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PAID FAMILY LEAVE IN NORTH CAROLINA

An Analysis of Costs and Benefits

Center for Child and Family Policy
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March 2019

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TABLE OF CONTENTS

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Paid family leave has emerged as a key public policy issue in recent years, with growing bipartisan support among both state and federal lawmakers, as well as voters. According to a 2016 national study by the Pew Research Center, the majority of Americans support paid family leave for a variety of reasons, including caring for an ill or elderly family member, one's own serious health condition, and the birth or adoption of a child.

The need to consider different options for paid family leave has increased due to demographic change in the United States. Currently, the majority of children live in a household in which all parents work, and the majority of women and mothers work outside the home. Additionally, an aging population is increasing caregiving demands on working-age men and women. North Carolina demographics mirror national trends: In 2018, 62.5 percent of North Carolina mothers worked outside the home and the share of the population over 65 was 15.9 percent and projected to increase by 64 percent in the next two decades. Additionally, paid family leave may reduce infant deaths, a particular challenge for North Carolina, which has struggled with persistently high infant mortality rates. In 2018, the infant mortality rate in North Carolina was 7.3 per 1,000 births, compared to the national average of 5.8.

As policymakers and the public debate how to address the need for family and medical leave at the federal level, several states and localities have chosen to adopt public paid family leave insurance (PFLI) programs. Currently, six states – California, New Jersey, New York, Massachusetts, Rhode Island, and Washington – and the District of Columbia, have passed legislation requiring some form of PFLI coverage.

This study examines the possibilities for paid family and medical leave insurance in North Carolina. It has three main goals:

I. To review what is known about the effects of access to paid family leave on workers, families and employers,
II. To determine how PFLI programs are being implemented in other states and what research exists regarding the outcomes of these programs, and
III. To consider the costs and benefits, including the prevention of child fatalities, of implementing a paid family and medical leave insurance program in North Carolina.

Our key findings show:

- Paid family and medical leave
  - increases labor force participation and employee retention and
  - improves the health of mothers and infants.

- Statewide PFLI programs are generally viewed by employers as having had a positive effect or no noticeable effect.

- Potential cost savings from estimated impacts of PFLI on North Carolina families would well-beyond outweigh administrative costs to implement and run a PFLI program.

- Two benefits of PFLI could have a particularly significant impact in North Carolina:
  - decreased infant mortality and
  - decreased nursing home usage.

- Twenty-six infant lives in North Carolina would be saved per year, among other benefits, under the PFLI proposal that simulates a statewide 12-week paid leave model with 80 percent wage replacement. Saving 26 infant lives would reduce the North Carolina infant mortality rate to 7.1 per 1,000, from its current 7.3 per 1,000.

This study concludes that a paid family and medical leave insurance program for all North Carolina workers would have a positive impact for North Carolina workers and families.

EXISTING PROGRAMS AND NC POLICY MODELING

Our examination of the research indicates that paid family leave has extensive health benefits for employees and minimal impacts on employers. Based on existing evidence, it appears that a PFLI policy has the potential to improve both short-term and long-term health and economic outcomes for North Carolina workers and families, without substantially impacting employers. We examine existing policies in the United States, comparing different policy aspects. Current PFLI programs exist in California, New Jersey, New York, and Rhode Island. Washington State and Washington, D.C.'s policies will go into effect in 2020, and Massachusetts' policy will go into effect in 2021.

We model the costs, benefits, and feasibility of the following two policy proposals for instituting a paid family and medical leave insurance program in North Carolina. In both proposals, funding for the program comes from employees only, with no contribution to premiums by employers. Under both

Proposal A and Proposal B, the PFLI program would allow employees paying into the fund to take paid leave for 1) their own health, 2) a new child, or 3) family caregiving (Exhibit 1).

