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EVIDENCE REVIEW

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Expanded Income Eligibility for Health Insurance

Evidence Review Findings: Effective / Roadmap Policy

Expanding Medicaid eligibility to include most individuals with incomes up to 138 percent of the federal poverty level increases access to needed health care services and improves financial wellbeing. Studies on the effect of Medicaid expansion on birth outcomes show this policy's potential to reduce disparities, but the findings are mixed.

States can employ a number of strategies to increase health insurance coverage for their residents. One key policy option that has been widely studied is the expansion of Medicaid income eligibility to include most adults with incomes up to 138 percent of the federal poverty level (FPL).

Medicaid is a joint federal-state program that provides health insurance coverage to low-income people. Medicaid is an open-ended entitlement, which means that individuals who meet eligibility criteria qualify to receive health insurance coverage.[1] States administer Medicaid and have the flexibility to determine eligibility thresholds for the types of covered services and populations of individuals that qualify for Medicaid coverage (including childless adults, parents, and pregnant individuals). States' decisions to expand Medicaid up to 138 percent of the FPL increases the number of adults who are entitled to Medicaid coverage.[1]

Decades of research in the field of child development have made clear the conditions necessary for young children and their families to thrive.[2] These conditions are represented by our eight policy goals, shown in Table 1. The goals positively impacted by Medicaid expansion are indicated with a filled circle, and the goals theoretically aligned (but without evidence of effectiveness from strong causal studies) are indicated with an unfilled circle.

Table 1: Impacts of Medicaid Expansion on Policy Goals

Positive Impact	Policy Goal	Overall Findings
●	Access to Needed Services	Positive impacts on insurance coverage, mixed impacts on health care use
	Parents' Ability to Work	(*Policy goal outside the scope of this review*)
●	Sufficient Household Resources	Positive impacts on sufficient resources, especially medical debt and spending on health
●	Healthy and Equitable Births	Mixed impacts on adverse birth outcomes overall, with some evidence of reducing racial disparities
○	Parental Health and Emotional Wellbeing	Mostly null impacts on parental health and emotional wellbeing
	Nurturing and Responsive Child-Parent Relationships	(*Policy goal outside the scope of this review*)
	Nurturing and Responsive Child Care in Safe Settings	(*Policy goal outside the scope of this review*)
○	Optimal Child Health and Development	Trending mixed impacts, with positive impacts on reducing child neglect rates

What Is Expanded Income Eligibility for Health Insurance?

The expansion of Medicaid income eligibility up to 138 percent of the federal poverty level (FPL) is the most rigorously studied state policy choice to increase health insurance coverage for low-income individuals. The federal Patient Protection and Affordable Care Act (ACA) was signed into law in 2010.[3] The ACA expanded Medicaid income eligibility for most adults up to 138 percent of the FPL, beginning in 2014. The ACA also established the Marketplace and provided individuals with incomes above 100 percent of the FPL with the option to receive subsidies and purchase health insurance in the Marketplace.[4] The expansion of Medicaid provided low-income childless adults and parents with incomes up to 138 percent of the FPL with the ability to qualify for health insurance based on income eligibility.[1]

However, in 2012, the Supreme Court ruled in *National Federation of Independent Business v. Sebelius* that the federal expansion of Medicaid was unconstitutional.[5] This decision[i] made the expansion of Medicaid optional for individual states and removed the risk of states losing other federal Medicaid funding, as originally stipulated in the ACA. As a result, Medicaid expansion has

[i] When the ACA was signed into law, a provision stipulated that states needed to expand Medicaid to adults up to 138 percent of the federal poverty level or they would lose all existing Medicaid funding provided by the federal government. The US Supreme Court ruled that the expansion requirement violated the Spending Clause of the US Constitution because states would need to fund their state share to cover health insurance for the expansion population to comply with the law.[6]

not been implemented in all states and the income eligibility criteria varies depending on states' Medicaid expansion choices.

States that expanded Medicaid provide health insurance coverage to most adults with incomes up to 138 percent of the FPL. States that have not expanded Medicaid do not cover any childless, nonelderly adults who do not have disabilities,[ii] regardless of income level. The income eligibility guidelines for parents in nonexpansion states ranges from approximately 17 percent of the FPL in Texas to 100 percent of the FPL in Wisconsin for a family of three.[7] Regardless of state decisions to expand Medicaid, low-income individuals who earn between 100 percent to 400 percent of the federal poverty level are eligible for subsidies,[4] which can offset the cost of a health insurance plan purchased on the Marketplace.

The Medicaid income eligibility threshold for pregnant people[iii] is set at a higher income level than for childless adults or parents in all but three states. The pregnancy income eligibility threshold for pregnant people ranges across states from 138 percent to 380 percent of the FPL.[9] Pregnancy-related Medicaid coverage typically ends at 61 days postpartum and individuals with incomes at 100 to 400 percent of the FPL can purchase health insurance on the Marketplace.[iv] In expansion states, parents with incomes at or below 138 percent of the FPL qualify for traditional Medicaid, and in nonexpansion states, new parents' eligibility varies based on state income eligibility thresholds. Overall, Medicaid is the largest provider of maternity care and covers 42.1 percent of all births in the US.[1,4]

Table 2 provides a snapshot comparison of how Medicaid income eligibility requirements typically vary during the perinatal period in expansion versus nonexpansion states. A more detailed description of income eligibility guidelines by state is provided in Table 4 at the end of this review.

[ii] With the exception of Wisconsin, which provides coverage for adults with incomes up to 100 percent of the FPL.
[iii] Pregnant people reflects the gender-inclusive term instead of the term pregnant women. Although pregnant people is preferred to respect all individuals who are pregnant and may become pregnant, this Evidence Review follows the policy and research-specific language, which most often uses women and mothers.
[iv] Extending Medicaid beyond 60 days is a proposed policy distinct from state Medicaid expansion and is outside the review scope. States may be more likely to extend Medicaid coverage to postpartum women past 60 days following the passage of the American Rescue Plan Act of 2021, which created a state option to provide health insurance coverage.[10]

Table 2: Summary of Medicaid Income Eligibility Requirements During the Perinatal Period[v]

	Before Pregnancy	During Pregnancy (Through 60 Days Postpartum)	After Pregnancy (61 Days Postpartum)
Expansion States	• Childless adults with incomes up to 138 percent of the FPL are eligible for Medicaid[vi] • Parents with incomes up to 138 percent of the FPL are eligible for Medicaid[vi]	• Pregnancy Medicaid income eligibility is determined by each state, and ranges from 138 percent to 380 percent of the FPL in expansion states	• Parents with incomes up to 138 percent of the FPL are eligible for Medicaid[vi] • Some parents can move to the Marketplace and be eligible for subsidies (100% to 400% of the FPL) to purchase health coverage
Nonexpansion States	• Childless adults are ineligible for Medicaid • Parents' income eligibility for Medicaid is determined by each state, and ranges from 17 percent to 100 percent of the FPL in nonexpansion states	• Pregnancy Medicaid income eligibility is determined by each state, and ranges from 138 percent to 306 percent of the FPL in nonexpansion states	• Parents' income eligibility for Medicaid is determined by each state, and ranges from 17 percent to 100 percent of the FPL • Some parents can move to the Marketplace and be eligible for subsidies (100% to 400% of the FPL) to purchase health coverage

Who Is Affected by Medicaid Expansion?

The group most affected by Medicaid expansion are individuals currently in the coverage gap in nonexpansion states. Kaiser Family Foundation (KFF) defines the coverage gap as individuals with: "incomes above their state's eligibility for Medicaid but below poverty, the minimum income eligibility for tax credits through the ACA Marketplace" (pg. 1).[12] In expansion states, most nonelderly childless adults (including childless women of reproductive age)[vii] and parents qualify for Medicaid, if their incomes are at or below 138 percent of the FPL.[8]

The number of newly income-eligible adults varied based on each state's eligibility threshold prior to Medicaid expansion. For example, Nebraska expanded parents' income eligibility threshold from

[v] Table 2 excludes state decisions to extend Medicaid coverage to new mothers past 60 days postpartum. As of August 2021, over 25 states took legislative or regulatory action to extend this Medicaid coverage, but the coverage would not be effective in any states until 2022.[11]
[vi] The District of Columbia is an exception and covers childless adults up to 215 percent of the FPL and parents up to 221 percent of the FPL. Connecticut has also increased parent income eligibility to 160 percent of the FPL.[8]
[vii] Reproductive age is defined as ages 15 to 44; state Medicaid expansion covers adults ages 19 to 64.

