PRENATAL-TO-3 POLICY CLEARINGHOUSE EVIDENCE REVIEW



ER 03D.0923

Paid Family Leave

Evidence Review Findings: Effective / Roadmap Policy

A state policy providing at least 6 weeks of paid family leave to parents with a new biological, adopted, or foster child increases the likelihood and length of leave-taking for mothers, reduces racial disparities in leave-taking, and has beneficial effects on maternal labor force attachment, postneonatal infant mortality, parent and child health, and nurturing and responsive parenting.

Paid family leave policies require employers to allow eligible parents to take time off from work to bond with a new child while receiving a portion of their salary. By providing parents with the time and financial security to stay home with a new child, paid family leave may improve both economic security and the health and wellbeing of children and parents. Currently, 14 states, including the District of Columbia, have enacted statewide paid family leave policies of any length. Only nine states have begun implementing a paid family leave policy of at least 6 weeks as of October 1, 2023.

States vary in the number of weeks offered, the portion of wages paid, eligibility requirements, job protection provisions, and funding mechanisms. States also vary in whether they provide leave to employees in the private sector, the public sector, or both. Studies that examine the causal impact of paid family leave policies find that providing at least 6 weeks of paid leave to parents with a new child increases the length and likelihood of leave-taking, increases mothers' labor force participation rates, improves mothers' mental health, and fosters better child-parent relationships and child health.

Decades of research in the field of child development have made clear the conditions necessary for young children and their families to thrive.¹ These conditions are represented by our eight policy goals, shown in Table 1. The goals positively impacted by paid family leave 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.

ER 03D.0923

Table 1: Impacts	of Paid	Family Leave	on Policy Goals
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Positive Impact	Policy Goal	Overall Findings
	Access to Needed Services	Positive impacts on leave-taking
	Parents' Ability to Work	Mostly positive impacts on employment and labor force participation
	Sufficient Household Resources	Mixed impacts, but leaning positive for household income and poverty
	Healthy and Equitable Births	Mostly positive impacts on birth outcomes driven by positive impacts on postneonatal infant mortality
	Parental Health and Emotional Wellbeing	Positive impacts on adult physical and mental health
	Nurturing and Responsive Child-Parent Relationships	Mixed impacts on quality time spent together
0	Nurturing and Responsive Child Care in Safe Settings	No strong causal studies identified for this goal
	Optimal Child Health and Development	Positive impacts on a variety of child health indicators

What Is Paid Family Leave?

In the early 1900s, approximately 20 percent of women in the United States participated in the labor force. Female labor force participation spiked during World Wars I and II when the male civilian workforce was limited, increased rapidly beginning in the 1960s with the availability of hormonal birth control, and peaked at 60 percent in 1999.^{54,63} Following World War I, an international movement advocating for fair treatment of women in the labor force gained momentum. The activism of feminists and female trade unionists led to the International Labor Organization's adoption of the Maternity Protection Convention of 1919, which called for 12 weeks of paid maternity leave, free medical care during and after pregnancy, and job protection.⁵⁵

In the following decades, most countries established paid parental leave policies – policies that require employers to allow eligible parents to take time off from work to bond with a new child while receiving some portion of their salary. As of 2023, the US remains one of only seven countries in the world without a paid maternity leave policy and one of 34 Organization for Economic Cooperation and Development (OECD) member nations without a national paid family leave policy.^{55,56}

3

As more women in the United States, especially those aged 25 to 54 years, joined the workforce in the mid-20th century, policies supporting pregnancy and employment gained increased attention. In the 1960s and 1970s, several laws were passed preventing discrimination related to pregnancy with some proposed legislation nearly leading to a national paid leave policy. Although the US does not have a national paid family leave policy, there is federal legislation mandating unpaid family leave and prohibiting pregnancy discrimination.⁵⁷

The Family and Medical Leave Act (FMLA), enacted in 1993, is currently the primary federal policy to support parental and family leave in the US. The FMLA mandates that qualifying workers receive 12 weeks of unpaid, job-protected leave with continuous health insurance coverage.⁴⁵ However, firm size and work history requirements preclude some employees from taking time off through the FMLA. To qualify, employees must have worked at least 1,250 hours in the preceding year, must work in a firm with at least 50 employees, and must have worked for that employer for the past 12 months.²

Data show that only 56 percent of workers qualify for the FMLA.³ Research has also found that the policy largely benefits higher-income and White workers.^{4,35} Because the FMLA provides only unpaid leave to eligible workers, many parents who earn low incomes may not use the time off or may shorten the duration of leave so that they do not lose wages. As of October 1, 2020, federal employees are eligible for 12 weeks of paid leave to care for a new child through the Federal Employee Paid Leave Act (FEPLA), in addition to FMLA.⁵

Momentum for passing paid family leave policies strengthened as a result of the COVID-19 pandemic, which exacerbated difficulties for families trying to balance work and the care of children. In response to the crisis, the federal government passed the Families First Coronavirus Response Act in March 2020, which included provisions supporting emergency paid leave for many employees, however any requirements for employers expired December 31, 2020.^{46,47,52}

Given the limitations of the FMLA and loss of emergency provisions, several states have adopted statewide paid family leave policies. Paid family leave policies allow parents time to bond with a new biological, adopted, or foster child. These policies often include medical leave provisions, allowing individuals to take time off for their own disabilities or to care for ill family members, but the focus of this review is on parental leave.

In 2002, California's Senate Bill 1661 was signed into law, making the state the first in the country with a paid family leave program.⁵⁸ Although enacted in 2002, benefits became available to nearly every worker in California in 2004. The policy provided employees with 6 weeks of leave that was reimbursed at 55 percent of one's weekly earnings (up to a maximum benefit).