Exhibit 1: Estimated Costs and Benefits of a North Carolina PFLI Program

	NC PFLI Proposals	
	Proposal A	**Proposal B**
Maximum Duration of Leave	8 weeks	12 weeks
Amount of Benefit	55% of wages up to max	80% of wages up to max
Maximum Weekly Benefit	$486	$875
Wages on which premium is paid	Up to $25,292	Up to $45,526
Waiting Period	One week	No waiting period
Eligibility	Worked at least 80 hours in the last year At least $1,560 total earnings in the last year	Worked at least 80 hours in the last year At least $1,560 total earnings in the last year

We estimate costs and benefits of Proposal A and Proposal B using two different models: (1) a modified version of the model created by the Montana Budget and Policy Center that relies on data from states with existing PFLI programs and (2) the Albelda Clayton-Matthews/IWPR 2017 Paid Family and Medical Leave Simulator model. We estimate that, under eligibility rules that are aligned with eligibility for the state's existing Unemployment Insurance program, a PFLI program in North Carolina would cover more than 4.7 million North Carolina workers (Exhibit 2).

Using the models described above, we simulated how a program might operate in North Carolina, focusing on the basics of program costs and usage and other effects on families. Given the lack of rigorous research on the effects of PFLI programs on employers, it was not possible to estimate empirical effects on employers in North Carolina.

How many North Carolinians would use PFLI?

Under Proposal A, we project that between 192,991 and 229,483 individuals would take advantage of leave for their own serious health conditions, bonding with a child, or family caregiving. Those estimates represent between 4.1 and 4.7 percent of covered North Carolina workers.

Under Proposal B, we project that between 192,991 and 277,744 individuals would take advantage of leave for their own serious health conditions, bonding with a child, or family caregiving. Those estimates represent between 4.1 and 5.7 percent of covered North Carolina workers.

How much would North Carolinians who use the program receive?

Under Proposal A, workers would receive average weekly individual benefits of $330 to $335. Under Proposal B, workers would receive average weekly individual benefits of $520 to $537.

We estimate that Proposal A would pay out from a range of $360 million to $497 million in family and medical leave benefits to covered workers. We estimate that Proposal B would pay out from a range of $865 million to $1,157 million in family and medical leave benefits to covered workers.

How much would North Carolinians pay in premiums?

In both proposals, we simulated the premiums as paid only by workers, with no contributions to premiums by employers. We estimate that the premium paid by workers would be between $1.47 and $1.97 per week for Proposal A and between $3.52 and $4.59 per week for Proposal B.

What other impacts would a PFLI program have on North Carolina families?

We estimate that both proposals would reduce infant mortality, low birth weight, nursing home costs, and the use of government assistance. For example, we estimate, based on existing rigorous empirical evidence on the effects of paid family leave insurance on infant mortality, that Proposal A would save about seven infant lives in North Carolina each year. Proposal B would save about 26 infant lives in the state per year.

In summary, if PFMLI were available in North Carolina, a substantial share of workers would likely take a leave at some point to address their own medical need, care for a new child, or care for another family member. The cost to workers in weekly premiums would be relatively low and the potential benefits to workers and families would be substantial.

Exhibit 2: Overview of Average Insurance Premiums and Benefits for Covered Employees

	NC PFLI Proposals			
	Proposal A		Proposal B	
	Model 1	Model 2	Model 1	Model 2
Covered employees per year (PY)	4,707,099	4,847,072	4,707,099	4,847,072
Number of covered employees taking PFLI leave PY	193,389	229,483	193,389	277,744
Average weekly PFLI benefit paid to employees taking PFLI leave	$335	$330	$537	$520
Total amount of PFLI benefits paid to all PFLI leave takers ($millions) PY	$360.3	$496.6	$865.2	$1,156.6
Employee premium as a percentage of earnings PY	0.35%	0.54%	0.58%	0.89%
Average weekly premium cost per worker	$1.47	$1.97	$3.52	$4.59