63 percent to 138 percent of the FPL, compared to Virginia which increased from 31 percent to 138 percent of the FPL.[13] Overall, Medicaid provides health insurance for one in five Americans in the US.[1] If all nonexpansion states increased their income eligibility threshold to 138 percent of the FPL, 2.2 million adults in the coverage gap would qualify for health insurance.[12]

Medicaid expansion through the ACA narrowed racial disparities in the rate of nonelderly adults without health insurance coverage, but racial disparities continue. Among the two racial and ethnic groups (Hispanic and American Indian/Alaska Native) with the highest uninsurance rates, Medicaid expansion led to a 12 percentage point reduction among Hispanic individuals ages 0 to 64 (from 32.0% to 20.0%), and an 11 percentage point reduction among American Indian/Alaska Natives ages 0 to 64 (from 32.6% to 21.7%). The uninsurance rate decreased across all racial and ethnic groups because of the increase in Medicaid income eligibility among expansion states and the provisions of the Marketplace, but the increases were largest among people of color who have historically lacked insurance at higher rates. Because Black adults ages 19 to 64 are more likely to live in nonexpansion states, they are more likely to be in the coverage gap.[12,15] Only 22 percent of Black adults ages 19 to 64 had Medicaid coverage in nonexpansion states compared to 33 percent in expansion states.[12,15] If all states expanded the income eligibility threshold to 138 percent of the FPL, the gap in health insurance coverage rates across racial and ethnic groups would narrow further.

States' decisions to expand income eligibility for health insurance has increased Medicaid coverage among the expansion population of adults ages 19 to 64. Among the three racial and ethnic groups with the highest (Hispanic and American Indian/Alaska Native) and lowest (White) uninsurance rates, individuals in expansion states had higher Medicaid coverage rates than their nonexpansion counterparts.[15] As of 2019, Hispanic, American Indian/Alaska Native, and White individuals ages 19 to 64 had a 15, 16, and 4 percentage point higher rate of Medicaid coverage compared to their counterparts in nonexpansion states. Disparities persist in the overall uninsurance rates, as outlined previously, but Medicaid expansion is one policy option that has narrowed gaps between individuals with and without health insurance.[15]

What Are the Funding Options for Medicaid Expansion?

Medicaid is funded by both the federal government and states. The share of the total cost of Medicaid that the federal government and states pay is determined by the Federal Medical Assistance Percentage (FMAP).[16] The FMAP is calculated using a formula set by the federal Medicaid statute based on each state's per capita income. If a state has a higher per capita income, the federal government provides a smaller share of funds to cover the cost of Medicaid.[1,16]

The ACA requires the federal government to pay for 90 percent of the costs associated with providing health insurance to the expansion population. States are responsible for paying the remaining 10 percent, and often use general revenues, provider taxes, cigarette and alcohol taxes, and other dedicated revenues and government contributions.[16,17]

The Families First Coronavirus Response Act (FFCRA) amended by the Coronavirus Aid, Relief, and Economic Security Act (CARES) Act provides states with a temporary 6.2 percentage point increase in their regular FMAP during the COVID-19 Public Health Emergency (PHE) starting in 2020.[18] For example, according to Georgetown University's Center for Children and Families (CCF), if a state

regularly receives a 57 percent FMAP, this amount increases to a 63.2 percent FMAP during the PHE.[16] The 6.2 percentage point increase in the FMAP will be available to states until March 2022.[19]

The American Rescue Plan Act of 2021 (ARPA) provides an additional 5 percentage point increase to the regular FMAP for a total of 2 years if states expand Medicaid. In the above example, CCF noted that if a state is receiving a FMAP of 63.2 percent, this would increase to 68.2 percent as a result of expansion.[10,16] The 5 percentage point FMAP increase from ARPA is only available to states that expand Medicaid during the PHE, however, the increase would be available for 2 years after expansion, regardless of when during the PHE states expand Medicaid.[18] The additional ARPA federal funding, according to the Kaiser Family Foundation, would balance the state's share of the cost of expanding the income eligibility for health insurance to childless adults and parents.[19]

Why Should Medicaid Expansion Be Expected to Impact the Prenatal-to-3 Period?

Medicaid expansion provides health insurance coverage to individuals who did not previously qualify for health insurance based on their income. Newly income-eligible adults may have improved health outcomes (e.g., quality of care and use of health care services) because they can now access and afford comprehensive health care.[20,21] Expanding income eligibility for health insurance through Medicaid may also improve financial outcomes; if more adults can access health insurance, they will be less likely to pay catastrophic medical bills or out-of-pocket premiums.[20]

Specific to the prenatal period, expanding income eligibility for health insurance may improve birth outcomes. Before Medicaid expansion broadened the income eligibility threshold, low-income women without children may have had more limited access to family planning services, preventative care before conception, and prenatal care in the earliest stages of pregnancy.[43] Pregnant women who receive early and regular prenatal care are more likely to have healthy infants.[22,23] Early and regular prenatal care provides a window of opportunity for providers to assess and treat health conditions prior to birth, which should lead to safer and healthier pregnancies and births, resulting in lower rates of birth complications, maternal and infant mortality, low birthweight, and preterm birth.[22,23]

The income eligibility guidelines during the postpartum period may cause interruptions in health insurance coverage after childbirth known as perinatal churn, which can restrict access to care during the critical postpartum period.[24] State Medicaid expansion decreases the gap in income eligibility between nonpregnancy and pregnancy Medicaid, which reduces the number of individuals susceptible to perinatal insurance churn compared to nonexpansion states.[24,25]

Medicaid expansion may also impact the health and financial wellbeing of families whose incomes fall between the pre-ACA guidelines in their state and 138 percent of the FPL. By providing free or low-cost health services to parents, these families may be less likely to be severely cost burdened by medical costs and less likely to incur medical debt.[20] Families who previously avoided medical care because of the cost may be able to get necessary health care and improve physical and mental health outcomes, which may lead to an increased likelihood of employment and greater earnings. Reduced medical financial burden may also lower family stress and free up resources to spend on other household needs.[20]

What Impact Does Medicaid Expansion Have, and for Whom?

The research on Medicaid expansion, both through the ACA and through earlier state expansions such as Massachusetts's health insurance reform in 2006 and Oregon's randomized controlled trial in 2008, is extensive and focuses on both the overall population and on several specific subgroups. To focus on the impact during the prenatal-to-3 period, this review is limited to those outcomes most relevant to the perinatal period, including perinatal insurance coverage and birth outcomes, and to those studies that focus on people who are of reproductive age or pregnant. Because of the significant impact of poverty on outcomes in early childhood,[25] this review also considers the impact of state expansions of Medicaid on financial security. The bulk of studies that examine financial security include the entire nonelderly population. A comprehensive literature review of all studies related to the passage of the ACA is available through other sources.[20]

The research discussed here meets our standards of evidence for being methodologically strong and allowing for causal inference, unless otherwise noted. Each strong causal study reviewed has been assigned a letter, and a complete list of causal studies can be found at the end of this review, along with more details about our standards of evidence and review method. The findings from each strong causal study reviewed align with one of our eight policy goals from Table 1. The Evidence of Effectiveness table displays the findings associated with state expansions of Medicaid (beneficial, null,[viii] or detrimental) for each of the strong studies (A through KK) in the causal studies reference list. For each indicator, a study is categorized based on findings for the overall study population; subgroup findings are discussed in the narrative. The Evidence of Effectiveness table also includes our conclusions about the overall impact on each studied policy goal. The assessment of the overall impact for each studied policy goal weighs the timing of publication and relative strength of each study, as well as the size and direction of all measured indicators.

Of the 37 causal studies included in this review, nine studies[ix] examined how outcomes differed by race and ethnicity (beyond simply presenting summary statistics or controlling for race/ethnicity). Where available, this review presents causal findings from subgroup analyses. A rigorous evaluation of a policy's effectiveness should consider whether the policy has equitable impacts and should assess the extent to which a policy reduces or exacerbates pre-existing disparities in economic and social wellbeing.

[viii] An impact is considered statistically significant if $p \leq 0.05$. Results with p-values above this threshold are considered null or nonsignificant.
[ix] Studies A, J, T, V, W, DD, EE, GG, and JJ include subgroup analyses based on race and ethnicity.

