal Legislative Milestones in Medicaid and CHIP," Medicaid and CHIP Payment and Access Commission, accessed July 15, 2022, https://www.macpac.gov/reference-materials/federal-legislative-milestones-in-medicaid-and-chip/.
9. Congressional Budget Office, *Federal Subsidies for Health Insurance Coverage for People Under Age 65: CBO and JCT's May 2022 Baseline Projections*, May 2022, 2, table 1.

in 2014 through 2017, the first years of the ACA's Medicaid expansion.[10] This contrasts with acceptance rates of 88.2% under Medicare and 95.6% under private insurance in 2014 through 2017.

While the reasons for lower provider participation in Medicaid are various, one important factor is the regime of lower payment rates that health providers receive under Medicaid. Payment rates for physicians under Medicaid are currently about 54% of what they are under private insurance, and Medicaid's payment rates for inpatient hospital services are about 62% of private insurance rates.[11]

Lower provider-participation rates in Medicaid result in periodic scholarly attention to whether Medicaid enrollees, despite carrying insurance, face greater barriers to care than those covered by private insurance. Results of such studies are often mixed, and answers can depend on the specific population studied. For example, the Medicaid and CHIP Payment Access Commission (MACPAC) reports that "adults with Medicaid coverage were significantly more likely to report not receiving or delaying medical care, prescriptions, and dental services compared to adults with private coverage," while children under Medicaid and the Children's Health Insurance Program (CHIP) show "similarly high rates of access to health care services compared to those with private insurance."[12]

Given that many Medicaid enrollees were already reporting difficulties in accessing care before the ACA, the question arises as to whether the ACA's Medicaid enrollment expansion has increased access problems in expansion states for populations who were Medicaid-eligible before expansion. In this study, we take a first step in exploring these questions by examining post-ACA patterns in Medicaid spending on different beneficiary categories.

Specifically, we examine Medicaid spending on behalf of enrollee categories including children, the aged, the disabled, and nondisabled nonaged adults,

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10. Medicaid and CHIP Payment Access Commission, *Physician Acceptance of New Medicaid Patients: Findings from the National Electronic Health Records Survey*, June 2021.
11. John D. Shatto and M. Kent Clemens, *Projected Medicare Expenditures under an Illustrative Scenario with Alternative Payment Updates to Medicare Providers* (Baltimore MD: Centers for Medicare and Medicaid Services, 2022). The Affordable Care Act increased Medicaid physician payment rates in 2013 and 2014, though Medicaid payment rates remained on average less than 80% of private rates in those years and subsequently declined to an average of 54%. See Laura Tollen, *Medicaid Primary Care Parity* (Washington, DC: Health Affairs, 2015).
12. "Access for Adults Covered by Medicaid," Medicaid and CHIP Payment Access Commission, accessed July 18, 2022, https://www.macpac.gov/subtopic/access-for-adults-covered-by-medicaid/; "Access for Children Covered by Medicaid and CHIP," Medicaid and CHIP Payment Access Commission, accessed July 18, 2022, https://www.macpac.gov/subtopic/access-for-children-covered-by-medicaid-and-chip/.

comparing the growth in nonexpansion states with that of states that commenced Medicaid expansion on January 1, 2014, the first date permitted under the ACA. The methodology is explained in appendix A, and notes on data sources are provided in appendix B.

GENERAL FINDINGS RELATED TO SPENDING ON PREVIOUS MEDICAID ELIGIBLES VERSUS EXPANSION POPULATION

We find no evidence supporting the first hypothesis articulated in this study—that is, that expansion under the ACA may have systematically diverted program resources away from groups who were eligible pre-ACA. More specifically, we find no evidence that post-ACA spending on previously eligible groups, collectively, has lagged in expansion states relative to nonexpansion states. Although absence of evidence is famously never evidence of absence, the data we examined are consistent with the supply of Medicaid services within expansion states expanding rapidly enough to provide for the ACA's expanded beneficiary population as a whole without the general competition for access within those states becoming more problematic than in nonexpansion states.

As explained in appendix A, we also examine Medicaid spending on behalf of specific enrollee categories, including children, the aged, the disabled, and nondisabled nonaged adults, from FY 2013 to FY 2019, comparing the growth in nonexpansion states with that of states that commenced Medicaid expansion on January 1, 2014 (hereafter referred to as January 2014), the first date permitted under the ACA. As explained in appendix B, these comparisons utilize data compiled and presented by MACPAC in its annually published *MACStats: Medicaid and CHIP Data Book*. However, whereas *MACStats* data currently only permit the examination of per capita spending trends by specific eligibility category through FY 2019, *MACStats* provides slightly more current data (through FY 2020) with respect to the more general division of all those who were eligible for Medicaid pre-ACA versus those who were made eligible by the ACA itself.[13] This enables a comparison of broader spending trends from FY 2013 to FY 2020 in expansion states versus nonexpansion states, for both the previously eligible and ACA-eligible Medicaid populations.

Tables 1 and 2 present Medicaid spending per capita in both FY 2013 and FY 2020, comparing spending in expansion states with that in nonexpansion

13. It should be noted that FY 2020 includes several months in which spending patterns across different states and eligibility groups may have been distorted by the COVID pandemic relative to previous years.

TABLE 1. PER CAPITA MEDICAID SPENDING FY 2013–FY 2020 FOR ALL ENROLLEES, EXPANSION VERSUS NONEXPANSION STATES

State Group	FY 2013	FY 2020	Difference (FY 2020–FY 2013)
January 2014 expansion states	$7,394	$8,898	+20.3%
Nonexpansion states	$5,789	$7,278	+25.6%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019. FY 2020 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021.

states. As explained in appendix A, the January 2014 expansion group of states excludes Rhode Island and Vermont because of data limitations.

Table 1 should be interpreted with the following points in mind. First, while per capita spending on Medicaid beneficiaries grew substantially from FY 2013 to FY 2020 in both expansion states and nonexpansion states, this is primarily reflective of a larger trend of persistent growth in national health spending per capita. In fact, national personal health spending per capita actually grew somewhat faster than Medicaid spending per capita during this period: the national average rose from $7,619 in calendar year 2013 to $10,202 in calendar year 2020, an increase of 33.9%.[14] Also of note: in both FY 2013 and FY 2020, per capita spending in nonexpansion states averaged less than it did in expansion states. This is reflective of a general trend in which states that chose to expand tended to be those states that spend more on health services, specifically spending more per capita on Medicaid health services.

A first glance at table 1 might foster the misimpression that per capita Medicaid spending is growing more slowly in expansion states than in nonexpansion states because of increased competition for services (in expansion states) crowding out enrollees' timely access to benefits. A closer look at the data, however, belies this interpretation. The slower growth in average per capita spending in expansion states appears to be an artifact of a particular phenomenon—the ACA's target expansion population of nonaged nondisabled childless adults has lower per capita health service expenditures than the population that was eligible before the ACA, which included low-income pregnant women as well as aged and disabled individuals. Once the data in table 1 are adjusted for this phenomenon, expansion states' apparent deceleration in Medicaid spending growth, relative to nonexpansion states, disappears (see table 2).

14. Centers for Medicare and Medicaid Services, "NHE Tables" (dataset), accessed October 4, 2022, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.

TABLE 2. PER CAPITA MEDICAID SPENDING FY 2013–FY 2020 FOR PREVIOUSLY AND NEWLY ELIGIBLE ENROLLEES, EXPANSION VERSUS NONEXPANSION STATES

State group	All Enrollees (FY 2013)	All Enrollees (FY 2020)	Newly Eligible Adults (FY 2020)	Previously Eligible Enrollees (FY 2020)	Difference (FY 2013–FY 2020), Previously Eligible Enrollees
January 2014 expansion states	$7,394	$8,898	$6,905	$9,490	+28.3%
Nonexpansion states	$5,789	$7,278	n/a	$7,278	+25.6%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019. FY 2020 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021.