State paid family leave policies currently allow parents to take between 6 and 12 weeks off from work, depending on the state, with pay varying based on a proportion of the employee's wages prior to taking leave. Most state policies also have weekly payment caps and require that individuals have a minimum work history, either by time worked or earnings, in the state during a given "base period" (often 12 months) prior to leave-taking.

Who Is Affected by Paid Family Leave?

Paid family leave policies govern how much paid time off employers must provide to an employee after the birth, adoption, or placement of a foster child. According to the Bureau of Labor Statistics, as of March 2022, 25 percent of all workers had access to paid family leave, whereas 89 percent of workers had access to unpaid family leave.^{1,6} A minority of states have adopted paid family leave policies, so for many workers, access to paid family leave is dependent on the generosity of employer-offered benefits. Employees that are born in the US, are college educated, and are non-Hispanic White have access to paid family leave at higher rates.^{4,35}

What Are the Funding Options for Paid Family Leave?

The majority of states that offer paid family leave fund it through employee payroll taxes, which require all workers and employers to contribute to funding the costs. California, Connecticut, Massachusetts, New Jersey, New York, Rhode Island, and Washington use this funding mechanism, with an employee payroll tax that ranges from 0.4 percent in Washington to 1.1 percent in Rhode Island.^{ii,53} The District of Columbia finances its program through employer contributions and Colorado and Oregon fund programs through both employee and employer contributions. Delaware, Maine, Minnesota, and Maryland will fund their programs using this same mechanism when implemented.

Why Should Paid Family Leave Be Expected to Impact the Prenatal-to-3 Period?

Paid family leave is designed to allow parents time off from work to bond with a new child. The guarantee of paid family leave may increase parents' labor force participation and families' economic security after a birth, while also reducing the time parents spend looking for new work.^{6,8} As discussed in this review, studies show increasing labor force attachment, through paid family leave, has generally made women more likely to return to work following the birth of their first child contributing to positive short-term labor market outcomes. However, some long-term studies have shown losses in employment and wages. The losses may result from penalties in the workplace of having children (i.e., mothers may be seen as less competent and committed to their jobs which can negatively impact hiring decisions, salary, and promotions) and the high cost of child care (which can disincentivize participation in the labor force).⁶¹

If parents with access to paid family leave can remain attached to the workforce to a greater degree than families without paid leave, access to affordable and high-quality child care is vital to support children's development when parents work.⁴⁴ Robust paid family leave policies may also reduce the need for infant care, potentially making child care later on more affordable for families. Some scholars emphasize that paid family leave policies can incentivize women to invest in their own education and training to a greater degree, because women perceive work as more profitable and compatible with raising children.⁴⁸

ⁱ The sum of paid and unpaid leave exceeds 100 percent because some workers had access to unpaid leave through the Family Medical Leave Act (FMLA), as well as paid family leave.

ⁱⁱ State-specific research conducted by the Prenatal-to-3 Policy Impact Center.

ER 03D.0923

Additionally, paid family leave may positively impact parent and child health outcomes.¹⁰ Paid family leave should help new parents have more time to bond with their babies, develop positive caregiving skills, and build the foundation for healthy attachment.¹¹ Children may be more likely to experience positive health outcomes if their families have access to paid family leave.¹² One mechanism may be through increased food security, because parents may have greater resources to spend on nutritious food. Mothers who are able to take paid time off after the birth of a child may be more likely to initiate breastfeeding and continue breastfeeding longer.¹²

Furthermore, both mothers and children may have a lower likelihood of being hospitalized following childbirth, because families may have more time to seek prompt medical care if a need arises.¹ Children may be less likely to experience avoidable poor health outcomes through timely immunizations and infant well-child visits.¹²

What Impact Does Paid Family Leave Have, and for Whom?

The evidence for the impact of paid family leave in the US reveals that the policy improves a variety of child and family outcomes, but the research is limited to a few states. Only California, New Jersey, and Rhode Island have family leave laws that were in effect before 2018, and the causal studies in this review examine only those three states.

Other states with paid family leave programs have not implemented them for a sufficient period of time to study the impacts in a rigorous way. As a result, the majority of reviewed studies assess the efficacy of a paid family leave policy of 6 weeks, corresponding to the duration of California's paid family leave policy between 2004 and 2020.

All but seven OECD countries have implemented paid family leave and many international studies have found positive impacts. However, the effects of those laws must be considered within the broader context of universal child care, universal health care, and child allowances offered in many other advanced economies.⁴³ Due to these systemic policy differences, this review is limited to laws within the US to build evidence on the policy's effectiveness for families in this country.

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 (Table 2) displays the findings associated with paid family leave (beneficial, null,ⁱⁱⁱ or detrimental) for each of the strong studies (A through FF) 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

ⁱⁱⁱ An impact is considered statistically significant if $p \le 0.05$. Results with p-values above this threshold are considered null or nonsignificant.

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 32 causal studies included in this review, 6 examined how outcomes differed by race or ethnicity (beyond simply presenting summary statistics or controlling for race/ethnicity). Where available, this review presents the analyses' causal findings for by race and ethnicity. 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.