Table 3: Evidence of Effectiveness for Medicaid Expansion by Policy Goal

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Access to Needed Services	Perinatal Medicaid Coverage	B, D, E, Z, AA, DD, EE, II			Positive
	Postpartum Medicaid or Health Insurance Coverage	I, X, AA, DD			
	Overall Perinatal Uninsurance Rates	C, H, DD	B, E		
	Health Insurance Coverage (Children)	Y			
	Child Visits (Dentist)		HH		
	Receipt of Recommended Prenatal Screenings	D			
	Preconception Counseling	AA			
	Prenatal Care Use	EE	E		
	Perinatal Contraceptive Counseling		Z		
	Postpartum Outpatient Care Use	I, Z			
	Primary Care Use	II	C		

Table 3: Evidence of Effectiveness for Medicaid Expansion by Policy Goal (Continued)

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Sufficient Household Resources	Any Out-of-Pocket Spending on Health	F, G, M, Q, KK	S		Positive
	Medical Debt	F, G	N		
	Reliance on Public Assistance (SNAP)	BB			
	EITC Receipt		BB		
	New Medical Collections	N			
	Family Poverty	CC			
	Catastrophic Medical Expenditures	F, KK			
	Problems Paying Medical Bills	K, L			
	Child Support	JJ			
	Nonmedical Debt		G		
	Cost Barriers to Care	C, K, H, II			
	Delinquency or Bankruptcy	R, N	G		
	Credit Score	N			
	Number of Loans	O			
	Amount Borrowed	O			
	Evictions	P, T			
	Total Housing/ Food Spending		S		

Table 3: Evidence of Effectiveness for Medicaid Expansion by Policy Goal (Continued)

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Healthy and Equitable Births	Preterm Birth	A, FF	E		Mixed
	Low Birthweight	A, FF	E, W		
	Maternal Mortality Ratio	J			
	NICU		FF		
	Infant Mortality	V, GG	W, FF, GG		
Parental Health and Emotional Wellbeing	Prenatal Vitamin Use	D, AA			Mostly Null
	Blood Pressure Medication Use	H			
	Insulin Use	H			
	Smoking		AA		
	Health Behaviors		H, AA		
	Diagnosis of Chronic Disease		H		
	Self-Reported Health		L		
	Hypertension		AA		
	Diabetes		AA		
	Unwanted Pregnancy		AA		
	Depression		AA		
	Mental Distress	L	H		
Optimal Child Health and Development	Neglect Rates	U			Trending* Mixed
	Physical Abuse Rates		U		

** Trending indicates that the evidence is from fewer than two strong causal studies or multiple studies that include only one location, author, or data set.*
Notes: If a study is placed in multiple impact categories (beneficial, null, detrimental) for an indicator, results were inconsistent within the study (e.g., depending on the number of states exposed to the treatment of Medicaid expansion in study GG).

Access to Needed Services

The link between state Medicaid expansion after the Affordable Care Act (ACA) and access to, and use of, preconception and interconception care through greater insurance coverage is key to the theoretical connection between Medicaid expansion and improved birth and health outcomes during the perinatal period. Strong causal studies show mostly positive impacts on perinatal

insurance coverage and mixed impacts on health care use among women of reproductive age and new mothers.

Impacts on Medicaid Coverage

Impacts on Medicaid Coverage During the Preconception Period

Medicaid expansion increases both the likelihood that individuals will have Medicaid and increases insurance rates overall during the perinatal period, with positive benefits found among women of reproductive age.[x] Two national studies found that Medicaid expansion increased Medicaid coverage rates prior to pregnancy. Medicaid expansion led to an 8.6 percentage point increase in the rate of preconception Medicaid coverage among low-income women of reproductive age, in a study published in 2018.[B] A more recent study, published in 2020, found that Medicaid expansion increased Medicaid coverage rates by 11.1 percentage points during the preconception period.[AA]

Individual state Medicaid expansion studies also found beneficial impacts on increasing Medicaid coverage during the preconception period. Ohio's Medicaid expansion led to an 11.8 percentage point increase in the number of first-time mothers enrolled in Medicaid before pregnancy and a 6 percentage point increase among mothers with at least one previous birth.[D] In Oregon, Medicaid expansion led to a 10 percentage point increase in the probability of being enrolled in Medicaid prior to pregnancy .[EE]

Impacts During the Preconception, Interconception, and Postpartum Periods

Medicaid expansion increased the rate of Medicaid coverage during the interconception (between pregnancies) period and postpartum period in national studies, as well. One national study found that Medicaid expansion was associated with a 2.3 percentage point increase in Medicaid-financed births compared to nonexpansion states.[E] Medicaid expansion increased postpartum Medicaid coverage by 8.5 percentage points for low-income women with incomes up to 138 percent of the FPL.[AA] Another national study found that a 100 percentage point increase in the parental Medicaid income eligibility threshold (e.g., increasing income eligibility from 100% to 200% of the FPL) led to a 13.2 percentage point increase in Medicaid coverage among new mothers with incomes up to 100 percent of the FPL.[DD]

Impacts During the Immediate Postpartum Period and Beyond

Two studies found beneficial impacts of individual state Medicaid expansions on postpartum health insurance coverage. Colorado's Medicaid expansion was associated with a nearly 1 month increase in the average length of Medicaid coverage during the postpartum period.[I] A post-expansion study in Ohio examined the difference in Medicaid enrollment between women who qualified for Medicaid based on the higher income threshold for pregnant women (pregnancy-eligible) compared to women who qualified because their incomes were at or below 138% of the FPL. The authors found that pregnancy-eligible women had a 7.7 percentage point increase in the probability of Medicaid enrollment 6 months postpartum compared to women who qualified for Medicaid based on the traditional income eligibility. The increase in Medicaid postpartum health insurance coverage among pregnancy-eligible women was because they were more likely to qualify at the more generous income eligibility post-expansion.[Z]

[x] Studies B, D, E, I, Z, AA, DD, EE, II examined impacts on Medicaid coverage

Finally, Medicaid expansion was found to have positive impacts for mothers beyond the immediate postpartum period. A 2021 national quasi-experimental study found that Medicaid expansion increased the rate of Medicaid coverage up to 16 percentage points among women with any dependent children in states that increased the income eligibility threshold from 90 percent or below the FPL to 138 percent of the FPL under the ACA.[II] Causal evidence from these nine studies suggests Medicaid expansion increased Medicaid coverage for women of reproductive age.

Impacts on Perinatal Uninsurance Rates

Several Medicaid expansion studies examined perinatal uninsurance rates because a goal of the ACA was to reduce overall uninsurance among low-income families (through increases in Medicaid and non-Medicaid health insurance coverage). Three quasi-experimental studies of women of reproductive age found beneficial impacts of Medicaid expansion on reducing perinatal uninsurance rates in expansion states. Medicaid expansion increased the likelihood that low-income women (up to 138 percent of the FPL) reported any health insurance coverage by 9.0 percentage points.[H] Among women with incomes up to 100 percent of the FPL, Medicaid expansion led to a 27.4 percentage point decrease in uninsurance rates among childless women and a 10.1 percentage point reduction for mothers by 2015.[C] Medicaid expansion was associated with an 8.8 percentage point reduction in uninsurance rates among new mothers with incomes up to 100 percent of the FPL, if the income eligibility threshold increased from 100 percent to 200 percent of the FPL.[DD] The variation in the size of beneficial impacts on perinatal uninsurance rates across these three studies is likely driven by the use of different definitions of low-income and the use of different national data sets (e.g., the Behavioral Risk Factor Surveillance System and the American Community Survey).[C,H,DD] In contrast, two studies found null effects on uninsurance rates among women of reproductive age in the post-expansion period.[B,E]

Impacts on Insurance Churn

A recent study examined perinatal insurance churn, defined as a shift between insurance plans or between insurance and uninsurance among low-income women of reproductive age.[X] Perinatal insurance churn is common during the perinatal period because of changes in employment or differing Medicaid income eligibility thresholds between pregnancy and parenting. The authors reported a 10 percentage point decline in the insured–uninsured churn[xi] in expansion states relative to nonexpansion states. Overall, Medicaid expansion was found to have mostly beneficial impacts in improving the continuity of health insurance coverage through maintaining Medicaid coverage.[X] The evidence suggests that the higher income eligibility thresholds associated with Medicaid expansion led to less coverage disruption during the preconception, interconception, and postpartum periods.

Impacts on Health Care Use Among Women of Reproductive Age

Medicaid expansion has mixed impacts on health care use among low-income women of reproductive age. One study published in 2017 found no significant impacts on primary care use in the past year among women with or without dependent children.[C] In another study published in 2021, the authors found that low-income women with dependent children increased their use of personal health providers up to 3 percentage points and routine checkups up to 6 percentage points

[xi] Study X defined insured-uninsured churn as "any switching between any type of insurance." (p. 1532).

relative to their counterparts in nonexpansion states.[II] Both indicators were not significant among women living in states that had more generous income thresholds prior to Medicaid expansion (e.g., states that increased their income eligibility thresholds from 110 to 138 percent of the FPL).[II]

The mixed findings across both national, quasi-experimental studies point to two important considerations in the examination of Medicaid expansion and health care use among the expansion population. First, the impact of Medicaid expansion may depend on states' pre-expansion income eligibility. States that have expanded Medicaid from lower pre-expansion income eligibility thresholds may see larger gains in outcomes related to health care access and use.[II] Second, although both studies[C,II] used the same national data set (the Behavioral Risk Factor Surveillance System), one study used data from 2012 to 2015[C] compared to 2011 to 2018 in the other national study.[II] The beneficial impacts of Medicaid expansion found in the longer-term study[II] may have been because of the authors could analyze the long-term impacts of Medicaid expansion.