A NOTE ON THE ORIGIN OF THIS STUDY

In 2017, the North Carolina Child Fatality Task Force was asked to study the issue of paid family leave insurance programs as a strategy to reduce infant mortality and promote child health outcomes. Prompted in part by a recommendation from the State Child Fatality Prevention Team, the Task Force heard introductory presentations on the issue and determined that a specialized and in-depth study of the issue would be needed before North Carolina leaders could appropriately consider the complexities of the issue. A work group of representatives from different sectors came together and, confirming the need for a study, outlined a range of issues and perspectives that such a study should address and also identified the types of organizations that would be well suited for conducting such a study. Duke University Center for Child and Family Policy was among the types of organizations identified, and researchers at the Center subsequently elected to conduct the study, pro bono, using the work group's outline as a study framework. This study was not, however, conducted under the auspices of the Child Fatality Task Force or the work group. At the time of its publication, the study has not been examined by the Task Force and should not be construed as reflecting its position or that of its members. All views expressed are solely those of the researchers who authored this study.

INTRODUCTION

The American workforce and family structures have changed significantly over the last few decades. Single motherhood and dual-earner households have been trending upward and women now make up one half of the labor force. Additionally, the number of employed adults who simultaneously provide care to family members other than children is also on the rise. Population aging and improvements in life expectancy are likely to influence this trend by increasing the demand for elder care.[1]

As the landscape of the American workforce has evolved, paid family and medical leave insurance (PFLI) legislation has become more prevalent in the national dialogue

Currently, the Family Medical Leave Act of 1993 (FMLA), guarantees 12 weeks of unpaid leave per year for employees who are new mothers, need to care for a family member with a serious illness, or have a serious illness themselves. Due to restrictions in eligibility, however, only approximately 60 percent of the workforce qualifies for FMLA leave. In North Carolina, unpaid leave under FMLA is inaccessible to the majority (64 percent) of the working people.

As a result, some states have enacted their own initiatives to provide paid leave benefits, including family and medical leave. Emerging evidence of these state programs shows they benefit parents and children, people with serious health issues, employers and taxpayers. The longest-standing state program, in California, has shown to increase leave taking by fathers,[2] increase retention for women workers,[3] and to have either positive or negligible effects on business operations.[4]

In this report, we examine the structure and costs of two models for PFLI in North Carolina. In our examination, two distinct demographic trends highlight the potential relevance of paid family leave insurance in North Carolina:

- growth in the elderly population and
- a relatively high infant mortality rate.

NC ELDERLY POPULATION AND NUMBER OF EMPLOYED CAREGIVERS ARE RISING

Between 2010 and 2016, the population of North Carolinians 65 years of age and over grew by 335,000 people or 27 percent.[5] As of 2017, there are about 1.6 million individuals over 65 in the state.[6] By 2037, over 2.6 million North Carolina residents will be 65 and older.[7] As the share of the older population grows, the need to care for the elderly will grow, increasing caregiving pressures on adult children.

Additionally, many older adults in North Carolina are themselves caregivers, taking care of grandchildren. As of 2015, 177,662 (7.8 percent) of North Carolinian children under 18 lived with grandparents.[8] Nearly 100,000 grandparents are actively responsible for their grandchildren who live with them.[9] Of these, 36,897 (37.4 percent) are the primary caretakers of children and do not live with the parents of their grandchildren.[10] The majority of grandparent caregivers are employed.[11]

NC INFANT MORTALITY RATE IS POVERTY-DRIVEN AND AMONG THE HIGHEST IN THE UNITED STATES

North Carolina has one of the worst infant mortality rates in the country (ranked #41), at 7.3 deaths per 1,000 births, above the U.S. national average rate of 5.8. The rate varies by race and socioeconomic status. “When we look at poverty, it goes hand-in-hand with infant mortality,” says Dr. Sarah Verbiest at the School of Medicine at UNC-Chapel Hill. In 2016, the infant mortality rate for whites was 5.7 per 1,000, while the rate for African-Americans was 12.5 per 1,000.[12]

PART I: EFFECTS OF PAID FAMILY LEAVE ON WORKERS, FAMILIES, AND EMPLOYERS

Paid family leave (PFL) refers to any employer-based, privately purchased, or public policy that provides paid leave for specified family and medical reasons. PFL policies "enable workers to take time off to address certain life events and medical emergencies—the birth or adoption of a child (paid parental leave), one's own illness (own medical leave), or family members' illnesses (family care leave)—without having to forgo their entire paycheck."[13]

Paid family leave insurance (PFLI) is a specific type of paid family leave that is publicly provided and operates statewide. In PFLI programs, employees (and sometimes employers) pay an insurance premium into a fund from which they can draw for qualified leave purposes.