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal	
Access to	Leave-Taking	B, N, R, W				
Needed Services	Receipt of Postpartum Care	Z			Positive	
	Labor Force Participation	D, F, Q	DD			
	Weeks Worked	В				
Parents' Ability to Work	Average Weekly Work Hours	B, N			Mostly Positive	
	Employment	B, D, AA, CC	N, O, DD	A, F	TOSICIVE	
	Attachment to Pre-Birth Employer	В, О	А			
	Household Income	М	Ν			
	Annual Wage Earnings		DD	А		
Q., ff ; - ; - , , t	Hourly Wages		В			
Sufficient Household	Household Savings		Х		Mixed+	
Resources	Risk of Poverty	М				
	Food Insecurity	Y			Mostly Positive	
	Reduced Reliance on Public Assistance	V				
Healthy and Equitable Births	Preterm Births		S			
	Low Birthweight		S			
	Postneonatal Infant Mortality	S, FF				

Table 2: Evidence of Effectiveness for Paid Family Leave

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal	
	Self-Rated Health	Р			Positive	
	Overweight	Р				
	Obesity		Р			
Parental Health and	Alcohol Consumption	Р				
Emotional	Maternal Mental Health	С				
Wellbeing	Paternal Mental Health		С			
	Coping With Demands of Parenting	С				
	Psychological Distress	Р, Т, ВВ				
Nurturing and Responsive Child-Parent Relationships	Mothers' Time Spent with Children on Reading, Outings, Meals	А	С		Mixed	
	Breastfeeding	G, H, K, U				
	Infant Hospitalizations	L				
	Timely Infant Vaccinations	E, EE				
Optimal Child Health and Development	Infant Health	nfant Health C				
	School-Aged Child Health	J			Positive	
	Asthma		С			
	Allergies (Food and Respiratory)		С			
	Abusive Head Trauma I					
	Behavioral Problems		BB			

Table 2: Evidence of Effectiveness for Paid Family Leave (Continued)

* 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.

+Mixed impacts but leaning positive for household income and poverty.

Access to Needed Services

Paid family leave policies lead to increased leave-taking and improved access to postpartum care. Research from California found that the implementation of paid family leave was associated with mothers and fathers^{iv} taking longer leave and both parents taking leave simultaneously.^{B,N,R} One

^{iv} Studies included in this review did not look at same sex couples.

ER 03D.0923

study found that the implementation of the policy increased the likelihood of maternal leave-taking by 3.6 percentage points^N and another study found that leave-taking increased by 5 weeks for mothers, but only up to 3 days for fathers.^B A separate study found that, although the implementation of the policy increased the probability of fathers taking leave by 0.9 percentage points, fathers were still taking only an average of 1.5 weeks out of the 6 weeks that were available at that time in California.^R The study noted that mothers took an average of 9 weeks out of the 12 paid weeks available through both Temporary Disability Insurance and paid family leave at that time.^R

Research suggests that the effect on leave-taking may be greater for unmarried women and Black women than mothers who are unmarried and of other racial and ethnic backgrounds; one study found that the probability of taking family leave increased by 7.2 percentage points for unmarried mothers (from a rate of 2% prior to the policy) and 10.6 percentage points for Black mothers (from a rate of 2% prior to the policy).^N White mothers, meanwhile, saw a statistically insignificant 3 percentage point increase (from a rate of 11% prior to the policy). However, more research on leave-taking effects by subgroup would be valuable to corroborate these findings, which had fairly large standard errors.

Although the California policy has increased the uptake of maternity leave, a policy brief from the University of California at Davis reported that only 25 to 40 percent of eligible mothers in California took advantage of paid family leave benefits approximately 10 years after implementation.³¹ The study also found that "median earnings of leave takers are an estimated \$10,000 higher than the median income for all working women in California" (p. 1).³¹ Although some of this difference may be attributed to a differential likelihood of eligibility based on income, research also suggests that awareness of eligibility is low. A 2011 study found that only half of eligible adults reported they knew about California's paid family leave, with lower-wage earners least likely to know about it.⁶

A 2020 study of San Francisco's paid leave ordinance corroborated this finding.^w The study examined uptake of paid leave in San Francisco compared to surrounding areas in California after San Francisco implemented an expansion to California's paid leave policy, bringing reimbursement for private sector employees to 100 percent of wages. The authors found that the policy was linked to a 13 percent increase in leave-taking for fathers (from a rate of 43% prior to the policy), but no significant increase for mothers.

They noted that 89 percent of women in the sample were already taking about 12 weeks of leave through paid leave and Temporary Disability Insurance and hypothesized that the ordinance may not have had a significant effect due to low awareness. For example, a survey associated with the study found that less than 2 percent of mothers with low incomes had accurate information about the new policy.

The study found that 61.6 percent of non-Medicaid covered women employed in San Francisco knew about the policy, compared to just 9.7 percent of women covered by Medicaid. Increasing awareness of state and local paid family leave policies could increase participation and allow more families, especially lower earners, to reap the child and parental benefits supported by the evidence discussed in this review.

Research from Rhode Island links statewide paid family leave policies to postpartum care access.^z Researchers used data from births in Rhode Island between 2012 and 2016 to examine the impact of the state's 2014 4-week paid family leave law, as compared to nearby states that did not have a paid family leave program. The study found that the policy led to a 2.2 percentage point increase in women receiving postpartum care, and the effect was greater for women of color (3.4 percentage points for Black, Hispanic, Asian, American Indian women, and women of mixed race, compared to 1.5 percentage points for White women). The authors were unable to disaggregate the specific effects for all racial groups because of the small state population and resulting small sample sizes.

Parents' Ability to Work

Research on the impact of paid family leave policies on mothers' employment and labor force participation finds mostly positive results. A study of California's policy found that paid family leave increased the probability of mothers working 1 year after a birth by between 12.9 to 18.3 percentage points, depending on how much work experience the mother had before the birth.^B

Additional research has shown that paid family leave led to higher labor force participation among young women.^{D,F,Q} For example, one study of California and New Jersey's policies found a 5 to 8 percentage point increase in mothers' labor force participation rate in the months surrounding birth, as well as a significant increase in the number of weeks employed, compared to the number of weeks spent looking for work.^D

A second study that examined both states also found a positive impact of paid family leave policies on labor force detachment—in California, the authors found that paid leave reduced labor market exit by, on average, 20 percent per year across the 5 years after a birth; in New Jersey, paid leave reduced labor market exit by an average of 46 percent each year across the 5 years after a birth.^Q The authors found that the effects were concentrated among women with high levels of education.

