prenatal-to-3 policy IMPACT CENTER
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Prenatal-to-3 State Policy Roadmap

Methods and Sources

2020-2024 Policy Impact Calculator

The purpose of the Policy Impact Calculator is to compare the level of resources available to a family of three based on each state's actual policy choices using policies in the Prenatal-to-3 State Policy Roadmap. This simulation demonstrates the substantial variation in available resources during the critical prenatal-to-age 3 period, based on state policy choices. A state's policy choices do not operate in isolation from one another. Instead, they interact to create a system of support of varying generosity for parents and children.

We simulate the level of resources available annually to a single parent with an infant and toddler, who works full time at a minimum wage job for 40 weeks, takes 12 weeks of leave provided for by the Family and Medical Leave Act (FMLA) following the birth of her infant on January 1st and receives paid family leave where available, and who uses a subsidy for their two children to receive center-based child care (9 months of care for the infant and 12 months of care for the 2-year old toddler). Our calculations begin with calculating earnings as the total annual earnings at the state minimum wage, assuming the mother works 40 hours per week for 40 weeks, plus any paid family and medical leave the mother is eligible to receive during the 12 weeks of leave. We subtract the family's out-of-pocket costs for child care that charges the equal access target rate, which is the 75th percentile of the state's market rate survey. The family's out-of-pocket costs include any required copayment, plus additional fees if the state's child care subsidy reimbursement rate is less than the price of care at the equal access target. We then add the resources a family would expect to receive from nutrition benefits (SNAP and WIC) and state and federal earned income and child tax credits, taking into account any federal or state income tax liabilities and payroll contributions under the Federal Insurance Contributions Act (FICA). Additionally, we overlay the choices states make with regard to Medicaid expansion. States are ranked by the total resources available to our family of three, including showing total resources adjusted for cost of living.

Documentation for each component measure, including sources, assumptions, and data notes, is below. All data in the models are as of October 1st of that year.

Annual Minimum Wage Earnings

Definition: Total annual earnings from full-time, full-year work at the state minimum wage. Calculated by taking the current state minimum wage and multiplying it by 1,600 hours (40 hours per week for 40 weeks).

Source: For detailed source information, please see our state minimum wage methods and sources documentation for 2020, 2021, 2022, 2023, and 2024. See the sources for measure 1.

Note: In the graphics, earned income is shown as annual minimum wage earnings minus out-of-pocket child care expenses, state and federal income taxes, paid family and medical leave premiums, and FICA (Federal Insurance Contributions Act).

Paid Family and Medical Leave (PFML) Benefits

Definition: In states with a paid family and medical leave program, the benefit a minimum wage earner would receive is calculated based on their earnings and taking the maximum paid leave available in the state.

Source: Prenatal-to-3 Policy Impact Center's Policy Evaluation Tracking System. For detailed information on our legislative tracking, please see our paid family leave methods and sources documentation for 2020, 2021, 2022, 2023, and 2024. Additional information available upon request.

Notes:

1. Hawaii's paid family and medical leave represents Hawaii's Temporary Disability Insurance (TDI) program, which provides medical leave for birthing parents but not bonding leave. Premiums are the maximum permitted by state law, with 50% of benefits considered taxable income.

Out-of-Pocket Child Care Expenses

Definition: Families' out-of-pocket expenses include both copayments and additional fees. The following assumptions are made: the infant is enrolled in care for the 9 months following the mother's leave, the toddler is enrolled in care for all 12 months, the price of care is equal to the price of care at the 75th percentile of the most recent market rate survey, and the provider receives the base reimbursement rates available for each child in the state. Component parts of this calculation are defined below.

Total Cost of Care = Base Reimbursement Rate + Additional Fees (if allowable)
Base Reimbursement Rate = State Contribution + Family Copayment Fee

1. *Total Cost of Care*: The price of care for an infant in full-time center-based care at the 75th percentile of market rates (also referred to as the "market rate price") in the most populous geographic area in the state. The distribution of this total cost of care is comprised of three components: the base subsidy reimbursement rate, which includes both the state contribution plus the family copayment fee, and any difference between the reimbursement rate and the total cost of care at the 75th percentile (either charged as an additional fee to the family or an unreimbursed cost to the provider).
2. *State Contribution:* The component of the base subsidy reimbursement paid by the state to the provider. {Base reimbursement = State contribution + Family copayment fee.}
3. *Family Copayment Fee:* The component of the base subsidy reimbursement paid by the family to the provider. {Base reimbursement = State contribution + Family copayment fee.}
4. *Additional Fees Paid by the Family*: The difference between the base subsidy reimbursement rate and the market rate price of care, assumed to be equal to the full price of care charged by the provider to private pay families. In states that allow providers to charge families this difference, this amount is paid by the family to the provider as an additional fee. If the state does not allow providers to charge

additional fees, this cost to the family is assumed to be $0 and the provider is assumed to experience this as an unreimbursed cost.