Impacts on Health Care Use During the Perinatal and Postpartum Periods

Medicaid expansion had positive impacts on women's access and use of critical services during the perinatal and postpartum periods. For instance, rates of recommended prenatal screenings were 8.4 percentage points higher among first-time mothers (5.1 percentage points higher for all other mothers) after Ohio's Medicaid expansion.[D] Among low-income women, Medicaid expansion was associated with a 4 percentage point increase in preconception counseling.[AA]

Oregon's Medicaid expansion was found to increase the likelihood of the receipt of both timely and adequate prenatal care, by 1.5 and 2.8 percentage points, respectively.[EE] The authors also found that women who enrolled in Medicaid in the month before pregnancy had a 4.2 and 1.1 percentage point higher probability of timely and adequate prenatal care, respectively, compared to women without Medicaid a month before pregnancy.[EE] However, a national Medicaid expansion study reported nonsignificant findings in timely prenatal care initiation.[E] The mixed results may be partially attributable to the different time periods (2009 to 2017[E] and 2012 to 2016[EE]), number of states (26[E] and 1[EE]), and sample sizes (18.2 million[E] and 218,329[EE]) examined.

Two studies found Medicaid expansion was associated with positive impacts on the increase in health care use among postpartum women. A quasi-experimental study of Colorado's expansion found a 17 percent increase in the number of outpatient visits postpartum,[I] and a study of Ohio's expansion found a 5.1 percentage point increase in the likelihood of a postpartum visit.[Z] The authors did not find any significant changes in contraceptive counseling, which may occur during postpartum visits.[Z] These mostly beneficial findings are promising given that postpartum health care use helps women transition from pregnancy to parenthood and provides an opportunity for women to receive support and services.[22]

Impacts on Children's Health Care Use

The Medicaid expansion related to the ACA expands health care coverage for adults by increasing the income eligibility threshold, but it does not change the Medicaid income eligibility limit for children. However, beyond positive impacts on parental Medicaid coverage, one study also linked Medicaid expansion to improvements in children's access to health insurance coverage. Spillover effects reflect the impact of one event (e.g., Medicaid expansion for adults) influencing a change in

another event (e.g., children health insurance coverage). A national study examined the likelihood of all children having public insurance coverage because of their parents becoming newly income-eligible for Medicaid themselves. Medicaid expansion led to a 2.7 percentage point increase in children's Medicaid insurance rates among newly-eligible adults.[Y] However, Medicaid expansion did not lead to any statistically significant spillover effects in preventive dental services among children with parents newly-eligible for Medicaid.[HH] More strong causal studies are needed to examine the spillover effects of parental access to services and its relation to children's health care use.

Access to Needed Services: Subgroup Findings by Race and Ethnicity

Two causal studies included in this review examined the impact of Medicaid expansion on subgroups of people by race and/or ethnicity for indicators including uninsurance rates, Medicaid coverage among children, and timely and adequate prenatal care.[DD,EE] As discussed earlier in this evidence review, non-White individuals were more likely to be uninsured compared to their White counterparts prior to Medicaid expansion.[15]

One national study found that a 100 percentage point (e.g., from 100% to 200% of the FPL) increase in the Medicaid income eligibility threshold can reduce uninsurance rates among all races and ethnicities, except for Black women. The authors reported the following decrease in uninsurance rates: 13.6 percentage points among American Indian/Alaska Native mothers, 10.2 percentage points among Hispanic mothers, 10.0 percentage points among White mothers, 8.1 percentage points among Asian American/Pacific Islander mothers, and 7.0 percentage points among multiracial/other[xii] mothers relative to their nonexpansion counterparts. The authors found a 4.6 percentage point reduction in uninsurance rates for low-income Black mothers, but this finding was not statistically significant.[DD]

The same study found that a 100 percentage point increase in Medicaid income eligibility increased Medicaid coverage rates for White (3.3 percentage points), Hispanic (15.5 percentage points), and Black mothers (9.3 percentage points) relative to their nonexpansion counterparts. The impact of Medicaid expansion on increasing Medicaid coverage rates was not statistically significant for American Indian/Alaska Native, Asian American/Pacific Islander, and multiracial/other mothers compared to their counterparts in nonexpansion states.[DD] The authors posited that the varied uninsurance and Medicaid coverage rates reflect a continuation of pre-expansion disparities in coverage rates by race and/or ethnicity.[DD]

A study of Oregon's Medicaid expansion found that, from 2012 to 2016, the receipt of timely prenatal care increased 2.4 percentage points for Hispanic women compared to 1.3 percentage points among non-Hispanic women.[EE,xiii] Similarly, Medicaid expansion led to a 3.6 percentage point increase in adequate prenatal care receipt for Hispanic women compared to 2.6 percentage points for non-Hispanic women.[EE] Nationally, 72.0 percent of Hispanic women began prenatal care in the first trimester and 70.8 percent received adequate prenatal care in 2016, the latest year data are available. In comparison, 82.3 percent of White women received timely prenatal care and 80.5

[xii] As described by the authors, the multiracial/other category includes women who reported a race other than White, Hispanic, Black, American Indian/Alaska Native, Asian American/Pacific Islander, or who reported more than one race.
[xiii] Other racial/ethnic groups were not included in the subgroup analyses.

percent of received adequate prenatal care.[28] Future research should examine receipt of timely and adequate prenatal care for Black women, who have the lowest rates of both timely (66.5%) and adequate prenatal care (66.4%) of all races and ethnicities.[28] Future studies should examine the potential impact of Medicaid expansion on Black women's receipt of prenatal care use during pregnancy.

Sufficient Household Resources

Experiences of financial hardship during early childhood can disrupt healthy brain development and compromise the foundation for long-term learning, behavior, and health.[26] Medicaid expansion through the ACA was designed to reduce financial burdens for low-income families by making health insurance coverage more affordable. Reduced medical financial burden may also lower family stress and free up resources for spending on other household needs. The current scope of this policy goal is inclusive of expanded income eligibility to 138 percent of the FPL for the entire expansion population of adults ages 19 to 64; the scope is not limited only to women of childbearing age.

Impacts on Health Spending

Evidence suggests that Medicaid expansion reduces the amount of money low-income individuals ages 19 to 64 pay related to health care access and services. A study of the randomized Oregon Medicaid lottery[xiv] found that Medicaid reduced the likelihood of having any out-of-pocket medical spending by 20 percentage points and reduced the likelihood of having any outstanding medical debt collections by 6.4 percentage points.[G] Among nonelderly adults in Portland, the Oregon Medicaid lottery led to a reduction in the likelihood of having any out-of-pocket medical spending by 15.3 percentage points, medical debt collections by 13.3 percentage points, and any catastrophic expenditures by 4.5 percentage points.[F] A study of California's Medicaid expansion also found a 10.1 percentage point decrease in any out-of-pocket medical spending for adults with incomes below 200 percent of the FPL.[Q] Additionally, a 2019 study of Michigan's Medicaid expansion found a 7.1 percentage point decrease in the likelihood of having problems with paying medical bills.[K] The beneficial impacts of Medicaid expansion on health spending in these state-specific studies are supported by findings of national studies.

Four national, quasi-experimental studies found that Medicaid expansion helped reduce household spending on health care services. If states expanded their income eligibility threshold by 100 percentage points (e.g., from 100% to 200% of the FPL), the likelihood of having problems paying for family medical bills decreased by 13.6 percentage points.[L] Medicaid expansion also decreased the likelihood of catastrophic medical expenditures up to 4.7 percentage points and out-of-pocket spending by $122 in 2017.[KK] A study published in 2020 found that Medicaid expansion led to a 7.9 percentage point increase in the likelihood of having zero out-of-pocket expenditures for both insurance premiums and nonpremium medical spending.[M] Lastly, Medicaid expansion was associated with a 3.3 percent reduction in the probability of having new medical bills sent to collections and no significant impact on medical debt.[N] Only one included study found null impacts of Medicaid expansion and overall health spending.[S]

[xiv] The Oregon Medicaid Lottery refers to Oregon's limited expansion of its Medicaid program for low-income adults through a lottery drawing that began in 2008. A third of those who put their names on the waiting list, approximately 30,000 total, received the option to apply for Medicaid.[F]

Impacts on Reducing Cost Barriers to Care

Evidence also shows that Medicaid expansion reduces the avoidance of health care due to cost barriers. Two studies that included women both with and without children found that Medicaid expansion reduced the likelihood that low-income individuals avoided going to the doctor because of cost. A study that used a national data set from 2012 to 2015 found that Medicaid expansion reduced the likelihood of women with incomes up to 100 percent of the FPL not going to the doctor because of cost by 3.8 percentage points.[C] In contrast, another national study found Medicaid expansion is associated with a larger, 7.4 percentage point reduction in avoiding care because of cost.[H] The study used a national data set from 2011 to 2016 and included women with incomes up to 138 percent of the FPL.[H] Both studies included women with and without children.[C,H] Another study that included mothers with dependent children found that Medicaid expansion led to a decrease in avoidance of care because of cost by up to 7 percentage points.[II,xv]

A study of the longer-term impacts of Medicaid expansion in Michigan found a 3.8 percentage point decrease in delaying care because of cost in year 3 after implementation. The effect grew to a 5.6 percentage point reduction the following year,[K] suggesting that the impacts of Medicaid expansion may take time to take effect.