Additional research that studied the impact of California's paid family leave policy on employment, , following implementation of the policy, California employers had an increase of nearly six employees per firm on average, with even greater increases in large firms (i.e., approximately eight employees).^{v,CC}

Another study found that labor force participation increased by 1.5 percentage points for young women in California following the implementation of paid family leave.^F The study, however, also reported unanticipated effects of paid family leave: a significantly higher unemployment rate (an increase of between 0.3 and 1.5 percentage points) and longer durations of unemployment (1.73 weeks longer) among young women.^F The author speculated that paid family leave may result in higher labor costs, and employers may engage in discriminatory hiring practices against younger women, causing higher unemployment rates in this group. However, this theory was not tested in the study, and other research suggests no such effect on employers.⁶

In addition to increased labor force participation, three studies on California's paid family leave found that the policy led to an increase in the employment and number of years that mothers spent

^v Large firms are defined in this study as establishments with greater than 100 employees.^{CC}

working following a birth, compared to one study that demonstrated a decrease in the same outcomes. The first study found that, among employed mothers of children age 1 to 3, access^{vi} to paid leave increased usual weekly work hours by up to 17 percent when compared to mothers in states without access.^N

The second study found that a paid family leave policy increased weeks worked and average weekly hours worked during the child's second year by 7.1 weeks and 2.8 hours, respectively, for those who worked at least 20 weeks during their pregnancy.^B The third study found that the implementation of the paid leave policy increased the probability of employment for mothers with low income by 11 percent 1 year after birth.^{AA}

In contrast, one study found that, in the 12 years after California's paid leave policy was implemented, employment decreased slightly (less than 1 percentage point) for women, with the impact being driven by younger women. The same authors found that the policy led to a decrease in unemployment duration by about 1 week for young men with a high school degree or less.^{DD}

One of the largest studies of California's paid leave policy to date found negative impacts on longterm employment and wages among first-time mothers who took leave immediately after the policy was implemented in 2004.^A The authors found a reduction of 7 percent in maternal employment and an 8 percent drop in wages, 6 to 10 years after giving birth, among women who were eligible for paid leave at the time of their first birth (compared to those who gave birth a few months before policy implementation). However, the authors found that self-employment income offset some of the decrease in wages.

The rationale for focusing on first-time mothers was that "the availability of paid leave may... have a greater impact on new mothers than on women who have already established their child care and work routines [because] women learn how to manage motherhood when they have their first child" (p. 16).^A The long-term employment findings for all mothers eligible for paid leave were not statistically significant.

Findings for job continuity, or attachment to the pre-birth employer, are mixed but lean positive. One study examined the impact of benefit levels using a sample of mothers with earnings near the maximum benefit threshold in California (i.e., high-earning women), and the authors found that a 10 percent increase in the weekly benefit amount increased the likelihood that a mother would return to her pre-birth employer by up to 5 percent.^o A study with a broader sample that included men and women of childbearing age, found a positive and statistically significant 13 percent increase in the likelihood of working at the pre-birth job 1 year after the birth, with a paid family leave policy.^B Very small and insignificant effects on job continuity were found in a study of the long-term effects of paid family leave in California.^A

^{vi} For the purpose of analyses, most studies included in this review defined "access" as "living in a state with a paid family leave policy" and examined outcomes relative to timeframes prior to implementation of the policy, relative to families in states without a paid leave policy, or relative to families without infants or young children. "Having access" does not mean that every family in the treatment sample was eligible for paid leave or received benefits.

A 2022 study found that California's paid family leave increased fertility by 2.8 percent, driven by higher order births to mothers in their 30s. The increase in fertility resulting from the policy could explain some of the contrasting short-term gains and long-term losses in women's labor market outcomes found in recent research. The authors of the 2022 study posit that, although women may benefit in the short run by remaining attached to their pre-birth employer, women may choose to have more children which can increase penalties in the workplace and the cost of child care.⁶¹

Sufficient Household Resources

The most rigorous evidence to date suggests that state paid family leave policies have mixed effects on household material wellbeing, which includes poverty status and income. More specifically, this research identifies more positive impacts in the short-term and null and negative impacts in the long-term—These conclusions that are consistent with research on the impact of paid family leave on women's labor market outcomes. A study from California with a large sample found that paid family leave was associated with better household economic security in the year following the birth of a child^M The study found that total income (inclusive of all household members' income) among households with children age 1, was approximately \$3,400 higher (equal to 4.1 percent higher) among families with access to paid family leave relative to those who did not have access. Effects on total earnings for mothers were greater among married mothers, likely because they tend to take longer leaves than single mothers. The study also showed that families with access to paid leave were 10.2 percent less likely to be in poverty, with the greatest effects for single mothers with low incomes and levels of education.^M

Alternatively, two studies found statistically insignificant increases in mothers' wages (compared with total household wages as in study M) as a result of paid family leave. The first, a study on California's paid family leave program between 1999 and 2010, found that an increase in weekly work hours for mothers who took paid leave led to very small, and statistically insignificant increases in wage income.^N A study of post-birth employment outcomes associated with paid family leave found that the program led to a statistically insignificant increase in hourly wages for mothers of up to 5 percent at 1 year after birth.^B

Other studies demonstrate the potential detrimental or null effects of paid family leave in the long term (i.e., 10 to 12 years following leave). One study found that paid family leave had a detrimental effect on annual wages of first-time mothers in the long run, with a net 10-year loss of \$24,000.^A An additional study also found null effects on earnings 12 years after implementation of California's paid leave policy.^{DD} A final study found that expectant mothers in that state saved about 1.4 fewer months of household income in the year before the birth compared to mothers in other states without a paid leave policy,^X possibly because they were anticipating the additional benefits from paid leave. However, this finding was not statistically significant, and the author explained that the reduced incentive to save was concentrated among higher-income families.