Source: For detailed source information, please refer to the "Sources for Measures 3-6 and 8-10" section in our child care subsidies methods and sources documentation for 2020, 2021, 2022, 2023, and 2024. The same sources as used in the Prenatal-to-3 State Policy Roadmap were used for this simulation, but under the assumption of different family income.

Notes:

1. The rates used are for the most populous geographic region in the state, as defined in state 2019-2021 and 2022-2024 Child Care and Development Fund (CCDF) plans.
2. Rates and copayment data are as of October 1 of that year. Several states planned changes to their subsidy rate and copayment policies as of October 2023, these changes will be reflected in subsequent updates of simulation data.
3. In 2020, copayment was waived in many states due to the COVID-19 pandemic.
4. The District of Columbia, New Mexico, and Virginia all base reimbursement rates on cost estimation modeling and do not provide a 75th percentile market rate. In the District of Columbia and New Mexico, additional fees are not allowed, so the family has no additional out-of-pocket expense beyond copayments. In Virginia, additional fees are allowable, but the state does not provide cost estimation figures for comparison. In 2020 and 2021, Virginia reported data at the 70th percentile, which we used in our simulation for those years. In the 2022 simulation, we used the cost of base quality care in Virginia provided by the Center of American Progress (https://costofchildcare.org/). In the 2023 simulation we have assumed $0 in additional fees, though this may not be the case for all families.
5. In 2024, many states released new 75th percentile market rates, but did not start reimbursing at that level. Accordingly, many families will have high additional fees.

Supplemental Nutrition Assistance Program (SNAP) Benefits

Definition: The maximum annual SNAP benefit available to the simulated family of three as of Fiscal Years 2020-2024. Estimated SNAP benefits are calculated based on the methodology described by the Center on Budget and Policy Priorities, calculated as maximum benefits less 30% of net income. Net income is calculated based on a number of deductions, including the standard deduction, earnings deduction, dependent care deduction, and an excess shelter deduction.

Sources:

1. Food and Nutrition Service, U.S. Department of Agriculture (2020). *SNAP – Fiscal year 2021 cost-of-living adjustments*. https://fns-prod.azureedge.us/sites/default/files/resource-files/COLAMemoFY2021.pdf
2. Food and Nutrition Service, U.S. Department of Agriculture (2021). *SNAP – Fiscal year 2022 cost-of-living adjustments*. https://www.fns.usda.gov/snap/fy-2022-cost-living-adjustments#:~:text=Maximum%20allotments%20for%20a%20family,and%20the%20U.S.%20Virgin%20Islands.
3. Food and Nutrition Service, U.S. Department of Agriculture (2022). *SNAP – Fiscal year 2023 cost-of-living adjustments*. https://www.fns.usda.gov/snap/fy-2023-cola
4. Food and Nutrition Service, U.S. Department of Agriculture (2023). *SNAP – Fiscal year 2024 cost-of-living adjustments*. https://www.fns.usda.gov/snap/fy-2024-cola
5. Center on Budget and Policy Priorities (2023). *A quick guide to SNAP eligibility and benefits.* Retrieved August 9, 2023, from https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits

6. Office of Policy Development and Research, Department of Housing and Urban Development (n.d.). *FY 2023 Fair Market Rent Documentation System* [Data set]. https://www.huduser.gov/portal/datasets/fmr.html
7. Office of Policy Development and Research, Department of Housing and Urban Development (n.d.). *FY 2022 Fair Market Rent Documentation System* [Data set]. https://www.huduser.gov/portal/datasets/fmr.html
8. Office of Policy Development and Research, Department of Housing and Urban Development (n.d.). *FY 2021 Fair Market Rent Documentation System* [Data set]. https://www.huduser.gov/portal/datasets/fmr.html
9. Office of Policy Development and Research, Department of Housing and Urban Development (n.d.). *FY 2020 Fair Market Rent Documentation System* [Data set]. https://www.huduser.gov/portal/datasets/fmr.html

Notes:

1. In certain state-years (the District of Columbia: 2020-2023, California: 2021-2023, Washington: 2023) where the family income is above the standard eligibility threshold for SNAP (130% of the federal poverty level), the family is still eligible for SNAP benefits due to broad-based categorical eligibility (https://www.fns.usda.gov/snap/broad-based-categorical-eligibility).
2. The values for maximum monthly allotments, the standard deduction, and the maximum shelter deduction are higher in Alaska and Hawaii compared to the 48 contiguous states and the District of Columbia. Figures in these two states differ due to higher cost of living.
3. The earnings deduction is defined as 20% of earnings.
4. The dependent care deduction accounts for monthly out-of-pocket child care expenses. These costs are estimated using the methodology described in the out-of-pocket child care expenses section of this documentation.
5. The excess shelter deduction is set at the amount by which the household's housing costs (including utilities) exceed half of its net income after all other deductions up to a set maximum. The household's housing costs for each year are assumed to match the 2-bedroom fair market rent in that Fiscal Year according to HUD (the most recent data available at time of publication). The family is assumed to live in the same locality as the most populous geographic region as defined for child care calculations.
6. Child expense and medical deductions are assumed to be $0.

Supplemental Nutrition Program for Women, Infants, and Children (WIC) Benefits

Definition: The estimated annual benefit based on the average monthly food cost per person for Fiscal Years 2019-2023, the most recent data available at the time of publication. Specifically, 2019 data was used for the 2020 simulation, 2020 data for the 2021 simulation, 2021 data for the 2022 simulation, 2022 data for the 2023 simulation, and 2023 data for the 2024 simulation. In the Policy Impact Calculator, we assume the parent is a mother who is eligible due to the age of the infant.

Sources:

1. USDA Food and Nutrition Service WIC data tables. Average monthly food cost per person. https://www.fns.usda.gov/pd/wic-program

Federal Income Tax

1. **Definition**: The federal tax owed (if any, after applying nonrefundable credits), assuming the mother files as head of household and takes the standard deduction. For years 2020-2021, federal income tax is estimated using the NBER TAXSIM model (version 35) (https://taxsim.nber.org/), which calculates federal and state income tax liabilities based on data provided by the user. For years 2022-2024, federal income tax is simulated using Policy Engine (https://policyengine.org/us). Similar to TAXSIM, Policy Engine is a microsimulation model of the of the US tax and benefit system. The family's annual earnings, including any paid family and medical leave benefits, along with the number of dependents, and annual child care costs are entered into the simulator to compute the federal tax liability.

Sources:

1. Feenberg, Daniel Richard, and Elizabeth Coutts, An Introduction to the TAXSIM Model, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.
2. Policy Engine. https://policyengine.org/us

Notes:

1. In 2024, the nonrefundable portion of the Child Tax Credit brings the federal tax liability of the simulated household to zero in all states.
2. In 2023, the nonrefundable portion of the Child Tax Credit brings the federal tax liability of the simulated household to zero in all but 2 states (DC and Delaware).
3. In 2022, the nonrefundable portion of the Child Tax Credit brings the federal tax liability of the simulated household to zero in all but 1 state (DC).
4. In 2021, the nonrefundable portion of the Child Tax Credit brings the federal tax liability of the simulated household to zero in all but 5 states (California, DC, Massachusetts, New York and Washington).
5. In 2020, the nonrefundable portion of the Child Tax Credit brings the federal tax liability of the simulated household to zero in all states.

Federal Earned Income Tax Credit

Definition: The value of the federal earned income tax credit (EITC) for tax years 2020-2024 is based on annual minimum wage earnings, including any paid family and medical leave benefits, for the simulated family. For years 2020-2021, federal EITC is estimated using the NBER TAXSIM model (https://taxsim.nber.org/). For tax years 2022-2024, federal EITC is estimated using Policy Engine (https://policyengine.org/us).

Sources:

2. Feenberg, Daniel Richard, and Elizabeth Coutts, An Introduction to the TAXSIM Model, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.
3. Policy Engine. https://policyengine.org/us

Notes:

1. The family is assumed to meet all qualifications to be eligible for the federal EITC.

Federal Child Tax Credit

Definition: The value of the federal child tax credit (CTC) for tax years 2020-2024 based on annual earnings, including any paid family and medical leave benefits, for the simulated family. For years 2020 and 2021, federal CTC is estimated using the NBER TAXSIM model (https://taxsim.nber.org/). For years 2022-2024, federal CTC is calculated manually, based on federal statutes.