Prior research has examined the effects of both PFL generally and state PFLI programs in particular. We review and synthesize this research literature below. Although six states plus Washington, D.C. have passed PFLI policies, only three states have had PFLI programs in place for a long enough time that they can provide evidence on the impact of PFLI in particular: California (implemented in 2004); New Jersey (implemented in 2009); and Rhode Island (implemented in 2014).

We note that this literature is developing, and only rigorous research studies were included in our review. Our synthesis does not suggest that these are the only impacts of PFL, but rather that these are the impacts that have been documented so far.

EFFECTS OF PAID FAMILY LEAVE ON WORKERS

Leave Taking and the Duration of Leave

Overall, PFLI programs have increased leave taking among new parents and have also increased the length of parental leaves.

- California's PFLI policy has doubled the overall use of maternity leave and has also increased the average length of leave for mothers.[14]
- California's PFLI policy has also increased fathers' leave taking and length of leave.[15, 16]

- In New Jersey, the average length of leave has been 5.2 weeks among those using the state's PFLI program.[17]
- In Rhode Island, 85 percent of individuals who have used leave through the state's PFLI program have taken four weeks of leave, the maximum amount available.[18]

Labor Force Participation

Paid family leave has increased labor force participation, particularly among women.

- Research focused on the California PFLI program found that the state's PFLI program has increased young women's labor force participation rate. [19]

Return to Work Post-Leave

Access to paid family leave has increased the likelihood of workers returning to work after a leave has ended.

- In California, more than 95 percent of those who have taken family leave through the state's PFLI program returned to work at the end of the period, and more than four-fifths returned to the same employer.[20] Among those in low-wage jobs, the benefit has been even greater: the rate of return to the same employer is 82.7 percent for those who have used the PFLI program, compared with 73.9 percent for those who have not.[21]
- In California, PFLI has been associated with higher work and employment probabilities for mothers nine to twelve months after birth.[22]
- Recent evidence from Germany shows that access to paid maternity leave has increased the probability that mothers return to their jobs in the short run.[23]

Wages and Earnings

There is not much evidence so far on the effect of paid leave on wages or earnings, but the evidence that is available suggests little effect.

- In California, the state's PFLI program has had little effect on young women's earnings.[24]

Awareness of State PFLI Policies

Awareness levels of PFLI policies have varied across the three states for which there is evidence available but, in general, awareness of PFLI programs has been relatively low.

- In 2011, nearly a decade after California passed PFLI, only half of workers who were surveyed were aware of the program.[25]
- A 2012 study in New Jersey showed that four in 10 voters knew about the PFLI plan. Low-income earners, minorities, and young adults were the least likely populations to have heard of the program.[26]
- In 2015, a year after Rhode Island implemented PFLI, 62 percent of adults aged 25-39 were familiar with the program.[27]

State PFLI Program Uptake

Use of state PLFI programs has been relatively high and has tended to grow over time.

- In 2000, the first full year of the PFLI program in California, 135,000 Californians took leave to care for a new child.[28] In 2013, that number increased to 190,000, and 60,000 of those who used the program were men.[29]
- In Rhode Island, 5,000 people took leave between the initiation of the PFLI program in 2014 and May 2015.[30]
- In New Jersey, 12 percent of eligible new parents were taking family leave via the state PFLI program as of 2017.[31]

Barriers to Leave Taking

There is not a great deal of information available regarding the barriers to taking paid leave through state PFLI programs.

- In New Jersey, discussion groups have found that barriers to participation in the state's PFLI program include lack of awareness, fear of job loss or repercussions at work, an overly complicated application process, social stigma of accepting state benefits, and inadequate wage replacement.[32]

- A small survey in California found that the biggest barriers to leave taking were worry about not having enough money and being afraid the employer would be unhappy.[33]

Reasons for Leave Taking

Across existing PFLI programs in the U.S. for which there is evidence available, the majority of individuals who have used paid family leave to care for a family member have done so in order to care for a new child, biological or adopted.