A study published in 2020 found economic benefits for families as measured by their reduced reliance on public assistance.^v The author found that living in a state with paid maternity leave,^{vii} versus not, decreased the use of Temporary Assistance for Needy Families (TANF) by 4.3 percent,

^{vii} The study included California, Hawaii, New Jersey, New York, and Rhode Island as treatment states because they either had a Temporary Disability Insurance policy that covered pregnancy, or a paid family leave policy, or both.

and reduced the benefits received per year by \$104 per family. The author suggested that substituting paid family leave benefits for TANF funds can be de-stigmatizing because it allows families with low incomes to participate in an entitlement program rather than a public assistance program. However, the results were only significant for the period before the Great Recession, and the author cautions that many mothers who earn low incomes are better off with TANF than with PFL benefits. Therefore, the implications of the study's findings may be different depending on each individual family's overall resources.

A study on food security in California between 1999 and 2007 found that the enactment of a statewide paid family leave policy significantly improved food security for households with infants (under age 1) compared to states without such a policy.^Y The author attributed a 2.3 percentage point decrease in food insecurity to the paid leave law, and measured the strongest effects for households below 185 percent of the federal poverty level and households with multiple children. Access to sufficient resources to purchase nutritious food may be one of the mechanisms driving better health outcomes for families in paid leave states, according to the author.

Healthy and Equitable Births

Paid family leave policies generally affect the period after the child's birth, meaning that the impact of policies on birth outcomes is limited. However, evidence from two studies show that paid family leave reduces postneonatal infant mortality (infant death after the first 28 days of life) – a finding that is especially important given that the US has one of the highest infant mortality rates among advanced economies.⁶⁰

Access to paid leave may improve caregiving and reduce the likelihood of accidents and precursors of infant mortality during early infancy. A study of California's paid leave policy found that, following paid family leave's passage in 2004, postneonatal infant mortality decreased by 12 percent with no differences across racial groups, relative to states without the policy. The study did not find statistically significant impacts on preterm births and birthweight.^s A 2022 study reinforced the benefits to postneonatal infant mortality, finding that California's paid family leave policy reduced the rate by 8 percent.^{FF}

Parental Health and Emotional Wellbeing

Three studies of California's policy and one study of California and New Jersey's policies found that parents' physical and mental health benefited when parents had access to paid family leave.^{C,P,T, BB} A study on the impact of the California paid family leave policy found that mothers with access to paid family leave were more likely to report having very good or excellent mental health (an 8.6 percentage point increase) and coping well with the day-to-day demands of parenting (a 5.3 percentage point increase).^C Effects on paternal mental health were not significant in this study.

Another study found multiple positive impacts on parent health (including mothers and fathers): a significant, 11 percentage point increase in the likelihood of reporting very good or excellent health, a 0.8 point reduction on a 24-point scale of psychological distress, an 8.2 percentage point decline in the risk of being overweight, and a 12 percentage point decline in any alcohol consumption.^P Mothers reported greater impacts on distress and overall health, whereas fathers saw greater declines in alcohol consumption.

Two additional studies assessed the implications of paid family leave on parents' postpartum psychological distress. More specifically, one study assessing mothers of infants in California found that access to paid leave was associated with a 27.6 percent decrease in postpartum psychological distress, as measured by the Kessler Psychological Distress Scale.^T In particular, the authors found the strongest reductions in stress for mothers ages 18 to 29 and for single mothers compared to older and married mothers, respectively. The authors also noted that the policy may have a stronger effect for Black and Hispanic mothers compared to White mothers based on point estimates, but the confidence intervals for these groups overlapped, precluding a definite conclusion.

Lastly, a study examining the effects of paid leave policies in California and New Jersey found that, compared to states without paid family leave policies, exposure to a paid family leave policy led to a 0.49 point decrease (on a 24-point scale) in psychological distress among parents of children under age 2.^{BB}

Nurturing and Responsive Child-Parent Relationships

Evidence to date suggests that state paid family leave policies may increase the quality of parentchild relationships.^A A study that used data from the Survey of Income and Program Participation found that California's paid family leave policy led to mothers spending more time with their children up to 4 years after the birth; in particular, mothers with access to paid family leave reported reading to their children 2 more times per week, having breakfast with their children 0.7 more times per week, and going on outings with children 1.8 more times per month when compared with mothers who did not have access to paid leave.^A

A second study also examined reading and found that parents were 8.2 percentage points more likely to read to their infants 4 or more days per week when they had access to paid leave in California, but the result was not significant.^C

Optimal Child Health and Development

Evidence shows that parents with access to paid family leave in California saw some improvements in a variety of indicators of their infants' health and later child health in elementary school. In particular, increases in breastfeeding have been cited in multiple studies.^{G,H,K} Evidence indicates null impacts of the policy on children's behavioral problems, however.^{BB}

Four studies present evidence that access to paid family leave increases breastfeeding,^{G,H,K} which has been linked in some research to a number of beneficial impacts for infants, including stronger immunity, reduced infections, and reduced infant mortality.³² A study with a very large sample from California and New Jersey showed that paid family leave policies increased the percentage of exclusively breastfed infants at age 6 months by 1.3 percentage points.^G The study also found statistically insignificant, but positive effects on any breastfeeding at 6 and 12 months. The authors noted that the relatively small overall effects found may underestimate the true effects among working women, who are more likely to be affected by paid family leave policies, because the sample included both working and non-working women.