As table 2 shows, per capita spending on the ACA's newly eligible adult population is less than it is on the previously eligible population. The ACA's enrollment in Medicaid of an expansion population with fewer healthcare needs than the previously eligible population is the primary reason why Medicaid spending per capita grew somewhat more slowly than national healthcare spending per capita during this period. As we will explain later, this effect is visible even in nonexpansion states, where there appears to have been a "woodwork" effect of increased enrollment of the previously eligible nonaged nondisabled adult population subsequent to the ACA.

The minor spending growth differential between expansion and nonexpansion states visible in table 2 is small enough that it is unlikely to be attributable to any systematic difference; in any case, it is smaller than typical data fluctuations observed between individual years, both within and between individual states. We examined the data for other factors that might contribute to differentials between states, such as different levels of penetration for managed care, different numbers of dually eligible enrollees, and local economic conditions, and we did not find any adjustments that might unearth a systematic differential in Medicaid per capita spending growth rates between expansion and nonexpansion states.

It is theoretically possible that differences between the demographics of expansion states versus nonexpansion states (for example, different rates of population aging) might obscure important differences in states' total per capita spending trends. In the following sections of this study we break down reported spending by enrollee group to identify potential differences arising from these factors.

Expansion states' higher levels of per capita Medicaid spending relative to nonexpansion states' levels could reflect a number of factors, possibly including a

political or philosophical preference for higher levels of public healthcare spending as well as generally higher costs of living in expansion states. This tendency might also contribute to spending growth on the previously eligible population remaining at least as rapid as in expansion states even after these populations faced increased competition for access to Medicaid services after the ACA.

At the same time, it should be noted that expansion states included several states that covered many in the ACA's target expansion population even before the ACA, thereby lessening the amount of new competition for services as a result of expansion. For example, before the ACA, several expansion states applied much higher (and therefore less binding) income limits to parents than were generally applied in nonexpansion states, limits that were sometimes as high or higher than those imposed later under the ACA.[15] To the extent that such individuals were already enrolled in Medicaid in expansion states before the ACA, they would not contribute to increased competition for access after the ACA's Medicaid expansion.

In any case, we do not find evidence that previously eligible enrollees received less benefit growth subsequent to expansion in expansion states relative to nonexpansion states. However, a closer examination of Medicaid benefit spending growth for specific eligibility categories tells a starkly different story, one of substantial shifts of financial resources from some beneficiary populations to others, shifts that occurred exclusively within expansion states. The following sections of this study detail the scope of these financial resource shifts.

SPENDING ON CHILDREN

Before reviewing the most significant Medicaid resource shifts that have occurred within expansion states during the ACA's Medicaid expansion, one should understand important context by first examining spending patterns in nonexpansion states. These spending growth patterns in nonexpansion states have remained remarkably stable since the ACA's implementation, with the distribution of spending between children, the aged, the disabled, and other adults barely changing between FY 2013 and FY 2019 (see table 3).

The data in table 3 display a remarkable consistency from FY 2013 to FY 2019 in the distribution of Medicaid expenditures in nonexpansion states. These states as a group continued to distribute spending on different eligibility groups

15. "Medicaid Income Eligibility Limits for Parents, 2002–2022," Kaiser Family Foundation, accessed November 15, 2022, https://www.kff.org/medicaid/state-indicator/medicaid-income-eligibility-limits-for-parents/.

TABLE 3. PERCENTAGE OF TOTAL MEDICAID EXPENDITURES BY ENROLLEE GROUP, NONEXPANSION STATES

Enrollee Group	% of Total Expenditures (FY 2013)	% of Total Expenditures (FY 2019)	Difference in Percentage Points (FY 2019–FY 2013)
Child	22.1%	22.2%	+0.1
Adults	11.8%	12.0%	+0.2
Disabled	43.3%	43.1%	−0.2
Aged	22.9%	22.8%	−0.1

Note: Children (and adults under 65) who qualify for disability are included in the disability category.
Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 58–59, exhibit 21a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 54–55, exhibit 21.

in 2019 almost exactly as they did in 2013, with a consistency exceeding what one might reasonably expect given inevitable changes in local economic or demographic conditions as well as simple random fluctuations. Regardless of how the ACA may have affected spending patterns within expansion states, nonexpansion states have continued to allocate resources in a manner similar to their allocations before the ACA.

By contrast, there have been significant changes subsequent to the ACA in the distribution of Medicaid benefit spending in expansion states. The most notable of these has been the relative decline in expansion states' Medicaid benefit spending on children. From FY 2013 to FY 2019, per capita benefit spending on children rose by 22.7% in nonexpansion states but by only 5.9% in expansion states, far below the amount of per capita spending growth for other Americans' health services. Table 4 shows how these expenditure differences break down.

TABLE 4. PER CAPITA MEDICAID BENEFIT SPENDING ON CHILDREN, EXPANSION VERSUS NONEXPANSION STATES

		Percent Change, FY 2013–FY 2019			
State group	Measure	Enrolled Children	Enrolled Children as a Share of all Enrollees	Per Capita Spending on Children (Annual Average)	Per Capita Spending on Children (Total)
Nonexpansion states	Total	+5.3%	−2.3%	+3.5%	+22.7%
	Median	−1.5%	−3.2%	+4.1%	+27.0%
January 2014 expansion states	Total	−3.4%	−29.7%	+1.0%	+5.9%
	Median	+2.6%	−27.1%	+1.6%	+10.2%

Note: Children who qualify for disability are included in the disability category rather than in this table.
Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

Some explanation may be useful for understanding table 4 and subsequent tables in this study. Total growth rates across the groups of nonexpansion states and January 2014 expansion states are shown in the table, along with the median percentages among individual states in each of the two categories. The median change among states may differ significantly from the total change of the group if there is an unusual amount of change in a particularly large state or in a few small states. The totals are generally most useful for understanding broader trends among both expansion and nonexpansion states. However, the inclusion of medians in the presentation along with totals allows the reader an opportunity to investigate whether conditions may have been exceptional in a particular state. The trend with respect to the growth of per capita spending on children is clear regardless of the vantage point taken: Medicaid benefit expenditures on children in expansion states have lagged relative to the growth in nonexpansion states and in other forms of health spending.

Specifically, per capita Medicaid spending on children in nonexpansion states has grown 22.7% over six years, a fairly typical amount of health cost growth that equates to 3.5% per year. In expansion states, however, the annual growth of per capita Medicaid spending on children has averaged less than 1.0% per year, totaling just 5.9% over six years. This average among expansion states is depressed somewhat by the large, populous expansion state of California, which reported spending less per capita on children in FY 2019 than in FY 2013. However, this trend of expansion states ratcheting back spending growth on children has been generally observed throughout the expansion state group. Of the 23 expansion states included in this study, there were only six states or districts in which per capita Medicaid spending on children grew as fast as the average among nonexpansion states (table 5).[16] Moreover, fully seven expansion states reported spending less per capita on children under Medicaid in FY 2019 than they did in FY 2013, even before adjusting for price inflation.[17] Children are simply receiving fewer dollars of Medicaid health benefits (in relative terms) in expansion states compared with children in nonexpansion states than they did before expansion.