Given that all states that have implemented PLFI already had Temporary Disability Insurance, they cannot provide direct evidence on the share of PFLI leaves in North Carolina that may be taken for own illness.

- In both Rhode Island and New Jersey, 80 percent of PFLI claims have been filed to bond with a new child, while 20 percent of claims have been filed to care for a sick family member.[34, 35]

Public Assistance Receipt

Evidence suggests that paid family leave has reduced public assistance receipt.

- A recent nationally representative study found that, among workers taking family or medical receive and receiving partial or no payment, 17 percent went on public assistance.[36]
- Mothers are particularly likely to use public assistance when they do not have access to paid family leave. Women in the U.S. who have access to and take paid family leave are 39 percent less likely to receive public assistance in the year following a child's birth than those who cannot or do not take paid leave.[37]

EFFECTS OF PAID FAMILY LEAVE ON FAMILIES

Infant Mortality

There is strong evidence that paid family leave reduces infant mortality.

- Based on evidence from 16 European countries, a 10-week increase in paid leave is predicted to reduce infant mortality rates by between 2.5 and 3.4 percent. By contrast, unpaid leave is unrelated to infant mortality.[38]
- Another, more recent study of 18 developed countries including the U.S. found that a 10- week increase in paid leave is predicted to decrease infant mortality by 4.1 percent. This study also finds that only paid leave, but not unpaid leave, leads to reductions in infant mortality.[39]

Family Functioning

Evidence suggests that paid family leave improves family functioning, including reducing domestic violence and child maltreatment.

- Women in Australia who received employer-provided paid leave had 58 percent lower odds of reporting intimate partner violence than women without any paid leave.[40]
- The implementation of the state PFLI program in California has been found to significantly reduce child abuse among young children, as measured by hospital admissions for abusive head trauma, a leading cause of fatal child maltreatment in very young children.[41]

Children's Physical Health

Paid family leave is associated with improved physical health among children.

- A global analysis of 185 countries found that a higher number of full-time equivalent weeks of paid maternal leave in a country is associated with higher childhood vaccination rates, even after controlling for GDP per capita, health care expenditures, and social factors.[42]
- Research based in the United States has shown that paid family leave is associated with reduced rates of attention deficit hyperactivity disorder, obesity, and ear infections among school-age

children. The group with the strongest associations for physical health are children from low-income households.[43]

Children's Educational and Labor Market Outcomes

Very little research has yet been able to follow children whose parents had paid family leave over time and into their own adulthood. Some evidence suggests, however, that there could be long-run effects on children as they become adults.

- Children of mothers who were eligible for a new paid leave policy in Norway dropped out of high school slightly less often than children of mothers who gave birth just before the date the policy began. The eligible children attended college slightly more and earned slightly higher wages at age 30.[44]

Maternal Health

There is robust evidence that paid family leave improves mothers' physical and mental health.

- A systematic review of the research literature across 6 countries including the United States has found a positive relationship between paid family leave and maternal health, including improved physical and mental health.[45]
- Consistent with the findings from the systematic review, other research focused on working mothers in the U.S. has also found that paid leave has decreased maternal depression and improved overall health status.[46] For example, increasing paid leave by one week is associated with a 6 to 7 percent decline in depressive symptoms.[47]
- Robust evidence from Norway has shown that the introduction of a 12-week paid family leave policy improved mothers' physical and mental health and improved health behaviors by increasing exercise and decreasing smoking. These health improvements resulted from more time at home after childbirth. Health effects were greatest for low-income and single mothers.[48]

Breastfeeding

There is strong evidence that paid family leave increases breastfeeding.