A second study found that in California, paid family leave led to a significant 5 percentage point increase in the likelihood of breastfeeding at age 6 months; the authors also report an increase in breastfeeding duration of 18 days, but this finding was not significant at the .05 level.^K There was no significant overall effect found for breastfeeding initiation, however; the authors suggested that because many women had access to 6 weeks of paid leave through Temporary Disability Insurance, they were already quite likely to initiate breastfeeding prior to the new paid leave policy (85 percent of mothers breastfeed).

The policy had significant effects on breastfeeding initiation among some subgroups, however. For example, the study found the greatest effects for Black mothers (a 7.5 percentage point increase in the likelihood of breastfeeding at all) and for mothers with incomes below 50 percent of the federal poverty level (a 5 percentage point increase in likelihood of breastfeeding).^K Overall, the study found greater effects on breastfeeding for less-advantaged groups, including those with lower education levels.

Two additional studies corroborate these findings, demonstrating that paid family leave increases breastfeeding duration. An additional study from California with a higher-income and less generalizable sample showed that paid family leave led to an increase in any breastfeeding for at least 6 and 9 months that ranged from 10 to 20 percentage points.^H

A study on paid family leave and breastfeeding duration found a somewhat smaller, but still significant impact.^U The author found that the likelihood of breastfeeding for at least 6 months increased by 1.8 percentage points after the passage of California's paid leave policy. For infants born to families below the poverty line, the impact was 4 percentage points higher than for wealthier families and for infants in poverty living in states other than California.

Beyond breastfeeding, evidence suggests that state paid family leave policies may impact other indicators of child health and development. A study of California found that after the paid leave policy went into effect, hospitals saw 6 percent fewer infant admissions overall, and decreased admissions by 33 percent and 15 percent for upper respiratory infections and gastrointestinal diseases, respectively.^L

Another California study found that infants whose families had access to paid family leave were 1.4 to 5 percentage points less likely to receive late vaccinations (measured for vaccines typically given before age 6 months), depending on the specific vaccination. The effect was even stronger for families with low levels of income, with a 5 to 7 percentage point reduction in the likelihood of receiving a late vaccination relative to similar families in states without paid leave.^E

A 2022 study found that the implementation of New York's paid family leave program increased the probability that a first-born child had all vaccinations on-time at age 2 months by approximately 1 percent. The authors limited the sample to first-born children to make the treatment and comparison groups as comparable as possible and to focus on new parents, who are most likely to be affected by the paid family leave law because the family environment and labor force participation has not already been changed by the birth of a child.^{EE}

A third study revealed that California's policy increased the likelihood that a child had very good or excellent health, as reported by their parents, by between 4.8 and 8.6 percentage points (approximately 5 to 10% of the pre-leave mean).^c The study also found a significant reduction in the likelihood of asthma (5 percentage points) for all children ages 0 to 17. Results for food and respiratory allergies were mixed, with mostly null impacts.

Paid family leave also appears to be linked to better child health in elementary school, suggesting that the policy can have long-lasting beneficial impacts beyond the infant years. One study showed that children whose families had access to paid family leave were less likely than those without access to be overweight (4.1 percentage point difference), have ADHD (0.7 percentage point difference), have hearing problems (2.4 percentage point difference), and have communication problems (1.1 percentage points difference), with greater effects seen among boys and among children with lower socioeconomic status for the likelihood of being overweight and having ADHD.^J

Finally, a study on paid family leave in California showed that the policy was linked to a significant reduction in the rate of pediatric abusive head trauma in children below age 2.¹ For children below age 2, paid family leave led to a rate reduction of 2.8 cases per 100,000 children; for children under age 1, the policy led to 5.1 fewer cases per 100,000 children.¹ The authors suggested that this finding may be driven by reduced maternal stress and better mental health after the introduction of paid leave, a mechanism supported by other studies reviewed.^{C,P}

Is There Evidence That Paid Family Leave Reduces Disparities?

Studies have examined the differential impact of paid family leave policies based on race, education, and income and found mixed results across populations. For some outcomes, such as breastfeeding initiation, there is strong evidence that racial disparities exist, so it is possible to assess whether a statewide paid family leave policy can address that disparity. For other outcomes, such as receipt of postpartum care and maternal postpartum psychological distress, national data on current disparities is limited, therefore we are unable to assess how a statewide paid family leave policy would change disparities across groups. In this section, we present the subgroup findings from the strong causal studies reviewed and data on the underlying disparities when available.

Studies have shown that access to paid family leave varies by race and ethnicity: Only 23.2 percent of Hispanic parents have access to paid family leave, compared to 40.8 percent for Black non-Hispanic parents and 47.4 percent for White non-Hispanic parents.⁵⁰ One study examining multiple forms of leave-taking found that non-Hispanic Black and Hispanic women experienced the greatest increases in family leave-taking after the passage of a state paid family leave policy at 14.4 and 6.4 percentage points, respectively.^N

The evidence to date shows mixed effects of paid family leave on breastfeeding initiation and duration by race and ethnicity. With respect to breastfeeding initiation, one study demonstrated that paid family leave increased the likelihood of mothers initiating breastfeeding for 90.3 percent of Asian infants, but for only 73.6 percent of Black infants in 2019.⁴⁹ However, another study demonstrated that Black mothers saw a greater increase in the likelihood of breastfeeding initiation when they had access to paid family leave than did White and Hispanic mothers and those of other races.^K

15

With regard to breastfeeding duration, results are mixed; one study showed that access to paid family leave led to increases in exclusive breastfeeding at 6 months among Hispanic women, but reductions in exclusive breastfeeding at 6 and 12 months among Black women.^G A study that examined the effect of state paid family leave policies on breastfeeding duration at 3, 6, and 9 months found no differences by race and ethnicity.^U The research to date is inconclusive about whether statewide paid family leave policies will reduce those gaps.