As table 4 shows, the percentage of Medicaid enrollees in nonexpansion states who are children has declined slightly but not qualitatively—by just 2.3%. By contrast, in expansion states, children represented a substantially smaller

16. These six states or districts are Delaware, the District of Columbia, Hawaii, North Dakota, Oregon, and Washington.

17. These seven states are California, Kentucky, Massachusetts, Nevada, New Mexico, New York, and West Virginia.

TABLE 5. GROWTH IN PER CAPITA MEDICAID BENEFIT SPENDING ON CHILDREN IN INDIVIDUAL STATES

January 2014 Expansion State	Percent Change in Per Capita Spending on Children (FY 2013–FY 2019)	Nonexpansion State	Percent Change in Per Capita Spending on Children (FY 2013–FY 2019)
Oregon	+72.7%	Wyoming	+64.7%
Hawaii	+55.9%	Wisconsin	+52.9%
Washington	+37.5%	Mississippi	+43.2%
District of Columbia	+36.3%	Florida	+39.9%
North Dakota	+33.2%	Tennessee	+36.8%
Delaware	+32.0%	Kansas	+30.8%
Arkansas	+21.9%	Texas	+23.2%
Ohio	+20.3%	South Carolina	+21.4%
Colorado	+17.4%	North Carolina	+20.5%
Iowa	+14.7%	South Dakota	+11.1%
Arizona	+11.4%	Alabama	+1.1%
New Jersey	+10.2%	Georgia	−10.4%
Illinois	+9.0%		
Connecticut	+8.9%		
Maryland	+7.1%		
Minnesota	+5.6%		
Kentucky	−0.2%		
Nevada	−0.5%		
Massachusetts	−2.8%		
West Virginia	−4.3%		
California	−5.4%		
New Mexico	−5.5%		
New York	−13.6%		
Average per capita spending growth on children	+5.9%	Average per capita spending growth on children	+22.7%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 62–63, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 57–58, exhibit 22.

fraction of total enrollees in FY 2019 than they did in FY 2013 (nearly 30% smaller)—an unsurprising result given that expansion states' total enrollment rolls were dramatically expanded by the addition of several million nonaged nondisabled adults. Partially for this reason, expenditures on children in expansion states declined from 19.1% of total program expenditures to 14.2%.[18] However, as

18. Children who qualify for disability are included in the disability category rather than the children category. FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 58–59, exhibit 21a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 54–55, exhibit 21.

table 4 also reveals, the declining share of expansion states' expenditures allocated to children's health benefits was not solely attributable to their being a smaller percentage of total enrollees. Per capita spending growth on children lagged far behind in expansion states as well.

The data in table 4 are remarkable in that as they illustrate how much more slowly Medicaid benefit spending on children has grown in expansion states than has health spending on other Americans around the nation. In calendar year 2013, national personal health spending per capita averaged $7,619, whereas in 2019 it averaged $9,681—an increase of 27.0%.[19] Medicaid per capita spending on children in expansion states grew by less than one-quarter that amount between FY 2013 and FY 2019, a statistical outlier relative to other populations and situations.

It may be worth emphasizing that the slower growth of Medicaid spending on children in expansion states is not simply a matter of nonexpansion states' FY 2019 spending being compared with a smaller spending base in FY 2013. For example, table 2 shows that the growth of per capita spending on the entire previously Medicaid-eligible population remained just as high in expansion states after FY 2013 as in nonexpansion states, despite expansion states starting at a higher level. Moreover, as table 6 shows, post-ACA per capita spending growth on children in expansion states was not only smaller as a percentage of their FY 2013 spending levels, but also much smaller than the post-ACA growth in nonexpansion states when measured in dollars.

As table 6 shows, not only were expansion states' spending growth rates on children less than one-third of nonexpansion states' from FY 2013 to FY 2019, but also expansion states' average growth was less than one-third as large when quantified in dollars.

This stark divergence in spending patterns on children prompts questions as to whether other factors are distorting Medicaid spending on children in expansion states relative to nonexpansion states. An important place to check is spending on CHIP. The ACA changed the relationship between Medicaid and CHIP in some ways, and it is theoretically possible that the ACA facilitated different patterns of enrollment and spending in Medicaid in relation to CHIP in expansion versus nonexpansion states. Specifically, it is important to determine whether Medicaid spending on children per capita grew more slowly in expan-

19. Centers for Medicare and Medicaid Services, "National Health Expenditure Data" (dataset), last modified December 15, 2021, https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.

TABLE 6. PER CAPITA MEDICAID BENEFIT SPENDING ON CHILDREN, EXPANSION VERSUS NONEXPANSION STATES

State Group	Measure	FY 2013	FY 2019	Difference (FY 2019–FY 2013)
Nonexpansion states	Total	$2,478	$3,041	+$563
	Median	$2,581	$3,332	+$751
January 2014 expansion states	Total	$2,996	$3,172	+$176
	Median	$2,972	$3,408	+$436

Note: Children who qualify for disability are included in the disability category rather than in this table.
Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

sion states in part because children with greater need of resources were being shifted to CHIP in those same states.

CHIP was created in 1997 as part of the Balanced Budget Act as a means of providing health coverage for uninsured low-income children who were "above Medicaid income eligibility thresholds."[20] States could create a separate CHIP program, operate it as an expansion of Medicaid, or adopt a combination of both approaches. Federal reimbursement rates were set higher for CHIP (averaging 70%) than for traditional Medicaid (where they averaged 57%), creating added incentive for states to participate. At the same time, federal CHIP funding was (and remains) capped, meaning that eligible beneficiaries are not necessarily covered if CHIP is operated separately from Medicaid. Eligible individuals can be denied coverage under CHIP if state revenues fall short of the amounts necessary to cover them. States were also given substantial flexibility with respect to CHIP design features ranging from covered services to cost-sharing.

The ACA increased CHIP matching rates and also required that states adopt a uniform income standard for coverage under Medicaid, covering under Medicaid all those under the age of 19 with incomes below 138% of the FPL.[21] On the one hand, the ACA's expanded Medicaid eligibility could result in movement of children from CHIP into Medicaid. On the other hand, the ACA's increased CHIP matching rates could facilitate movement of children from Medicaid into CHIP. This combination of factors could theoretically lead to different Medicaid spending growth rates in expansion states relative to nonexpansion states, as the two groups of states experience different enrollment shifts between Medicaid and CHIP as a result of the ACA.

20. Robin Rudowitz, Samantha Artiga, and Rachel Arguello, *Children's Health Coverage: Medicaid, CHIP and the ACA* (Menlo Park, CA: Kaiser Commission on Medicaid and the Uninsured, 2014).
21. Rudowitz, Artiga, and Arguello, *Children's Health Coverage*.

However, an examination of the data on CHIP enrollment and spending demonstrates that such enrollment shifts do not account for the large difference between expansion and nonexpansion states in their post-ACA growth rates of Medicaid spending on children.

As table 7 indicates, there is a striking difference in child-enrollment patterns in CHIP between expansion and nonexpansion states. From FY 2013 to FY 2019, expansion states' CHIP enrollments increased by 26.6%, while their child enrollment in Medicaid (see table 4) declined by 3.4%. This contrasts with nonexpansion states, where rates of enrollment growth remained steady for the two programs: a 5.3% increase in child enrollment in Medicaid (see table 4), paired with a 6.7% increase in child enrollment in CHIP. This raises the question of whether, in expansion states, children with greater health spending needs moved into CHIP at the same time children with fewer health spending needs were enrolled in Medicaid, thereby reducing the growth of Medicaid spending on children.

Although expansion states' per capita spending growth rate in CHIP did increase by much more (22.3%) than it did for children in Medicaid (5.9%), this was not the reason that expansion states' Medicaid spending on children lagged behind nonexpansion states'. First, nonexpansion states increased per capita spending on children in CHIP by an even greater amount (24.3%). Second, a closer look at the data does not support the hypothesis that CHIP enrollment preferentially selected children with greater spending claims, thereby causing slower growth of spending on children under Medicaid in expansion states (see table 8).