Impacts on Financial and Material Wellbeing, Including Poverty

Research has also shown that state expansions of Medicaid can impact nonmedical financial outcomes, including poverty, though the findings are mixed. Medicaid expansion led to an increase in housing stability.[P,T] Additionally, Medicaid expansion led to an increase in credit scores, reduced the likelihood of bankruptcy filings, and reduced loan payments among low-income adults.[N,R,O] The increase in the income eligibility for health insurance also increased the probability of receiving child support payments among custodial parents.[JJ] Finally, the boost in financial and material wellbeing associated with Medicaid expansion resulted in a decline in family poverty.[CC]

State expansions of Medicaid can improve housing stability by preventing or reducing the rate of evictions. A study of California's early Medicaid expansion found 24.5 fewer evictions per month in each county, with greater effects in counties that had above average rates of uninsured adults prior to expansion (51.5 fewer evictions per month).[P] At the national level, Medicaid expansion was associated with an annual reduction of 1.15 evictions per 1,000 renters.[T]

Three studies found Medicaid expansion is associated with beneficial impacts on credit and credit-related outcomes. One study found a very small, but statistically significant, 0.1 percent increase in credit scores and a 2.8 percent reduction in the probability of a new personal bankruptcy filing as a result of Medicaid expansion.[N] A study published in 2020 found that a 10 percentage point increase in the share of the low-income population with health insurance was associated with a reduction of 1.3 personal bankruptcy filings per 1,000 adults.[R] Finally, California's early Medicaid expansion[xvi] was

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[xv] Avoiding care because of cost was only statistically significant (at $p \leq 0.05$) for low-income women living in states that increased their income eligibility threshold from 90 percent of FPL to 138 percent of the FPL after Medicaid expansion.
[xvi] California entered into an agreement with the Obama administration to implement the ACA's Medicaid expansion in 2011 and 2012. The authors compared 43 California counties that expanded Medicaid early to 920 counties nationwide that did not do so, including four California counties that delayed expansion.[O]

associated with an 11 percent decrease in the number of loans and a 10 percent decrease in the amount borrowed from payday storefronts after Medicaid expansion.[O]

A study of child support found a 1.8 percentage point increase in payments (from the noncustodial parent to the custodial parent) in expansion states compared to nonexpansion states. The beneficial impacts are two-fold: they point to an increase in the number of parents who can afford to make their child support payments, and these payments are an important source of income for custodial parents with dependent children.[JJ]

One study examined the antipoverty impact of Medicaid expansion because of a possible reduction in out-of-pocket spending for low-income adults. The national quasi-experimental study found that Medicaid expansion reduced the rate of poverty up to 1.4 percentage points.[CC] Given causal evidence that the alleviation of childhood poverty leads to an improvement in children's wellbeing,[26] this is a promising finding.

Other indicators of material and financial wellbeing (i.e., nonmedical spending) were not associated with Medicaid expansion. A study of Oregon's randomized Medicaid lottery found null impacts on nonmedical debt or nonmedical financial strain[G] and a national quasi-experimental study found null effects on total household spending on food or housing.[S]

Overall, Medicaid expansion can increase financial resources for low-income adults ages 19 to 64 through the reductions of spending related to health care, which may protect families from negative financial outcomes such as evictions or bankruptcy filings.

Impacts on Public Income Supports

One strong causal study examined the connection between Medicaid expansion and its impact on participation in the federal earned income tax credit (EITC) and the Supplemental Nutrition Assistance Program (SNAP) among the nonelderly population. The authors found that the increase in the Medicaid income eligibility threshold from 0 to 138 percent of the FPL led to a change of 0.6 additional SNAP participants per 100 people.[BB] EITC receipt was not significantly related to Medicaid expansion. The authors suggested that the small, but significant finding for SNAP suggests more individuals may be aware of other public programs they are qualified for and receive access to entitled benefits as a result of this increased awareness.[BB]

Sufficient Household Resources: Subgroup Findings by Race, Ethnicity, and Education

Two studies[T,JJ] conducted subgroup analyses by race and education on the impact of Medicaid expansion. Neither study found that Medicaid expansion was associated with reducing racial disparities in eviction rates for Black adults or in increasing child support payments for non-White parents with lower levels of education.

Medicaid expansion was associated with a slight increase in evictions by 0.41 per 1,000 renters in counties with larger shares of Black residents.[T] The detrimental impact, although small, shows an increase in housing instability associated with Medicaid expansion. Families with evictions are more likely to live in unsafe or inadequate housing arrangements, especially if the eviction notices appear on rental or credit histories.[T] The Eviction Lab reported that eviction filings and eviction rates are

significantly higher for Black renters compared to White renters. For instance, in a sample of almost 1,200 counties, the average eviction filing rate was 3.4 percent among White renters, but was 6.2 percent for Black renters.[50] The limited evidence is insufficient to determine whether Medicaid expansion may reduce disparities in eviction filings.

Additionally, the child support study found that Medicaid expansion had greater effects among those of higher educational levels and among White parents compared to non-White parents.[JJ] The author conducted subgroup analyses comparing the rates of child support receipt pre- and post-Medicaid expansion to determine if the policy had stronger impacts for particular groups. Medicaid expansion was associated with a 3.7 percentage point increase in child support receipt for college-educated custodial parents, with null impacts for parents with a high school degree or less after Medicaid expansion. Stratified by race, child support receipt increased by 3.3 percentage points for non-Hispanic White custodial parents and 3.1 percentage points for Hispanic custodial parents from pre- to post-expansion. Medicaid expansion did not lead to increases in child support receipt for Asian or Black custodial parents.[JJ] It is unclear why Medicaid expansion had differential impacts on child support receipt across race and educational attainment. No national data exist for these outcomes to assess whether these results represent reductions in disparities.

More evidence is needed on how Medicaid expansion impacts the financial wellbeing of beneficiaries across different socioeconomic statuses, given the limited findings available.

Healthy and Equitable Births

Medicaid expansion may improve birth outcomes because women of reproductive age are more likely to have health insurance coverage before and during pregnancy. Medicaid recipients have access to an array of health benefits during the preconception period and interconception period, such as prenatal care, preventive services, mental health services, and substance abuse treatments.[1] If mothers are healthier before and during pregnancy, it can lead to healthier birth outcomes.[43]

Four large, quasi-experimental studies (three national[A,E,V] and one in Massachusetts[W,xvii]) found no statistically significant impacts of expanded income eligibility for health insurance reducing rates in preterm birth, low birthweight, or infant mortality rates for all infants relative to infants in nonexpansion states.[A,E,V,W] In contrast, another study found a 0.26 reduction in the infant mortality rate in expansion states compared to nonexpansion states, when the authors restricted the analysis to any states that had adopted the 2003 birth certificate[xviii] form by 2011.[GG] The 2003 birth certificate form modified questions on race and Hispanic origin and added reporting of multiple-race categories.[29] Using only the states that had adopted the birth certificate form likely improved the quality and accuracy of the data. Null impacts were found in the same study if the authors analyzed all expansion states compared to nonexpansion states, regardless of the adoption of the more recent birth certificate form.[GG,xix]

[xvii] The study was on the Massachusetts health reform initiative in 2006. The policy provisions in the Affordable Care Act were designed similarly to the Massachusetts health reform initiative.[W]

[xviii] A new US birth certificate form was adopted in 2003, however, it was not uniformly implemented by all states until 2015.[29]

[xix] Beneficial impacts were found only when the authors examined expansion states that adopted the 2003 birth certificate compared to the nonexpansion states that had adopted the 2003 birth certificate by 2011.[GG]

Finally, Oregon's Medicaid expansion was associated with a 23 percent reduction in the likelihood of a preterm birth (<37 weeks gestation) and a 29 percent reduction in children born low birthweight, but expansion had no impact on NICU admissions nor the infant mortality rate.[FF]

Medicaid expansion is associated with a decrease in the maternal mortality rate. Relative to nonexpansion states, expansion states had 7.01 fewer maternal deaths per 100,000 live births from the study period (2006 to 2017).[J] The author hypothesized that greater effects of Medicaid expansion might be attributable to women in expansion states having increased access to health insurance coverage and prenatal care in the preconception period. Further, the increase of women in expansion states with continuous Medicaid coverage in the postpartum period may help prevent and treat pregnancy-related complications past the 60 days of Medicaid coverage available to pregnancy-eligible women in nonexpansion states.[J]

Healthy and Equitable Births: Subgroup Findings by Race and Ethnicity

Studies on the effect of Medicaid expansion on birth outcomes show this policy's potential to reduce disparities. A total of five studies[W,A,V,GG,J] conducted subgroup analyses to evaluate differential effects of Medicaid expansion and found both beneficial and null impacts.