Stark racial disparities persist in birth outcomes, with infants who are Black, American Indian or Alaska Native, or Native Hawaiian and Other Pacific Islander experiencing the worst outcomes. One study to date has examined the impact of paid family leave on birth outcomes, but it found no differences across racial groups.^s This study examined preterm birth, low birthweight, infant mortality, and postneonatal infant mortality. The existing evidence does not suggest that state paid family leave policies are effective at addressing this inequality.⁵¹

Some evidence suggests that access to paid family leave improves maternal outcomes for women of color in the postpartum period. One study found that access to paid family leave led to a 1.26 point decrease in the K6 psychological distress score for Black women and a 1.5 K6 score decrease for Hispanic women, but a statistically insignificant decrease for White women.^T Another study found that access to paid family leave increased receipt of postpartum care by 3.4 percentage points for non-White racial groups (specifically Black, Asian and Alaskan Native, Chinese, Japanese, Filipino, other Asian, American Indian, Hawaiian, mixed race, and other non-White) but only 1.5 percentage points for White women.^Z No national data exist for these outcomes to assess whether these results represent reductions in disparities.

Early evidence also suggests that mothers with low incomes and low levels of education may experience particularly beneficial outcomes after the passage of a state paid family leave policy. One study showed greater improvements in maternal mental health and coping skills, as well as a greater increase in the likelihood of a family reading to their child more than 4 times per week for families with incomes below 150 percent of the federal poverty line compared to higher income families.^c Another study found that the probability of late vaccinations decreased by 5 to 7 percentage points, depending on the vaccination type, for families with low incomes relative to families with higher incomes.^E A third study found that reductions in child incidence of overweight and ADHD were concentrated among families with low levels of income and maternal education.^J

Paid family leave may have a greater impact for parents with low incomes and low levels of education because these parents are unlikely to receive benefits like paid leave through their employer, therefore a statewide policy may be their only opportunity to experience these benefits. In contrast, parents with high incomes and high levels of education may have already had access to paid parental leave, so this policy would change little for them.

Has the Return on Investment for Paid Family Leave Been Studied?

Despite initial concern about the impact of the policy on employers and businesses, studies have found that most employers report either "no noticeable effect" or "a positive effect" of paid family leave on employee productivity, profitability, turnover, and morale.^{6,34,35} More rigorous research on

the return on investment for paid family leave, beyond employer surveys, is needed to build the evidence base. A more comprehensive analysis of the return on investment is forthcoming.

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

The research to date shows that the implementation of paid family leave policies in the US is effective at supporting labor force attachment and improving maternal and child health and parenting outcomes. The evidence from the most methodologically rigorous studies shows that parents take longer periods of family leave and that families achieve greater economic security when they have access to paid leave. Additional research also shows positive effects for maternal health and for a variety of child health outcomes. ^{A,36}

Although the current evidence generally supports the notion that paid family leave has positive impacts on family outcomes, most of the research to date comes from California because of the recent enactment and implementation of statewide leave laws. Between 2004 and 2020, the period examined by most strong causal studies, California offered 6 weeks of paid family leave. Therefore, the bulk of the evidence describes the effect of a 6-week paid family leave policy rather than the 12 weeks that are being newly implemented in most states.

A more nuanced understanding of the optimal length of leave, the percent of pay that is reimbursed, and program administration and funding is necessary to highlight the specific components of paid family leave that lead to the greatest impacts on health and wellbeing. Findings from various studies that were not included in this review because of limitations in the study design or a focus on factors other than statewide policy suggested that the benefits of paid leave may accrue when mothers take more than 6 weeks–in particular, maternal mental health and breastfeeding outcomes may be better when mothers return to work after 12 weeks of leave.^{38,39,40}

There are also some inconsistencies in research on women's labor market outcomes. Studies largely suggest positive short-term impacts of paid family leave on employment and earnings, but some research finds negative long-term impacts, potentially because of workplace penalties mothers may face and child care costs.⁶¹ More research to reconcile short- and long-term findings is needed.

Additionally, the current research is not able to assess the complete impact of paid family leave for families with low incomes and fathers, whose take-up rates are lower than families with higher incomes and mothers, respectively.^{31,R} Few studies focus on how fathers are affected by paid family leave, despite the fact that research from other countries has shown positive outcomes for the entire family if fathers take paternity leave.³⁷ Noncustodial fathers are absent from this research in particular. Reliable data on access to paid leave and leave-taking across the US are also limited; the Bureau of Labor Statistics' American Time Use Survey does not provide sufficient sample sizes in every state to gain a complete picture of access to and take-up of paid family leave.

Finally, more research is needed on the intersection of paid family leave policies with other policies, particularly that related to infant child care. Infant care is expensive, and demand for care in the immediate period after birth is high. Paid leave offers a variety of benefits on its own, but it can also serve as a solution to infant care challenges, and further research to understand the intersection is needed.

18

Momentum for passing paid family leave policies has strengthened as a result of the COVID-19 pandemic, which has exacerbated the difficulty many families have when trying to balance work and the care of children or other family members. In response to the crisis, the federal government passed the Families First Coronavirus Response Act in March 2020, which included provisions supporting emergency paid leave for many employees.⁴⁶ For example, the Act provided "up to an additional 10 weeks of paid expanded family and medical leave at two-thirds the employee's regular rate of pay" for employees who had been with their employer for at least 30 days and had a child care need due to COVID-19 closures.⁴⁶ This benefit was expanded to 12 weeks in the subsequent Coronavirus Aid, Relief, and Economic Security (CARES) Act. The federal government reimbursed employers, through payroll tax credits, for each dollar spent on these benefits through March 31, 2021, however the requirement to provide leave expired December 31, 2020.^{47,52}

Is Paid Family Leave an Effective Policy for Improving Prenatal-to-3 Outcomes?