As table 8 shows, although per capita spending growth in expansion states' CHIP programs exceeded their rate of spending growth on children on Medic-

TABLE 7. PER CAPITA CHIP BENEFIT SPENDING ON CHILDREN, EXPANSION VERSUS NONEXPANSION STATES

State Group	Percent Change in CHIP-Enrolled Children (FY 2013–FY 2019)	Average Annual Percent Change in Per Capita CHIP Spending on Children (FY 2013–FY 2019)	Percent Change in Per Capita CHIP Spending on Children (FY 2013–FY 2019)
Nonexpansion states (total)	+6.7%	+3.7%	+24.3%
January 2014 expansion states (total)	+26.6%	+3.4%	+22.3%

Note: Per capita spending on children in FY 2013 was calculated by the authors on the basis of the assumption that per capita spending on adults in CHIP was approximately 50% higher than on children, consistent with contemporaneous patterns in Medicaid in these expansion states.
Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *Report to Congress on Medicaid and CHIP*, June 2014, 27n30, 32, table 1-A-3; and Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, March 2014, 78–79, table 8. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2020, 88–89, 90–91, exhibit 32, exhibit 33.

TABLE 8. MEDICAID AND CHIP CHILD ENROLLMENT AND SPENDING, FY 2013 AND FY 2019

State Group	Program	FY 2013 Enrollment (Millions)	FY 2019 Enrollment (Millions)	% Change	FY 2013 Per Capita Spending	FY 2019 Per Capita Spending	% Change
Nonexpansion states	Medicaid	8.80	9.26	+5.3%	$2,478	$3,041	+22.7%
	CHIP	2.72	2.90	+6.7%	$1,348	$1,675	+24.3%
January 2014 expansion states	Medicaid	13.23	12.79	−3.4%	$2,996	$3,172	+5.9%
	CHIP	4.02	5.09	+26.6%	$1,671	$2,044	+22.3%

Note: Excluding Rhode Island and Vermont, as on other tables.
Source: FY 2013 data for CHIP are from Medicaid and CHIP Payment Access Commission, *Report to Congress on Medicaid and CHIP*, June 2014, 27n30, 32, table 1-A-3; and Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, March 2014, 78–79, table 8. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2020, 88–89, 90–91, exhibit 32, exhibit 33. For Medicaid, FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 Medicaid data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

aid, this was not because children receiving the largest benefits were enrolled in CHIP. Both before and after expansion, expansion states were spending less per capita on children in CHIP than they were in Medicaid. Moreover, even if one were to assume (incorrectly) that Medicaid and CHIP were totally separate programs in all expansion states and that the faster rates of growth in CHIP spending were occurring wholly on top of spending growth in Medicaid, total per capita spending growth on children for the two programs combined would still be only 6.1% from FY 2013 to FY 2019 in the expansion states.[22]

In sum, per capita health benefit spending on children has grown much more slowly in ACA Medicaid expansion states than in other states, a phenomenon that exists separate and apart from differences in movements between states' Medicaid and CHIP programs. Medicaid expansion states have simply slowed their spending growth on children since implementation of the ACA.

SPENDING ON THE AGED

We now turn to the aged, whose care makes up a large proportion of total Medicaid spending. Table 9 compares Medicaid spending on the aged after the ACA in expansion versus nonexpansion states.

22. That is, even if one hypothetically (and wrongly) assumes no overlap in enrollment or spending between Medicaid and CHIP, total Medicaid and CHIP enrollment would have grown from 17.25 million to 17.87 million from FY 2013 to FY 2019 while total combined spending on children would have grown from $46.35 billion to $50.95 billion, resulting in an increase in per capita spending on children from $2,687 to $2,851, or a growth rate of just 6.1%—barely changed from expansion states' Medicaid spending increases (5.9%) on children. Movement in and out of CHIP simply is not large enough to significantly affect states' per capita growth rates for Medicaid spending.

TABLE 9. PER CAPITA MEDICAID BENEFIT SPENDING ON THE AGED, EXPANSION VERSUS NONEXPANSION STATES

		Percent Change, FY 2013–FY 2019			
State Group	Measure	Enrolled Aged	Enrolled Aged as a Share of All Enrollees	Per Capita Spending on the Aged (Annual Average)	Per Capita Spending on the Aged (Total)
Nonexpansion states	Total	+12.4%	+4.3%	+2.9%	+19.0%
	Median	+2.6%	+2.5%	+2.2%	+13.6%
January 2014 expansion states	Total	+20.6%	−12.3%	+1.9%	+11.9%
	Median	+16.7%	−18.4%	+2.0%	+12.7%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, December 2021, 42–43, 57–58, exhibits 15, exhibit 22.

It appears that, after expansion under the ACA, expansion states shifted Medicaid financial resources away from the aged, as they did with children. Expansion states' Medicaid per capita spending growth rates on the aged were, as with children, considerably lower than national averages. However, the data with respect to the aged are less conclusive than they are with respect to children.

Per capita Medicaid spending growth on the aged averaged 19.0% in nonexpansion states from FY 2013 to 2019, the equivalent of 2.9% per year. However, this is partially reflective of exceptionally high growth rates in some especially large states, such as Texas (43.3%). The median growth rate in nonexpansion states was much lower (13.6%), not significantly different from the median growth in expansion states (12.7%). Though national totals are more indicative of overall trends than medians, which overweight small states (such as Wyoming, a nonexpansion state that spent less per capita on the aged in FY 2019 than it did in FY 2013), it is possible that the national growth-rate differential was partially reflective of unusual patterns in certain large states such as Texas, rather than reliably indicative of a systematic difference between expansion and nonexpansion states.

Expansion states' Medicaid spending on the aged grew more slowly than it did in nonexpansion states, but it's also true that once an especially large state (Texas) is excluded, the apparent pattern becomes less pronounced. This is in contrast to the spending on children: for children, the spending pattern differentials were clearly observable throughout the entire distribution of states.

In both expansion as well as nonexpansion states, enrollment of the aged in Medicaid increased significantly from FY 2013 to FY 2019, both in absolute terms and especially in comparison to other nonexpansion groups, such as children.

This increased enrollment of the aged largely reflects demographic shifts, as more of the historically large baby boom generation have entered the ranks of aged Americans. Despite this enrollment surge, Medicaid enrollment of the aged in expansion states nevertheless declined as a percentage of total Medicaid enrollees because of the greater increase in enrollment of nonaged nondisabled adults who were the focus of the ACA's Medicaid expansion.

Health spending per capita is generally much greater for the aged than it is for other demographic groups. In all states nationwide, Medicaid spending per capita on the aged averaged $19,950 in FY 2013 and $23,205 in FY 2019. For comparison, total Medicaid spending per capita was $7,742 in FY 2013 and $8,690 in FY 2019. Medicaid spending per capita on the aged was similar in expansion and nonexpansion states, with expansion states averaging $23,262 in FY 2019 and nonexpansion states averaging $22,088.[23]

SPENDING ON THE DISABLED

Next, we examine trends affecting disabled Medicaid beneficiaries. Table 10 compares Medicaid spending on disabled individuals in expansion versus nonexpansion states.

As table 10 shows, enrollment of the disabled in Medicaid declined sharply in expansion states, not only as expected as a percentage of the whole—the whole

TABLE 10. PER CAPITA MEDICAID BENEFIT SPENDING ON THE DISABLED, EXPANSION VERSUS NONEXPANSION STATES

		Percent Change, FY 2013–FY 2019			
State Group	Measure	Enrolled Disabled	Enrolled Disabled as a Share of All Enrollees	Per Capita Spending on the Disabled (Annual Average)	Per Capita Spending on the Disabled (Total)
Nonexpansion states	Total	+2.9%	−4.5%	+3.6%	+23.3%
	Median	+1.0%	−3.2%	+2.8%	+17.8%
January 2014 expansion states	Total	−9.2%	−34.0%	+2.3%	+14.7%
	Median	−5.2%	−37.3%	+3.8%	+25.0%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

23. FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, December 2019, 44–45, 62–63, exhibit 15a, exhibit 22a. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Program Statistics*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

having been increased by the enrollment of additional nondisabled, nonaged adults under the ACA—but also in absolute terms. Disabled enrollees in expansion states declined from 4.22 million to 3.84 million from FY 2013 to FY 2019. This might appear at first glance to be attributable to the general improvement in economic conditions as financial markets gradually recovered from the Great Recession of 2007 to 2009, but there was no analogous decline in disabled enrollment in nonexpansion states. In nonexpansion states, enrollment of the disabled in Medicaid continued to grow gradually from FY 2013 to FY 2019.