Very Low Birthweight and Preterm Birth

The US national very low birthweight rate was 1.38 percent of all live births in 2019. Rates by race and ethnicity show that the percentage of infants born very low birthweight were 1.02 percent, 1.27 percent, and 2.94 percent, percent for all live births born to White, Hispanic, and Black women, respectively, in 2019.[14] A national study on Medicaid expansion compared infants born very low birthweight (<1,500 grams or 3 pounds 4 ounces) across expansion and nonexpansion states for Black and Hispanic infants relative to White infants. They found that Medicaid expansion led to a reduction in this outcome, and that the reduction was 0.1 percentage points larger for Black infants compared to White infants. The authors found no statistically significant differences for Hispanic infants relative to White infants.[A] The national rate of infants born very low birthweight is statistically unchanged from pre- to post-Medicaid expansion; in 2012, rates were 1.13, 1.22, and 2.94 percent for all infants born to White, Hispanic, and Black women.[51] Given the small reduction in very low birthweight for just Black infants compared to White infants and the rates in the country overall, additional evidence is needed to conclude if Medicaid expansion reduces racial and ethnic disparities in very low birthweight rates.

The average US preterm birth rate among all live births was 10.23 percent in 2019 and was 9.26 percent for White infants, 9.97 percent for Hispanic infants, and 14.39 percent for Black infants in 2019.[14] The same study found that Medicaid expansion was linked to a reduction in preterm birth rates, and that the reduction was 0.4 percentage points larger for Black infants compared to White infants.[A,xx] Medicaid expansion was not associated with statistically significant differences in preterm birth rates for Hispanic infants compared to White infants.[A] The average US preterm birth rate was

[xx] Several studies in the Healthy and Equitable Births section compare adverse birth outcomes among groups (e.g., Black infants) compared to White infants. The Evidence Review follows the language used by study authors and is not concluding that White individuals should be the comparison group.

11.55 percent of all live births in 2012 and has decreased post-Medicaid expansion; in 2012, the preterm birth rates were 10.29, 11.58, and 16.53 percent for White Hispanic, and Black infants, respectively.[51] This finding provides some evidence that Medicaid expansion may reduce racial and ethnic disparities in preterm birth rates.

One study, a statewide analysis of the 2006 Massachusetts health insurance reform, found that Medicaid expansion resulted in no differential impacts across racial groups in rates of preterm birth and low birthweight.[W] The study used the oldest data of the five studies—state-level data from 2001 to 2012—and compared birth outcomes in Massachusetts to those in Maine, New Hampshire, Vermont, and Rhode Island, which had not increased income eligibility for Medicaid.[W]

Infant Mortality

Medicaid expansion has mixed impacts on reducing infant mortality. In 2018, infant mortality was 5.67 per 1,000 live births in 2018. Stratified by race and ethnicity, the infant mortality rates were 4.63, 4.86, and 10.75 per 1,000 births for infants born to White, Hispanic, and Black women, respectively.[30] One study examined the differential impacts of Medicaid expansion on infant mortality rates among White and Black infants across expansion and nonexpansion states. Medicaid expansion was associated with a reduction of 0.29 per 1,000 live births for infants born to White mothers in expansion states relative to nonexpansion states. The authors found statistically insignificant results when testing whether Medicaid expansion reduces infant mortality rates for Black infants in expansion states relative to nonexpansion states.[xxi,GG] This study did not provide causal evidence that Medicaid expansion reduced racial and ethnic disparities in adverse birth outcomes.

In contrast, another national 2020 study examined the differential impacts of Medicaid expansion on the infant mortality rate across racial and ethnic groups. Medicaid expansion led to a statistically significant decrease of 0.53 infant deaths per 1,000 live births among Hispanic infants in expansion states relative to their nonexpansion state counterparts. The authors did not find, however, a statistically significant difference in the infant mortality rate among non-Hispanic Black and White infants in expansion compared to nonexpansion states.[V] This study provides some evidence that Medicaid expansion may reduce disparities in adverse birth outcomes by narrowing the gap in the infant mortality rate for Hispanic compared to White infants.

The two aforementioned national studies[V,GG] that examined the impact of Medicaid expansion on infant mortality rates did not report the same reductions in infant mortality rates. Both studies were published in 2020 and used data from the Centers for Disease Control and Prevention (CDC). However, one study[GG] ran analyses of states that had not adopted the 2003 birth certificate, which restricted the sample to 17 expansion and 11 nonexpansion states compared to 24 and 12 states, respectively. When the authors included all 36 states regardless of the adoption of the birth certificate reform, they did not find that Medicaid expansion led to statistically significant findings for White or Black infants relative to their nonexpansion counterparts.[GG] In contrast, the other study had a sample of 26 expansion and 19 nonexpansion states and found a slight decrease in the infant

[xxi] Significant impacts only found in the analysis inclusive of states that expanded Medicaid and had adopted the 2003 US birth certificate by 2011.

mortality rate for Hispanic infants in expansion states compared to their counterparts in nonexpansion states.[V]

Medicaid expansion has mixed effects on birth outcomes, but many studies found no differential impacts across racial and ethnic groups. Medicaid expansion may reduce disparities between Black and White infants in very low birthweight and preterm birth rates and infant mortality rates[A] for White and Hispanic infants relative to their nonexpansion counterparts.[V,GG] Additionally, the statewide analysis of the 2006 Massachusetts health insurance reform found null effects for White, Black, Hispanic, and Other/non-Hispanic[xxii] infants for rates of preterm birth, low birthweight, and infant mortality.[W]

The national infant mortality rate has declined from 5.98 to 5.67 deaths per 1,000 live births from 2012 to 2018, before and after Medicaid expansion. Infant mortality rates, disaggregated by race, decreased among infants born to White (5.11 to 4.63) and Hispanic (5.04 to 4.86) mothers and Black mothers (11.19 to 10.75) per 1,000 live births from 2012 to 2018.[30,52] Given this national trend and the mixed results across all the included studies, more research is needed on the potential for Medicaid expansion to reduce gaps for all individuals across races and ethnicities.

Maternal Mortality

One study provides evidence that Medicaid expansion may reduce the maternal mortality rates for Black and Hispanic women compared to similar women in nonexpansion states. In 2019, the maternal mortality rate for White, Hispanic, and Black women was 17.9, 12.6, and 44.0 deaths, respectively, per 100,000 live births.[31] The national maternal mortality rate was 20.1 per 100,000 live births in 2019.[31] A study of maternal mortality found the effects of Medicaid expansion were greatest among non-Hispanic Black mothers. The author reported a reduction of 16.3 maternal deaths per 100,000 live births among Black mothers in expansion states relative to their counterparts in nonexpansion states.[J] Medicaid expansion was also linked to 6 fewer Hispanic maternal deaths per 100,000 live births relative to their nonexpansion counterparts, but there were no significant differences for White mothers. The beneficial impacts for Black women are particularly promising given that Black mothers are more than twice as likely to die in childbirth or experience severe maternal morbidity compared to White and Hispanic mothers.[31,32] This study suggests that Medicaid expansion reduces disparities in maternal mortality for women of color, but more evidence is needed to fully assess the potential of Medicaid expansion to close gaps in maternal mortality for women of all races and ethnicities.

Parental Health and Emotional Wellbeing

Two interconnected theoretical pathways support Medicaid expansion having the potential to impact parental health and emotional wellbeing. First, Medicaid expansion may reduce cost barriers to care, which then increases low-income parents' ability to seek preventative and routine health care services. Secondly, the increase in health care use may then lead to better health outcomes for parents. Researchers have suggested that Medicaid expansion may be particularly important for low-income individuals with chronic conditions because they require routine medical care and

[xxii] The authors did not write out the races or ethnicities included in the Other/Non-Hispanic group.[W]

medicine adherence.[47] Evidence from strong causal studies suggests that Medicaid expansion may increase parental health and wellbeing, but most findings are not statistically significant.

Three studies on parental health found that Medicaid expansion increases the intake of prenatal vitamins, folic acid, blood pressure medicine, and insulin.[D,AA,H] A quasi-experimental study of Ohio's expansion of Medicaid found a 4.1 percentage point increase in the use of prenatal vitamins among all mothers and a 13.6 percentage point increase among first-time mothers.[D] Additionally, Medicaid expansion led to a 1.9 percentage point increase in folic acid intake (folic acid may prevent neural tube defects among infants) during pregnancy.[AA,33,34] A study of women of reproductive age found that Medicaid expansion led to a 7.9 percentage point increase in the use of blood pressure medicine, and an 11.4 percentage point increase in the use of insulin.[H]

Two strong causal studies included in this review examined the impact of Medicaid expansion on the mental health of parents and found mixed results.[H,L] Medicaid expansion through the ACA stipulated that health insurance plans for the expansion population include mental health and substance use disorder services as essential health benefits, which may improve the mental health of low-income adults.[48] If the Medicaid income eligibility threshold increased by 100 percentage points (e.g., from 100% to 200% of the FPL), the likelihood of severe psychological distress[xxiii] decreased by 10.9 percentage points among parents, although no reductions in moderate psychological distress were found.[L] Another national study did not find that Medicaid expansion was associated with reductions in psychological distress.[H]

Medicaid expansion was not found to change the diagnosis of chronic disease or the likelihood of certain health behaviors, such as smoking or drinking.[H] Although Medicaid expansion was not associated with smoking or drinking, both indicators are relevant from a public health standpoint because both are related to a higher risk of chronic diseases including certain types of cancer.[49] Medicaid expansion was not associated with changes in hypertension, diabetes, depression, and unwanted pregnancy among new mothers.[xxiv,AA] Medicaid expansion had null effects on improvements in self-reported health among mothers[II] in one study, and among both fathers and mothers in another study.[L]

More evidence is needed to understand how the increase in health insurance coverage from Medicaid expansion may lead to changes in health outcomes for parents, given the mostly null findings in this goal.