The evidence demonstrates that a paid family leave policy of at least 6 weeks is an effective policy to improve a variety of child and family outcomes. In particular, paid leave policies increase the length and likelihood of leave-taking among mothers and fathers, increase mothers' labor force participation, improve postneonatal infant outcomes, improve mothers' mental health, support more nurturing child-parent relationships, and foster better child health.

How Does Paid Family Leave Vary Across the States?viii

As of October 1, 2023, 14 states^{ix} (California, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, Oregon, Rhode Island, Washington, and the District of Columbia) have enacted paid family leave laws, but not all states have fully implemented the laws yet. State laws vary in the number of weeks of leave offered, percentage of pay provided, level of job protection, and the funding mechanism.

Paid leave policies to bond with a new child currently offer a range of 6 weeks in Rhode Island to 12 weeks in, Colorado, Connecticut, Delaware, Maryland, Maine, Massachusetts, Minnesota, New Jersey, New York, Oregon, and Washington.¹⁴ Only seven states currently have a paid family leave policy of at least 6 weeks and have begun paying benefits (California, Connecticut, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Washington, and the District of Columbia). All 14 states with a paid family leave policy in place cover private sector employees, with, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, Oregon, Rhode Island, Washington, and the District of Columbia. All 14 states with a paid family leave policy in place cover private sector employees, with, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, Oregon, Rhode Island, Washington, and the District of Columbia covering state employees as well.^x

Some states have enacted less expansive policies that provide paid family leave to some or all state employees, including Arkansas, Georgia, Idaho, Illinois, Indiana, Kansas, Michigan, Missouri, North

^{viii} For details on state progress implementing paid family leave, see the paid family leave section of the US Prenatal-to-3 State Policy Roadmap: <u>https://pn3policy.org/pn-3-state-policy-roadmap-2022/us/paid-family-leave</u> ^{ix} State counts include the District of Columbia.

^x See references 15, 16, 17, 18.

Carolina, New Hampshire, New Mexico, Ohio, South Carolina, South Dakota, Tennessee, Texas, and Virginia.^{xi}

Table 3: State Variation in Paid Family Leave

State has adopted and fully implemented a paid family leave program of a minimum of 6 weeks following the birth, adoption, or the placement of a child into foster care					
State	Policy Adoption Yes/No	Maximum Number of Weeks of Paid Family Leave Benefit	Wage Reimbursement Rate	Maximum Paid Family Leave Benefit Value (Weekly)	
Alabama	No	-	-	-	
Alaska	No	-	-	-	
Arizona	No	-	-	-	
Arkansas	No	-	-	-	
California	Yes	8	60-70%, depending on income	\$1,620	
Colorado	No**	12	90%	\$1,100	
Connecticut	Yes	12	95%	\$900	
Delaware	No**	12	80%	\$900	
District of Columbia	Yes	12	90%	\$1,049	
Florida	No	-	-	_	
Georgia	No	-	-	-	
Hawaii	No	-	-	-	
Idaho	No	-	-	-	
Illinois	No	-	-	-	
Indiana	No	-	-	-	
Iowa	No	_	-	-	
Kansas	No	-	-	-	
Kentucky	No	_	-	_	
Louisiana	No	-	-	-	
Maine	No**	12	90%	\$1,104	
Maryland	No**	12	90%	\$1,000	
Massachusetts	Yes	12	80%	\$1,130	
Michigan	No	-	-	-	
Minnesota	No**	12	90%	\$1,337	

^{xi} See references 21, 22, 23, 24, 25, 26, 27, 28, 29, 30.

Table 3: State Variation in Paid Family Leave (Continued)

State has adopted and fully implemented a paid family leave program of a minimum of 6 weeks following the birth, adoption, or the placement of a child into foster care					
State	Policy Adoption Yes/No	Maximum Number of Weeks of Paid Family Leave Benefit	Wage Reimbursement Rate	Maximum Paid Family Leave Benefit Value (Weekly)	
Mississippi	No	-	-	-	
Missouri	No	-	-	-	
New Jersey	Yes	12	85%	\$1,025	
New Mexico	No	-	-	-	
New York	Yes	12	67%	\$1,131	
North Carolina	No	_	-	-	
North Dakota	No	-	-	-	
Ohio	No	-	-	-	
Oklahoma	No	-	-	-	
Oregon	Yes	12	100%	\$1,524	
Pennsylvania	No	-	-	-	
Rhode Island	Yes	6	60%	\$1,043	
South Carolina	No	-	-	-	
South Dakota	No	-	-	-	
Tennessee	No	-	-	-	
Texas	No	-	-	-	
Utah	No	-	-	-	
Vermont	No	-	-	-	
Virginia	No	-	-	-	
Washington	Yes	12	90%	\$1,427	
West Virginia	No	-	-	-	
Wisconsin	No	-	-	-	
Wyoming	No	-	-	-	
State Count	9	N/A	N/A	N/A	

"**" in the Yes/No column indicates that the state has passed legislation enacting paid family leave but the benefit is not yet available. Policy adoption, generosity and variation data: As of October 1, 2023. State statutes and legislation on paid family leave. For additional source and calculation information, please refer to the Methods and Sources section of <u>pn3policy.org</u>.

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20

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 indepth 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 February 28, 2023.

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 wellexecuted 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.

Studies That Meet Standards of Strong Causal Evidence

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RESEARCH FOR ACTION AND OUTCOMES

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