As with children and the aged, spending on the previously eligible population of disabled individuals grew more slowly in expansion states than in nonexpansion states. The differentials in enrollment patterns for the disabled between expansion and nonexpansion states—unlike those for children and the aged—were at least as striking as the differentials in the rate of per capita spending growth. In other words, in expansion states, the slower rate of total spending growth on the disabled was driven as much by the declining enrollment of this population as it was by slower growth of per capita spending.

In both nonexpansion states and expansion states, the clustering of high-population states toward one end of the spending distribution caused total per capita spending growth rates for the disabled to differ from states' median spending growth rates. In nonexpansion states, more rapid growth of spending in large states such as Texas caused total per capita spending growth to exceed median spending growth among nonexpansion states. Among expansion states, the trend was in the opposite direction, with slower rates of per capita spending growth in large states such as California, New York, and Ohio, causing total growth nationally to be less than the median spending growth rate.

In sum, per capita Medicaid spending growth on the previously eligible disabled in expansion states lagged behind growth within nonexpansion states, but there was an even more striking pattern of reduced enrollment of the disabled in expansion states.

SPENDING ON NONAGED NONDISABLED ADULTS

If—as shown in tables 1 and 2—per capita Medicaid spending growth subsequent to the ACA has been approximately as rapid in expansion states as in nonexpansion states but—as shown in tables 4, 9, and 10—expansion states have slowed the growth of their Medicaid spending on children, the aged, and the disabled, where have expansion states increased spending more rapidly? The answer is,

on nonaged nondisabled adults—not coincidentally, the beneficiary group that is the focus of the ACA's Medicaid expansion.

Table 11 shows that not only have expansion states dramatically increased their enrollment of nonaged nondisabled adults relative to nonexpansion states, they have also increased Medicaid spending per capita on this population more rapidly.

Several noteworthy trends are illustrated in table 11. First, there was an enormous increase in nonaged nondisabled adult Medicaid enrollment in expansion states, an unsurprising outcome given that this population was the focus of the ACA's expansion.[24] This resulted in nonaged nondisabled adults making up a much larger share of Medicaid enrollees in FY 2019 relative to FY 2013 in expansion states.

Interestingly, there was also a substantial increase in nonaged nondisabled adult enrollment in nonexpansion states, resulting in this population making up a higher fraction of Medicaid enrollment in FY 2019 than in FY 2013. This might possibly be a spillover (or "woodwork") effect of the ACA, stimulating increased enrollment of the previously eligible adult population even in states that did not expand eligibility criteria after the ACA.

TABLE 11. PER CAPITA MEDICAID BENEFIT SPENDING ON NONAGED NONDISABLED ADULTS IN EXPANSION VERSUS NONEXPANSION STATES

		Percent Change, FY 2013–FY 2019			
State Group	Measure	Enrolled Nonaged Nondisabled Adults	Enrolled Nonaged Nondisabled Adults as a Share of All Enrollees	Per Capita Spending on Nonaged Non-disabled Adults (Annual Average)	Per Capita Spending on Nonaged Non-disabled Adults (Total)
Nonexpansion states	Total	+22.6%	+13.8%	+0.0%	+0.2%
	Median	+16.2%	+19.2%	−1.7%	−9.8%
January 2014 expansion states	Total	+143.6%	+77.1%	+1.4%	+8.8%
	Median	+139.9%	+105.1%	+1.6%	+10.3%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 58–59, 62–63, exhibit 15a, exhibit 21a, exhibit 22a. Per capita spending on adults for FY 2013 was calculated by the authors from these data after noting apparent inconsistencies between the per capita spending levels indicated in exhibit 22a and those that would be computed from data provided on exhibits 15a and 21a and after finding that relying exclusively on the data in 22a resulted in discrepancies between computed national average and median spending growth rates. FY 2019 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 57–58, exhibit 15, exhibit 22.

24. As noted earlier in this paper, several expansion states covered some such adults, especially parents, even before the ACA. However, despite the existence of some previous coverage in expansion states, the ACA dramatically increased Medicaid enrollment among nonaged nondisabled adults in expansion states, as it was intended to do.

Among nonexpansion states, the median per capita spending growth rate on adults was negative even though nonexpansion states' total per capita spending on adults slightly increased. This largely reflects the fact that some of the nonexpansion states with larger adult enrollments, such as Texas and Wisconsin, exhibited positive per capita spending growth on adults, while at the same time per capita spending on adults declined in a number of smaller nonexpansion states.

In expansion as well as nonexpansion states, per capita spending on nonaged nondisabled adults grew more slowly than it did on the disabled, on the aged, and (in nonexpansion states) on children. In nonexpansion states, per capita spending on nonaged nondisabled adults remained essentially flat between FY 2013 and FY 2019, with the increase in their total spending on adults arising almost solely from increased enrollment. As shown in table 3, these factors were offsetting: nonexpansion states' spending on adults remained nearly the same (as a share of their total Medicaid spending) in FY 2019 as in FY 2013.

The relatively slow growth of post-ACA spending per capita on adults in both expansion and nonexpansion states is unremarkable in that the ACA was expected to facilitate the enrollment of a nonaged, nondisabled adult population that is relatively healthy compared to the poorer, generally sicker adults who were enrolled before the ACA's implementation.

As noted earlier, table 3 illustrates that, in nonexpansion states, the distribution of Medicaid program spending between children, adults, the disabled, and the aged exhibited no significant changes between FY 2013 and FY 2019. Table 12 illustrates the contrasting situation in expansion states, where new spending has been concentrated on the ACA's target expansion group of nonaged nondisabled adults. As the earlier tables have shown, this redistribution is not solely a function of increased enrollment of nonaged nondisabled adults under

TABLE 12. PERCENTAGE OF TOTAL MEDICAID EXPENDITURES BY ELIGIBILITY GROUP, JANUARY 2014 EXPANSION STATES

Enrollee Group	% of Total Enrollment (FY 2013)	% of Total Enrollment (FY 2019)	% of Total Expenditures (FY 2013)	% of Total Expenditures (FY 2019)
Child	48.0%	33.7%	19.1%	14.2%
Adult	26.9%	47.6%	17.5%	32.2%
Disabled	15.3%	10.1%	41.6%	31.3%
Aged	9.8%	8.6%	21.8%	20.9%

Source: FY 2013 data are from Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 44–45, 58–59, exhibit 15a, exhibit 21a. FY 2019 data are from *MACStats: Medicaid and CHIP Data Book*, December 2021, 42–43, 54–55, exhibit 15, exhibit 21.

the ACA. Per capita spending on such adults has also increased more in expansion states than in nonexpansion states, whereas per capita spending growth on children has been much lower in expansion states.

Table 12 shows how expenditures within expansion states have shifted from children, the disabled, and the aged to nonaged nondisabled adults. A brief note may be in order to explain why the percentages of total expenditures on children, the disabled, and the aged in expansion states have not declined as much as their respective shares of enrollment have declined. This is primarily because per capita spending on nonaged nondisabled adults is less than per capita spending in Medicaid as a whole, with the result that additions of nonaged nondisabled adults to the beneficiary rolls tend to reduce total per capita Medicaid spending.

As shown earlier in this study, per capita Medicaid spending growth on children, the disabled, and the aged has been substantially less in expansion states than in nonexpansion states, though this is not immediately apparent from table 12.

IS MEDICAID EXPANSION THE PRIMARY DRIVER OF INTERSTATE SPENDING GROWTH DIFFERENTIALS?