Optimal Child Health and Development

Only one strong causal study examined an indicator related to optimal child health and development: child maltreatment. Rates of maltreatment may decline as a result of Medicaid expansion because low-income families' financial wellbeing and access to health care services increases.[42] One strong causal study examined physical abuse and neglect rates in expansion and nonexpansion states.[U] Medicaid expansion was associated with 422 fewer reported cases of neglect

[xxiii] Severe psychological distress scores are scores of 13 or more on the Kessler K6 Psychological Distress Scale.
[xxiv] The CDC noted that individuals with unwanted pregnancies may be more likely to delay health care or may be engaging in risky behaviors during conception.[35]

to Child Protective Services per 100,000 children under the age of 6, but Medicaid expansion did not impact rates of physical abuse.[U] It is unclear why Medicaid expansion was only associated with a decline in child neglect reports and not physical abuse reports.[U] More research is needed on Medicaid expansion and maltreatment outcomes during the early childhood period.

Is There Evidence That Medicaid Expansion Reduces Disparities?

Current evidence suggests that Medicaid expansion may be an effective policy for reducing disparities in maternal mortality among Hispanic and Black women, but may not reduce gaps in infant mortality, preterm birth, or low birthweight. Only nine of the 37 strong causal studies include subgroup analyses based on race and ethnicity. Simply controlling for race and ethnicity without conducting further analyses does not allow for an evaluation of the differential impact of Medicaid expansion across groups. None of the studies that demonstrated impacts on optimal child health and development[U] or parental health and emotional wellbeing[D,H,L,AA] disaggregated findings based on race and ethnicity. Thus, the assessment of Medicaid expansion's impact across race and ethnicity was limited to one quarter of all included studies.

Medicaid expansion narrowed racial/ethnic disparities in both uninsurance rates and Medicaid coverage rates, although inconsistently among race and ethnic groups. A national study found reductions in uninsurance in expansion states, ranging from a 13.6 percentage point reduction in uninsurance rates among American Indian and Alaska Native new mothers and a 7.0 percentage point reduction for multiracial new mothers, as a result of the Medicaid income eligibility threshold rising by 100 percentage points.[DD] The same study found that a 100 percentage point increase in the Medicaid income eligibility threshold for parents increased Medicaid coverage rates for White, Hispanic, and Black mothers, but was null for other races (e.g., Asian mothers).[DD] These findings are consistent with the Kaiser Family Foundation (KFF) uninsurance rates reported previously which show reductions in uninsurance after Medicaid expansion. For example, the uninsurance rates for American Indians and Alaska Native nonelderly adults decreased from 32.6 percent in 2010 to 21.7 percent in 2019, compared to 13.1 percent to 7.8 percent for White nonelderly adults from 2010 to 2019. Disparities have narrowed, but still persist.

One study of Oregon's Medicaid expansion on timely and adequate prenatal care found beneficial increases for both non-Hispanic and Hispanic women. However, Medicaid expansion was found to have greater effects in timely and adequate prenatal care for Hispanic women.[EE] However, the study focused on just one state's Medicaid expansion population, and the population of Oregon is predominantly White.[EE]

Two studies examined differential impacts of Medicaid expansion based on race and ethnicity for financial and material wellbeing indicators, however both studies did not find Medicaid expansion associated with closing gaps in this indicator.[T,JJ] Medicaid expansion was associated with a slight increase in evictions in counties with higher shares of Black residents.[T] Medicaid expansion was associated with larger effects of child support receipt for White custodial parents and custodial parents with higher educational levels.[JJ] The research is limited, in part, because large national databases of financial measures, such as credit scores or payday borrowing, do not include

individual-level information on race.[N,O] Additional research may provide more information on the differential impacts across race and ethnicity for indicators related financial wellbeing.
Most of the studies that provide subgroup findings by race and ethnicity are related to adverse birth outcomes and the results are mixed. Medicaid expansion is associated with reducing racial disparities in infant mortality rates between Hispanic infants[V] and White infants[GG] relative to their nonexpansion counterparts. Medicaid expansion is also associated with larger reductions in racial disparities in the rates of preterm births and very low birthweight among Black infants compared to White infants.[A] Medicaid expansion was associated with narrowing the disparity in the maternal mortality rate for Hispanic and Black mothers and was nonsignificant among White mothers.[J] Two studies found no statistically significant findings attributable to Medicaid expansion on adverse birth outcomes,[E,W] and three other studies only found decreases for one subgroup.[A,V,GG] Given that racial disparities continue in adverse birth outcomes across these five studies, more research should examine how Medicaid expansion addresses inequality for all.

Finally, Medicaid expansion under the ACA requires lawfully-present immigrants to wait an additional five years to enroll in Medicaid coverage, although some states have extended benefits to noncitizens through state funds.[15] Most of the strong causal studies are inclusive of citizens up to 138 percent of the FPL. Restrictions on citizenship status and access to health insurance have resulted in nonelderly Hispanic residents being more likely not to have access to health insurance.[15] More research is needed on how Medicaid expansion may impact individuals differently based on varied citizenship statuses. Finally, the evidence base should be extended to include subgroup analyses of Medicaid expansion across all eight prenatal-to-3 policy goals to determine its full potential to reduce disparities across all races and ethnicities.

Has the Return on Investment for Medicaid Expansion Been Studied?

Evidence included in this review shows that state expansions of Medicaid have improved financial wellbeing among low-income individuals and families. Cost savings may occur as the expansion population increases access to health insurance and health care services. For example, an assessment of Ohio's Medicaid expansion found that uninsurance rates were at an all-time low and access to care improved by over 64 percent.[36] Medicaid enrollees ages 19 to 64 reported reductions in emergency room visits, severe obesity rates, and medical debt. The cost of the state expansion compared to the savings associated with the improved health of residents was not calculated.[36]

States' decisions to adopt Medicaid expansion also impacts hospital finances because hospitals are responsible for paying unpaid medical bills from health care services. If low-income, uninsured patients cannot pay those bills, hospitals must incur the costs. In nonexpansion states, low-income individuals are more likely to be uninsured compared to low-income individuals in expansion states;[15] if states reduce the number of uninsured residents by expanding the income eligibility for health insurance, it will boost the revenue streams for hospitals.[37] For instance, Louisiana's Medicaid expansion led to a 55 percent decline in uncompensated care from the average pre-expansion uncompensated care costs in rural hospitals. Medicaid expansion led to a smaller, but significant, 31 percent reduction in uncompensated care in urban hospitals.[38]

A more comprehensive analysis of the return on investment is forthcoming.

What Do We Know, and What Do We Not Know?

Research on expanded income eligibility for health insurance has largely focused on state expansions of Medicaid, both before and through the passage of the ACA. The evidence indicates that state expansions of Medicaid have positive impacts on outcomes related to access to needed health services and families' economic security. The evidence also suggests that Medicaid expansion can lead to improvements in birth outcomes, including reduced infant mortality and low birthweight, but the findings are mixed across the strong causal studies. Studies reported mostly null impacts on perinatal physical and emotional wellbeing and optimal child health and development outcomes.

The extension of Medicaid to postpartum people beyond 60 days was also outside the scope of review; however, there are significant implications to the prenatal-to-3 period. Following the state option included in the American Rescue Plan Act, states can extend Medicaid to 12 months postpartum through the state option, Section 1115 waivers, or passing legislation.[39,40] If states provide postpartum coverage to low-income women through the Children's Health Insurance Program (CHIP), the state option would need to include coverage through CHIP as well. If Medicaid is extended to 12 months postpartum, especially in nonexpansion states, there will likely be a reduction in low-income mothers who do not have health insurance.[39,40] As of August 2021, 25 states have taken legislative or regulatory action to extend postpartum Medicaid coverage past 60 days. According to KFF, of the 25 states, 18 states have both expanded Medicaid to low-income individuals up to 138 percent and have extended postpartum coverage past 60 days postpartum.[46,xxv]

Increasingly, states have introduced legislation on the adoption and implementation of public options or state-run health insurance plans. According to the Commonwealth Fund, states can implement a state-run health insurance plan that is a similar to the federal Marketplace, but only available to state residents, to increase the affordability of health insurance.[44] Washington was the first state to implement a state-run option, Cascade Care, in 2021. Colorado, Connecticut, Oregon, Minnesota, and Nevada have introduced legislation previously to study or implement state-based options.[41] As research is conducted on the impact of these policies on accessibility and affordability of health insurance, the potential causal impact can be evaluated.