Sources:

1. Feenberg, Daniel Richard, and Elizabeth Coutts, An Introduction to the TAXSIM Model, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.

Notes:

1. In 2020, the maximum child tax credit was $2,000 per child, but only $1400 per child was fully refundable.
2. In 2021, the American Rescue Plan Act (ARPA) increased the child tax credit and expanded its coverage. Under this act, the credit was increased to $3,600 per child under 6 and was made fully refundable. As a result, the simulated family in each state received the full credit for both children, totaling $7,200.
3. In 2022, the maximum child tax credit was $2,000 per child, but only $1,500 was fully refundable.
4. In 2023, the maximum child tax credit was $2,000 per child, but only $1,600 per child was fully refundable.

State Income Tax

1. **Definition**: The state income tax owed (if any) after applying nonrefundable credits, assuming the mother files as head of household and takes the standard deduction. For years 2020 and 2021, this measure is calculated using the NBER TAXSIM model (https://taxsim.nber.org/), which simulates U.S. federal and state income tax systems. For years 2022-2024, this measure is calculated using Policy Engine (https://policyengine.org/us), which simulates state income tax systems. The family's annual earnings, and number and age of dependents are entered into both simulators to compute the state tax liability.

Notes:

1. Our simulated tax filer in Pennsylvania owes no state income tax due to Pennsylvania's Tax Forgiveness program, which allows eligible tax filers to reduce all or part of their Pennsylvania state income tax liability: https://www.revenue.pa.gov/FormsandPublications/PAPersonalIncomeTaxGuide/Pages/Tax-Forgiveness.aspx .

Sources:

1. Feenberg, Daniel Richard, and Elizabeth Coutts, An Introduction to the TAXSIM Model, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.
2. Policy Engine. https://policyengine.org/us

State Earned Income Tax Credit

Definition: The value of the state's earned income tax credit (EITC) for tax years 2020-2024 based on annual earnings for the simulated family.

Source: We calculate state earned income tax credits based on our legislative tracking, simulating the credit based on the earnings and paid family and medical leave benefits, in states where those benefits are considered as taxable income. For detailed source information, please see our state earned income tax credit methods and sources documentation for 2020, 2021, 2022, 2023, and 2024. See the sources for the progress assessment methodology and measure 1.

Notes:

1. Most state tax credits are calculated as a percentage of the federal EITC.
2. California's EITC is based on a unique calculation, not a percentage of the federal EITC received by the same taxpayer. The value for this scenario in the 2023 and 2021 simulations was calculated using this tool: https://www.ftb.ca.gov/file/personal/credits/EITC-Calculator/Home. In 2022, the simulated family in California did not qualify for the state EITC. In 2020, majority of state EITC recipients received a credit that is 85% of the Federal credit, so California's EITC is set to 85% of the federal EITC.
3. In tax year 2023, Minnesota revised the structure of their EITC, including it as a portion of the Working Family Credit. The Family of 3 qualifies for the maximum credit of $350.
4. Washington's tax credit is a flat rate based on the number of kids. This calculator was used to estimate the maximum credit for the simulated family: https://survey.alchemer.com/s3/7027130/WFTC-Eligibility-Assistant

State Child Tax Credit

Definition: We calculate state child tax credits based on our legislative tracking, simulating the credit based on the earnings and paid family and medical leave benefits, in states where those benefits are considered as taxable income. The value of the state's child tax credit for tax years 2020-2024 based on annual earnings for the simulated family.

Sources:

1. National Conference of State Legislators (2022). *Child tax credit enhancements.* https://www.ncsl.org/research/human-services/child-tax-credit-enactments.aspx
2. National Conference of State Legislators (2022). *Child tax credit overview.* https://www.ncsl.org/human-services/child-tax-credit-overview
3. Jirary, T., & Prestera, E. (2022). *State-level CTC reforms can strengthen American families.* Niskanen Center. https://www.niskanencenter.org/state-level-ctc-reforms-can-strengthen-american-families/
4. Tax Credits for Working Families (n.d.). *State tax credits*. Retrieved August 1, 2023, from https://www.taxcreditsforworkersandfamilies.org/state-tax-credits/
5. McCabe, J. (2023). *The State of Our Families*. Niskanen Center. Retrieved August 1, 2023 from https://www.niskanencenter.org/wp-content/uploads/2023/02/The-State-of-Our-Families.pdf

Notes:

1. Colorado's Child Tax Credit is only available for children 5 and younger. For single individuals with incomes between $25,001 and $50,000 (the income level of the simulated family in Colorado), the usual credit is 15% of the federal child tax credit. However, due to the expiration of the enhanced benefits in the American Rescue Plan Act, the credit is 30% of the federal child tax credit beginning in tax year 2022. Source: Colo. Rev. Stat. § 39-22-129 (2021). (Details also available the original bill text: http://leg.colorado.gov/bills/hb21-1311.)
2. For tax year 2023, New York expanded eligibility of its Empire State Child Credit to include children under 4 years of age.
3. In Massachusetts, families can use either a child tax credit or a child and dependent care tax credit, whichever is greater. In our simulation, we assume that the family claims the child tax credit, which is greater than their child and dependent care credit. (Additional sources: https://www.mass.gov/service-details/view-child-and-dependent-related-credits, https://commonwealthmagazine.org/economy/child-tax-credit-proposal-would-strengthen-states-pro-family-standing/)
4. In Oklahoma, filers may claim either 5% of the CTC or 20% of the CDCTC, whichever is greater. The CTC is more generous for this household and is included in the simulation.
5. One-time child tax rebates, if any, are included in the simulation. Three states have had child-based rebates: Arizona in tax year 2023, Connecticut in tax year 2021, and Rhode Island in tax year 2021.
6. In visualizations that summarize resources across all 51 states, Alaska's Permanent Fund Dividend (APFD) is included as a Child Tax Credit, although every individual in Alaska receives the APFD, regardless of age. Accordingly, we simulate all 3 family members as receiving the APFD. For more information on the APFD, see: https://pfd.alaska.gov/
7. In 2024, Colorado introduced the Family Affordability Tax Credit, which provides $3,200 for each child aged 0-5, and $2,400 for each child aged 6-16. Single taxpayers earning less than $15,000 receive the full credit. For single taxpayers, the act reduces the $3,200 amount of credit by 6.875% for each $5,000 by which the taxpayer's income exceeds $15,000. In visualizations that summarize resources across 51 states, Colorado's Family Affordability Credit is combined with the Child Tax Credit.

Federal Insurance Contributions Act (FICA)

Definition: FICA is a U.S. federal payroll tax that is deducted from each paycheck to fund the Social Security and Medicare programs. For tax years 2020 and 2021, FICA is estimated using the NBER TAXSIM model (https://taxsim.nber.org/). For tax years 2022-2024, FICA is estimated using Policy Engine (https://policyengine.org/us)

Sources:

1. Feenberg, Daniel Richard, and Elizabeth Coutts, An Introduction to the TAXSIM Model, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.
2. Policy Engine. https://policyengine.org/us

Note: FICA is split between the employer and employee. Only the employee's share is included in the simulations.

Total Resources

Definition: The total sum of resources available to a family is calculated as the sum of annual minimum wage earnings, benefits from PFML, SNAP, WIC, federal and state EITCs, and federal and state CTCs, minus out-of-pocket child care expenses, paid family and medical leave premiums, FICA, and federal and state income tax owed (if any).

Cost-of-Living Adjusted Resources

Definition: Cost-of-living adjusted resources are calculated by applying the state's 2018-2022 regional price parities index value for all items to the total resources calculated as described above. Specifically, 2018 data was used for the 2020 simulation, 2019 data for the 2021 simulation, 2020 data for the 2022 simulation, 2021 data for the 2023 simulation, and 2022 data for the 2024 simulation.

Sources:

1. US Bureau of Economic Analysis. (December 2022). *Table SARPP Regional Price Parities by state from GDP and personal income* [Data set]. Retrieved on August 19, 2023, from https://apps.bea.gov/iTable/?reqid=70&step=1&isuri=1&acrdn=8
2. Gascon, C.S. (October 1, 2014). *District overview: Buying power of minimum wage varies across and within states*. Federal Reserve Bank of St. Louis. Retrieved on May 18, 2021 from https://www.stlouisfed.org/publications/regional-economist/october-2014/buying-power-of-minimum-wage-varies-across-and-within-states#endnotes

Notes:

1. Regional Price Parities (RPPs) measure the differences in price levels across states and metropolitan areas for a given year and are expressed as a percentage of the overall national price level. All items RPPs cover all consumption goods and services, including housing rents. Areas with high/low RPPs typically correspond to areas with high/low price levels for rents.
2. Cost-of-living adjustments were calculated following the methodology used by researchers with the Federal Reserve Bank of St. Louis.