In analyzing and discussing these data, care must be taken not to conflate Medicaid spending with the provision of healthcare. A state that spends more per capita on Medicaid than another is not necessarily providing more or better healthcare; rather, healthcare prices may simply be higher in that state, or perhaps there are greater inefficiencies in the provision of care. We analyze only spending patterns; a different and more rigorous study, preferably using microdata on individual Medicaid beneficiaries, would be required to determine whether observed shifts in spending patterns are indicative of shifts in the provision of healthcare itself.

Nevertheless, clear and pronounced shifts in the distribution of financial resources have occurred subsequent to Medicaid expansion under the ACA, at least in states that began their expansions on the earliest possible date (January 1, 2014). Whereas in nonexpansion states the distribution of Medicaid spending between children, the aged, the disabled, and nonaged nondisabled adults has remained essentially unchanged subsequent to the ACA, that is not true of the states that have expanded Medicaid. In expansion states, rather, there has been a substantial shift in financial resources away from children and to a lesser extent from the aged and the disabled toward nonaged nondisabled adults. This should not be entirely surprising, because the ACA was designed to expand coverage

specifically for nonaged nondisabled adults. However, to date there has been little recognition and commentary about how specific enrollee groups, such as poor children, are receiving relatively less Medicaid benefit spending in expansion states after the ACA's implementation.

The gap between the growth of Medicaid spending on children in nonexpansion states and expansion states is so significant that it is important to check whether it is an artifact of the particular bases of comparison we employ in this study. These checks demonstrate that the result is not an artifact of our comparing nonexpansion states only with those states that expanded Medicaid starting in January 2014.[25] The qualitative difference is still visible if the analysis is extended to compare all expansion states to all nonexpansion states, irrespective of how recently a state began expansion and without regard to data-reliability issues in such states as Rhode Island and Vermont.

Whereas per capita Medicaid spending on children grew over FY 2013 to FY 2019 by 22.7% in nonexpansion states but by only 5.9% in this study's pool of states (i.e., states that expanded in January 2014), the cumulative FY 2013 to FY 2019 growth rate for all expansion states regardless of expansion date or data reliability was 12.5%. This figure of 12.5% is likewise far below nonexpansion states' cumulative per capita spending growth and is closer to the 5.9% growth rate for expansion states than it is to that of nonexpansion states. The fact that the cumulative growth rate of spending on children rises when states that expanded Medicaid more recently are included in the expansion group is consistent with the finding that states have tended to exhibit slower growth of spending on children after adopting the ACA's Medicaid expansion; this differential becomes greater the longer expansion is in effect. In any event, the substantially slower growth of expansion states' Medicaid spending on children is observable even as more expansion states are included in the analysis.

We also examine the data to determine whether the observed differential between expansion and nonexpansion states is an illusion borne of the specific years chosen in a data environment in which large annual fluctuations in states' reported spending levels could render the choice of comparison years crucial. To test this, we also examine per capita spending on children for FY 2018 and for FY 2014 in the states for which these data were available. Comparisons were made for per capita spending growth spanning the years FY 2013 to FY 2018, FY 2013 to FY 2019, FY 2014 to FY 2018, and FY 2014 to FY 2019. Because MACStats FY 2014 data were not available for all states, these calculations could not be

25. As previously specified, excepting Rhode Island and Vermont, because of data reliability limitations.

directly totaled or averaged across states.[26] However, the medians of expansion states' growth rates over all these time periods taken together were still less than half what they were in nonexpansion states (7.0% vs. 16.1%). This is also true of the "median of the medians" (i.e., first calculating each state's median growth rate over the four different periods and then determining the medians of those medians among the state groups). Nonexpansion states' growth rates for FY 2013 to FY 2018 and FY 2014 to FY 2018 were lower than they were over FY 2013 to FY 2019 in large part because Florida and Tennessee reported much higher per capita spending on children in FY 2019 than in FY 2018 and, in Tennessee's case, much higher spending in FY 2014 than in FY 2013.[27] Despite the data discontinuities in these two nonexpansion states, the large differential remains between expansion and nonexpansion states when examined over multiple years from multiple vantage points.

Further inspection of the details of individual states presented in table 5 only accentuates the systematic difference between expansion and nonexpansion states in the growth of their per capita spending on children from FY 2013 to FY 2019. The expansion states with the largest numbers of child enrollees (California and New York) spent less per capita on children in FY 2019 than in FY 2013, whereas the nonexpansion states with the largest numbers of child enrollees (Texas and Florida) spent 23% and 40% more in FY 2019, respectively. The pattern was also visible at the other end of the population spectrum: the nonexpansion state with the fewest child enrollees (Wyoming) saw much faster per capita spending growth on children than the expansion state with the fewest child enrollees (North Dakota). In both sets of states, the states with the highest spending per capita in 2019 tended to be the ones in which per capita spending grew the fastest from 2013 to 2019; however, per capita spending on children grew faster in the high-spending nonexpansion states of Wyoming, Mississippi, and Tennessee than it did in the expansion states with highest per capita spending on children (North Dakota, Oregon, and Delaware). The same was true of the respective sets of states where spending on children per capita was lowest in 2019: there was an aggregate per capita decline from 2013 to 2019 between the expansion states of New York, Nevada, and Illinois, but there was a net increase from 2013 to 2019 in

26. See Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 46–47, 60–61, exhibit 15b, exhibit 21b.
27. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 62–65, exhibit 22a, exhibit 22b; Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 57–58, exhibit 22; and Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2020, 57–58, exhibit 22.

the lowest-spending nonexpansion states that included Georgia, Alabama, and South Carolina. Whether we examine high-enrollment states, low-enrollment states, high-spending states, or low-spending states, the pattern is still visible: spending on children grew more slowly in expansion states.

The data were also examined to determine whether other factors, such as differences in managed-care penetration, might account for the different spending growth rates between expansion and nonexpansion states. That is to say, if the penetration of managed-care networks into Medicaid has a significant influence upon the rate of per capita Medicaid cost growth in a state, and if there are also significant differences between expansion and nonexpansion states in their average levels of managed-care penetration, then a cost-growth difference seemingly attributable to expansion may actually be attributable to differences in managed-care penetration.

Examination of the data, however, reveals no evidence that managed-care penetration has significantly influenced the different per capita spending growth rates of expansion versus nonexpansion states. Table 13 displays these data. Among states with higher-than-average levels of managed-care penetration, the change in per capita spending levels from FY 2013 to FY 2020 for states' previously eligible (pre-2014) Medicaid populations, as a percentage of national average per capita spending, was nearly the same in expansion states (−3.8 percentage points) as it was in nonexpansion states (−3.0 percentage points).[28] Moreover, among states with lower-than-average levels of managed-care penetration, the FY 2013 to FY 2020 change in per capita spending levels for states' previously

TABLE 13. FY 2013–FY 2020 CHANGE IN PER CAPITA SPENDING ON PRE-ACA-ELIGIBLE MEDICAID ENROLLEES

Change as a Percentage of Average National Healthcare Spending		
Managed-Care Group	ACA Expansion Group	Percentage-Point Change
Higher-than-average managed-care penetration	January 2014 expansion states	−3.8
	Nonexpansion states	−3.0
Lower-than-average managed-care penetration	January 2014 expansion states	−8.6
	Nonexpansion states	−13.1

Note: For the purpose of this comparison, we include in January 2014 expansion states all states that expanded Medicaid on January 1, 2014, with the exception of Rhode Island, because of the data-reliability problems cited in Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021.

28. For the purpose of this comparison, we include in January 2014 expansion states all states that expanded Medicaid on January 1, 2014, with the exception of Rhode Island, because of the data reliability problems cited in Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021.

eligible (pre-2014) Medicaid populations actually showed a greater relative drop in nonexpansion states (−13.1 percentage points) than in expansion states (−8.6 percentage points). Managed-care penetration is not the reason that Medicaid spending on children in expansion states is lagging behind that of nonexpansion states. In any case, it would have been far from clear why or how differences in managed-care penetration would cause a redistribution of resources away from children to other beneficiary groups.