Finally, the evidence base on Medicaid expansion will increase as more expansive literature is published. Additional research on the long-term impacts of state Medicaid expansion will be beneficial to draw causal links in outcomes pertinent to the prenatal-to-3 period. Additionally, some studies included in this review examined the Medicaid expansion for only one state over the course of several years rather than assessing the impact of Medicaid expansion across a diverse sample of states. The findings of these studies may not be generalizable to other states. As additional states expand Medicaid and more time has passed since implementation and adoption, more evidence will be available for analysis.

[xxv] For details on the extension of postpartum coverage for pregnant people, see the expanded income eligibility for health insurance section of the US Prenatal-to-3 State Policy Roadmap: https://pn3policy.org/pn-3-state-policy-roadmap-2021/us/health-insurance/

Is Medicaid Expansion an Effective Policy for Improving Prenatal-to-3 Outcomes?

Evidence shows that expanding the Medicaid income eligibility threshold to include most adults with incomes up to 138 percent of the FPL is an effective policy for increasing access to needed health care services, through the increase in Medicaid coverage and reductions in uninsurance rates. Medicaid expansion improves the financial wellbeing of parents by reducing cost barriers to health care and catastrophic medical expenditures, among other indicators which increase household resources. Finally, Medicaid expansion reduces adverse birth outcomes and there is some evidence that Medicaid expansion may reduce disparities between groups.

How Does Medicaid Expansion Vary Across the States?[xxvi]

To date, 39 states[xxvii] have expanded Medicaid coverage to most adults with incomes up to 138 percent of the FPL.[44] Oklahoma and Missouri were the latest states to fully implement Medicaid expansion in 2021.[11,44] In states that have not expanded Medicaid, income eligibility requirements for low-income parents vary widely, from 17 percent in Texas to 100 percent of the FPL for a family of three in Wisconsin. With the exception of Wisconsin, childless adults residing in states that have not expanded Medicaid are not eligible for coverage through Medicaid at all.[8,44]

States have several policy choices to expand Medicaid expansion to childless adults and parents with incomes up to 138 percent of the FPL. States can extend income eligibility for health insurance through the legislative process. Some states have passed legislation to expand Medicaid and submitted Section 1115 waivers to CMS to implement expansion. Ballot initiatives in Idaho, Maine, Missouri, Nebraska, and Utah authorized Medicaid expansion; however, for it to be implemented, state action (e.g., funding and submitting a SPA) was required.[7] Governors have also taken executive action through executive orders to adopt and implement Medicaid. Both Kentucky and West Virginia, for example, implemented Medicaid expansion through executive orders.[7,44]

See Table 4 for more details on state variation related to Medicaid expansion.

[xxvi] For details on state progress implementing expanded income eligibility for health insurance, see the expanded income eligibility for health insurance section of the US Prenatal-to-3 State Policy Roadmap: https://pn3policy.org/pn-3-state-policy-roadmap-2021/us/health-insurance/
[xxvii] State counts include the District of Columbia.

Table 4: State Variation in Medicaid Expansion

State Has Adopted and Fully Implemented the Medicaid Expansion Under the ACA that Includes Coverage for Most Adults with Incomes up to 138 Percent of the Federal Poverty Level					
State	Policy Adoption Yes/No	Income Eligibility Limits as a Percent of the Federal Poverty Level			
		Childless Adults	Parents	Pregnant Women	Children
Alabama	No	0%	18%	146%	317%
Alaska	Yes	138%	138%	205%	208%
Arizona	Yes	138%	138%	161%	205%
Arkansas	Yes	138%	138%	214%	216%
California	Yes	138%	138%	213%	266%
Colorado	Yes	138%	138%	200%	265%
Connecticut	Yes	138%	160%	263%	323%
Delaware	Yes	138%	138%	217%	217%
District of Columbia	Yes	215%	221%	324%	324%
Florida	No	0%	31%	196%	215%
Georgia	No	0%	35%	225%	252%
Hawaii	Yes	138%	138%	196%	313%
Idaho	Yes	138%	138%	138%	190%
Illinois	Yes	138%	138%	213%	318%
Indiana	Yes	138%	138%	213%	255%
Iowa	Yes	138%	138%	380%	380%
Kansas	No	0%	38%	171%	232%
Kentucky	Yes	138%	138%	200%	218%
Louisiana	Yes	138%	138%	138%	255%
Maine	Yes	138%	138%	214%	213%
Maryland	Yes	138%	138%	264%	322%
Massachusetts	Yes	138%	138%	205%	305%
Michigan	Yes	138%	138%	200%	217%
Minnesota	Yes	138%	138%	283%	288%
Mississippi	No	0%	25%	199%	214%
Missouri	Yes	138%	138%	201%	305%
Montana	Yes	138%	138%	162%	266%
Nebraska	Yes	138%	138%	199%	218%
Nevada	Yes	138%	138%	165%	205%
New Hampshire	Yes	138%	138%	201%	323%

Table 4: State Variation in Medicaid Expansion (Continued)

State Has Adopted and Fully Implemented the Medicaid Expansion Under the ACA that Includes Coverage for Most Adults with Incomes up to 138 Percent of the Federal Poverty Level					
State	Policy Adoption Yes/No	Income Eligibility Limits as a Percent of the Federal Poverty Level			
		Childless Adults	Parents	Pregnant Women	Children
New Jersey	Yes	138%	138%	199%	355%
New Mexico	Yes	138%	138%	255%	305%
New York	Yes	138%	138%	223%	405%
North Carolina	No	0%	41%	201%	216%
North Dakota	Yes	138%	138%	162%	175%
Ohio	Yes	138%	138%	205%	211%
Oklahoma	Yes	138%	138%	138%	210%
Oregon	Yes	138%	138%	190%	305%
Pennsylvania	Yes	138%	138%	220%	319%
Rhode Island	Yes	138%	138%	195%	266%
South Carolina	No	0%	67%	199%	213%
South Dakota	No	0%	48%	138%	209%
Tennessee	No	0%	93%	200%	255%
Texas	No	0%	17%	203%	206%
Utah	Yes	138%	138%	144%	205%
Vermont	Yes	138%	138%	213%	317%
Virginia	Yes	138%	138%	148%	205%
Washington	Yes	138%	138%	198%	317%
West Virginia	Yes	138%	138%	190%	305%
Wisconsin	No	100%	100%	306%	306%
Wyoming	No	0%	52%	159%	205%
Best State	N/A	215%	221%	380%	405%
Worst State	N/A	0%	17%	138%	175%
Median State	N/A	138%	138%	200%	255%
State Count	39	N/A	N/A	N/A	N/A

Policy adoption status: Data as of October 1, 2021. Medicaid state plan amendments (SPAs) and Section 1115 Waivers.
Generosity and variation metrics: Data as of January 1, 2021. Kaiser Family Foundation.
For additional source and calculation information, please refer to the Methods and Sources section of pn3policy.org.

How Did We Reach Our Conclusions?

Method of Review

This evidence review began with a broad search of all literature related to the policy and its impacts on child and family wellbeing during the prenatal-to-3 period. First, we identified and collected relevant peer-reviewed academic studies as well as research briefs, government reports, and

working papers, using predefined search parameters, keywords, and trusted search engines. From this large body of work, we then singled out for more careful review those studies that endeavored to identify causal links between the policy and our outcomes of interest, taking into consideration characteristics such as the research designs put in place, the analytic methods used, and the relevance of the populations and outcomes studied. We then subjected this literature to an in-depth critique and chose only the most methodologically rigorous research to inform our conclusions about policy effectiveness. All studies considered to date for this review were released on or before March 31, 2021.

Standards of Strong Causal Evidence

When conducting a policy review, we consider only the strongest studies to be part of the evidence base for accurately assessing policy effectiveness. A strong study has a sufficiently large, representative sample, has been subjected to methodologically rigorous analyses, and has a well-executed research design allowing for causal inference—in other words, it demonstrates that changes in the outcome of interest were likely caused by the policy being studied.

The study design considered most reliable for establishing causality is a randomized controlled trial (RCT), an approach in which an intervention is applied to a randomly assigned subset of people. This approach is rare in policy evaluation because policies typically affect entire populations; application of a policy only to a subset of people is ethically and logistically prohibitive under most circumstances. However, when available, RCTs are an integral part of a policy's evidence base and an invaluable resource for understanding policy effectiveness.

The strongest designs typically used for studying policy impacts are quasi-experimental designs (QEDs) and longitudinal studies with adequate controls for internal validity (for example, using statistical methods to ensure that the policy, rather than some other variable, is the most likely cause of any changes in the outcomes of interest). Our conclusions are informed largely by these types of studies, which employ sophisticated techniques to identify causal relationships between policies and outcomes. Rigorous meta-analyses with sufficient numbers of studies, when available, also inform our conclusions.

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