In sum, after looking at the data from a variety of angles and considering various alternative explanations, the conclusion remains: Medicaid expansion under the ACA is associated with a shift of Medicaid's financial resources away from children, a shift that appears in expansion states rather than in nonexpansion states.

CONCLUSIONS

The expansion of Medicaid per the terms of the ACA to cover nonaged nondisabled adults with incomes above the FPL has been associated with a shift of Medicaid program financial resources in expansion states away from children and toward other beneficiary groups. In states that chose to forego Medicaid expansion, per capita Medicaid spending on children rose by 22.7% from FY 2013 to FY 2019, qualitatively comparable to other US healthcare spending growth, whereas in states covered in this study that expanded in January 2014, per capita spending growth on children was a mere 5.9% from FY 2013 to FY 2019, far below national healthcare spending growth rates.

It is perhaps unsurprising that a significant expansion of Medicaid to serve many additional beneficiaries, without a corresponding increase in the supply of providers available to serve those beneficiaries, should reduce the expenditure of financial resources on Medicaid's previously eligible populations, which include children. However, Medicaid program expenditures on children seem to have been disproportionately constrained by Medicaid expansion, even relative to other previously eligible categories.

This shift of Medicaid's financial resources away from low-income children is potentially very important. Children are inherently vulnerable and are not in a position to advocate for their own share of medical attention. This inability to advocate for themselves could be one factor contributing to children receiving less resources compared with others when competition increases for Medicaid's limited supply of services. To be deprived of adequate medical attention early in life can carry potentially costly implications lasting for several future decades. It is important for policymakers to be aware of the extent to which

Medicaid's financial resources are being shifted away from children's healthcare as a byproduct of program expansion.

The research performed for this study does not permit an explanation for the shift of financial resources away from children in expansion states that is more than speculative. However, it seems worthy of note that per capita spending on the ACA's targeted expansion group (nonaged nondisabled adults) rose faster in expansion states than in nonexpansion states, whereas per capita spending on other previously eligible population groups (children, the aged, and the disabled) rose faster in nonexpansion states. This seems unlikely to be a coincidence and more likely reflects the policy emphasis in expansion states of making resources newly available to nonaged nondisabled adults.

Although we examine fiscal years that were completed before the onset of the COVID pandemic, these findings are even more concerning in light of developments affecting children during the pandemic. As the United States improvised responses to a massive national health policy challenge that was unprecedented in recent memory, difficult judgment calls were made that imposed additional costs, burdens, and hardships on children. Prominent among these was the closure of in-person learning in many schools throughout 2020 and 2021. As with the pandemic policies in 2020 and afterward, the ACA's expansion of Medicaid was well-intended—specifically intended to promote health. However, well-intended policies can have unintended side effects, and Medicaid expansion may well have had the unintended side effect of causing the perceived needs of adults to be prioritized over those of low-income children.[29]

More research than was conducted for this study would be necessary to determine whether the shift of Medicaid financial resources away from children was felt in rough proportion by all child beneficiaries in expansion states or whether it restrained spending on some beneficiary subgroups more than others. The purpose of this study was more introductory and general: to determine how Medicaid expansion has affected the expenditure of program resources on broad categories of enrollees who were eligible for Medicaid before expansion.

As policymakers contemplate future expansions of Medicaid, or of any other health program featuring a limited supply of health services, they would do well to consider how the opening of services to new enrollees affects the resources available to previously eligible enrollees. Low-income children seem especially worthy of such consideration.

29. Indermit Gill and Jaime Saavedra, "We Are Losing a Generation," *Future Development* (blog), Brookings Institution, January 28, 2022.

APPENDIX A: METHODOLOGY

We examine Medicaid spending on behalf of specific enrollee categories, including children, the aged, the disabled, and nondisabled nonaged adults, from fiscal year FY 2013 to FY 2019, comparing the growth in nonexpansion states to states that commenced Medicaid expansion on January 1, 2014, the first date permitted under the ACA.[30] For reasons detailed in appendix B, these calculations rely primarily on publicly available data published by MACPAC.

We choose FY 2013 as the base year for comparison because it was the last fiscal year before expansion under the ACA became effective, thereby preventing pre-ACA spending trends from obscuring the results. FY 2019 is chosen as the comparison year for several reasons. One is that it was the latest fiscal year for which MACPAC's December 2021 *MACStats: Medicaid and CHIP Data Book* breaks down spending by enrollee categories of children, the aged, the disabled, and other adults.[31] FY 2019 was also the last full fiscal year before the outbreak of the COVID pandemic, which precipitated legislated alterations to Medicaid financing as well as significant changes in national health spending patterns. In addition, the period from FY 2013 to FY 2019 is the longest span of time currently available to measure ACA-induced spending changes within available data limitations, thereby minimizing potential distortions arising from unusual spending patterns in individual years.

We compare spending growth on behalf of specific enrollee populations in nonexpansion states to that of states that commenced expansion on January 1, 2014. We do this for a number of reasons. One is that comparing the earliest expanders among states to nonexpanders permits the longest possible time comparison, from FY 2013 to FY 2019. Another reason is that there are substantial gaps in data availability for intervening years—years that would have to be included if we were to include states that had expanded on other dates.

A third and especially important reason for studying the earliest-expanding (January 1, 2014) states is that states that have expanded have done so over a wide range of effective dates. For example, Virginia, Maine, Idaho, Utah, Nebraska, Oklahoma, and Missouri all commenced expansion in 2019 or later, far too recently to establish clear effects on the distribution of spending comparable to those seen in the larger number of states that expanded on January

30. For purposes of this study, we define nonexpansion states as states that had not expanded Medicaid by the time the data used for this study were collected.
31. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 39–44, 51–52, 54–59, exhibits 14, 15, 18, 19, 21, and 22.

1, 2014.[32] In addition, our analysis of the data finds wide discrepancies in the pace of expansion even among states that initially expanded on the same date. By limiting our analysis to the states that expanded on January 1, 2014, and extending the time window for as long as possible, we minimize the effects of differences in the initial speed and thoroughness of expansion. Finally, comparing nonexpansion states with states that expanded on January 1, 2014, allows comparison of a more similar number of states: specifically, 12 nonexpansion states with 22 expansion states plus the District of Columbia. Including more recent expansion states would have increased the differential between the sizes of the two datasets.

The nonexpansion states included in our study are Alabama, Florida, Georgia, Kansas, Mississippi, North Carolina, South Carolina, South Dakota, Tennessee, Texas, Wisconsin, and Wyoming. The 23 states (and district) that expanded on January 1, 2014, and are included in our study are Arizona, Arkansas, California, Colorado, Connecticut, Delaware, the District of Columbia, Hawaii, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, Washington, and West Virginia.

Two other states that expanded Medicaid on January 1, 2014, are not included in our main study: Rhode Island and Vermont. MACPAC did not report spending breakdowns for Vermont in FY 2019 by enrollee group because of "large differences" in Vermont's reporting through different sources.[33] Similarly, Rhode Island's data for FY 2013 were excluded from MACPAC's reporting "due to data reliability concerns."[34]

Another well-documented challenge in interpreting Medicaid data is that individuals can be rendered both eligible and ineligible for Medicaid at different times during a year and might be enrolled in Medicaid during one part of the year but not another. This causes point-in-time estimates of Medicaid enrollment to fluctuate significantly. It also causes total numbers of individuals enrolled at any point throughout the year to substantially exceed the numbers enrolled on average or at any specific time. To minimize errors arising from this phenomenon, we rely on MACPAC's data for "Full Year Equivalent" (FYE) enrollees, which can also be thought of as average monthly enrollment during a year.

32. "Status of State Medicaid Expansion Decisions: Interactive Map."
33. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 54–58, exhibit 21, exhibit 22.
34. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2019, 58–59, 62–64, exhibit 21a, exhibit 22a.

APPENDIX B: NOTES ON MEDICAID DATA SOURCES

The quality of Medicaid financial data reporting, despite recent improvements, is notoriously variable and inadequate.[35] A substantial separate paper could and perhaps should be written about the process of determining which data sources are most useful for illuminating Medicaid spending practices and about the many gaps in data quality and reliability that interfere with lawmakers' capacity to act as effective stewards of program resources. It is apparent that the incentives facing states in a system in which the federal government finances a majority of every dollar of health insurance benefits that states choose to provide are incommensurate with conscientious financial stewardship.[36] These conflicting incentives result in a distorted policy dynamic in which states develop creative ways to maximize the flow of federal dollars, while at the same time improper payments exceed the levels exhibited in other US health insurance programs.[37] These problems were exacerbated by the ACA, which delivered federal subsidy rates between 90% and 100% for covering the law's Medicaid expansion population. One result of the ACA's further inflating federal match rates has been a surge in improper payments, just one of the many Medicaid policy challenges obscured by inaccurate and delayed reporting.[38]

After choosing among imperfect sources, we have relied in this paper primarily on data compiled and presented by MACPAC in its annually published *MACStats: Medicaid and CHIP Data Book*. MACPAC compiles its data on enrollment and expenditures for different enrollee populations using the Transformed Medicaid Statistical Information System (T-MSIS), sometimes adjusting totals to preserve consistency with aggregate spending reported by states through their CMS-64 Financial Management Reports.[39] MACPAC describes T-MSIS as the "only federal Medicaid data source for person-level information on eligibility,

35. Government Accountability Office, "Medicaid: Data Completeness and Accuracy Have Improved, Though Not All Standards Have Been Met" (report no. GAO-21-196, Government Accountability Office, Washington, DC, January 2021).
36. James Capretta, "Safety Net: Medicaid," American Enterprise Institute, February 8, 2017, https://www.aei.org/spotlight-panels/safety-net-medicaid/.
37. Brian C. Blase, "Medicaid Provider Taxes: The Gimmick That Exposes Flaws with Medicaid's Financing" (Mercatus Research Paper, Mercatus Center at George Mason University, Arlington, VA, February 2016); "Estimated Improper Payment Rates for CMS Programs," Centers for Medicare and Medicaid Services, November 16, 2020, https://www.cms.gov/newsroom/fact-sheets/2020-estimated-improper-payment-rates-centers-medicare-medicaid-services-cms-programs.
38. Brian C. Blase, "Examining the Affordable Care Act's Effect on Coverage," *Health Affairs Forefront* (blog), July 20, 2021.
39. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 39–44, 51–52, 54–59, exhibits 14, 15, 18, 19, 21, and 22.

demographics, service use, and spending" and notes that all states regularly submit T-MSIS data.[40] CMS-64 reports, by contrast, are quarterly reports by states to the Centers of Medicare and Medicaid Services for the purpose of determining federal matching funds.[41] MACPAC also derives additional information from surveys of individuals, including the National Health Interview Survey and the Medical Expenditure Panel Survey.[42]

Complexity is introduced by the fact that CMS-64 Medicaid Budget and Expenditure System (MBES) data are considered most reliable for determining total Medicaid spending by states, given that these are used to "provide an official accounting of state spending on Medicaid for purposes of receiving federal matching dollars," whereas T-MSIS data are "used primarily for statistical purposes." But whereas CMS-64 is "preferred" for understanding total state or federal spending, "it cannot be used for analysis of benefit spending by eligibility group and other enrollee characteristics."[43] T-MSIS, by contrast, can and does track eligibility-group information but gets aggregate program spending totals wrong for a number of reasons, including the fact that states may choose but are not required to report disproportionate share hospital and other supplemental payments through T-MSIS. Consequently, some states include such spending but other states do not. T-MSIS is also regarded as inaccurately quantifying (overstating) payments for drugs, among other problems. In the final analysis, despite CMS-64 Financial Management Reports' reportedly superior accuracy with respect to states' aggregate spending totals, they are not useful for determining enrollment by eligibility group or per capita spending on different enrollee groups, given that the data they contain are replete with errors and inconsistencies.

When conducting an initial examination of quarterly data reported in states' CMS-64 forms, we repeatedly discovered instances in which MBES CMS-64 data were unreliable for quantifying enrollment by eligibility group or for

40. Aaron Pervin and Chris Park, *Update on Transformed Medicaid Statistical Information System (T-MSIS)* (Washington, DC: Medicaid and CHIP Payment Access Commission, 2021), https://www.macpac.gov/wp-content/uploads/2021/04/Update-on-Transformed-Medicaid-Statistical-Information-System-T-MSIS.pdf.
41. Chris Park, *Interpreting Trends in Spending Data: Impact of Prior Period Adjustments* (Washington, DC: Medicaid and CHIP Payment Access Commission, 2020), https://www.macpac.gov/wp-content/uploads/2020/01/Interpreting-Trends-in-Spending-Data-Impact-of-Prior-Period-Adjustments.pdf.
42. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 134.
43. Medicaid and CHIP Payment Access Commission, *MACStats: Medicaid and CHIP Data Book*, December 2021, 139.

spending on different groups, both in the aggregate and on a per capita basis. For example, Arkansas's quarterly reports in FY 2015 showed that on average over 31,000 of its expansion population consisted of "not newly eligible" enrollees, whereas the analogous numbers provided on Arkansas's FY 2018 quarterly reports averaged a mere 420.[44] The state of Washington's per capita expenditures on the expansion population, as derived from its CMS-64 forms, dropped suddenly from $5,768 to $3,971 from FY 2015 to FY 2016 and then suddenly soared from $5,357 to $8,565 from FY 2018 to FY 2019. Its reported expansion enrollment increased at the same time that reported expansion expenditures plunged (FY 2015–FY 2016), while on the other hand its reported expansion enrollment decreased at the same time its reportedly associated expenditures sharply increased (FY 2018–FY 2019).[45] In these and several other states, reported patterns of enrollment and expenditures within the MBES data system are too inconsistent to appear plausible or useful.

The federal government is aware of shortcomings in Medicaid data and has worked in recent years to improve the situation. Federal budget personnel know to be skeptical of MBES enrollment numbers, as states' emphasis in filling out these reports is on securing federal matching support rather than on illuminating patterns affecting eligibility groups, with certain states more notorious than others in their unreliability. The Centers for Medicare and Medicaid Services (CMS) has also set up a data quality assessment site that evaluates the quality of data reporting by state and by subject.[46] There, visitors can find a US map and can click on any state to learn CMS's view of how well each state is doing with respect to various categories of data reporting. These facilities are gradually improving the quality of Medicaid data, but there is a substantial distance to go before legislators have the tools they need to ensure that Medicaid expenditures adequately serve public policy goals. Operating within this imperfect data environment, we find that MACPAC's presentations of data gleaned from T-MSIS reports, reconciled with aggregate spending totals reported on forms CMS-64, were most useful for tracking spending on different eligibility groups.

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44. "Expenditure Reports from MBES/CBES," Medicaid.gov, accessed July 29, 2022, https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html; "Medicaid Enrollment Data Collected through MEBS," Medicaid.gov, accessed July 29, 2022, https://www.medicaid.gov/medicaid/national-medicaid-chip-program-information/medicaid-chip-enrollment-data/medicaid-enrollment-data-collected-through-mbes/index.html.
45. "Expenditure Reports from MBES/CBES"; "Medicaid Enrollment Data Collected through MEBS."
46. "Exploring Data Quality (DQ) Assessments by State," Medicaid.gov, accessed July 29, 2022, https://www.medicaid.gov/dq-atlas/landing/states/info.

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