- In California, the state's PFLI program has led to an increase in breastfeeding rates.[49]
- A recent evaluation of a 2007 paid leave reform in Germany found a significant increase in mothers who breastfed their children for at least four months.[50]
- Evidence from an expansion of paid leave in Canada shows a significant increase in breastfeeding due to the policy's expansion.[51]

Elder Care

There is very little research evidence yet on the impacts of paid family leave on elder care. The limited evidence suggests, however, that paid family leave may impact elder care by keeping older adults out of nursing homes.

- In California, the state's PFLI program decreased nursing home usage by 11 percent.[52]

EFFECTS OF PAID FAMILY LEAVE ON BUSINESSES

Employer Costs

There is limited evidence about the effects of paid family leave on costs to employers. The available evidence suggests that paid family leave may reduce employer costs.

- One study estimated that if U.S. employers had offered paid sick days (a type of paid medical leave), they could have saved between $630 million and $1.88 billion in reduced influenza-related absenteeism costs per year between 2007 and 2014. [53]
- Strong evidence from Norway shows that the introduction of a paid family leave policy has reduced costs to small businesses (defined as those with 3-30 employees),[54] by shifting risk and responsibility for costs from individual small firms to a large employee pool.

Business Operations

Available rigorous research evidence on the effect of paid family leave on businesses is minimal but shows that paid family leave has not, in general, impacted most firms' operations.

- According to a 2010 survey of 253 firms in California, employers reported that the effect of the state's PFLI policy on profitability, productivity, and employee turnover has been insignificant.[55]
- Research using interviews and surveys of California businesses found that the majority of firms have redistributed work when an employee takes paid leave rather than hiring new employees.[56]
- In a non-representative survey of businesses in New Jersey, 67 percent of surveyed businesses reported that the state's PFLI program has had no effect on their business's performance.[57] A series of interviews with New Jersey businesses similarly found that a majority has not experienced negative impacts of the policy.[58]
- Research from Norway finds strong evidence that productivity and profits have not been affected by the introduction of a paid family leave policy.[59]

Employer Attitudes Toward Paid Family Leave

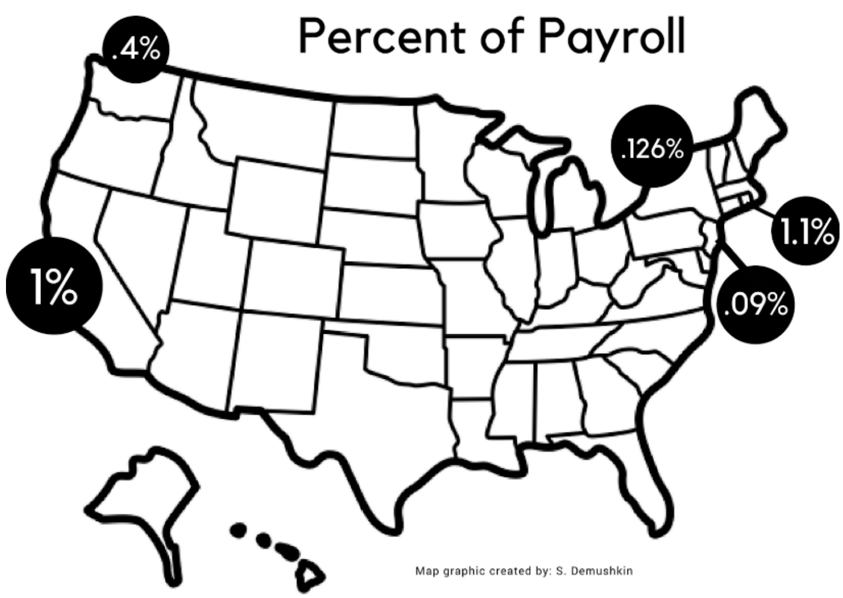
Little research exists yet on employers' attitudes toward paid family leave. The available evidence suggests that, in general, employers are supportive of paid family leave.

- Research from Rhode Island indicates that 61 percent of small- to medium-size employers (10 to 99 employees) favor or strongly favor that state's PFLI program.[60]
- A survey of small- to medium-size employers in New Jersey found that 63 percent of employers were very or somewhat supportive of the state's PFLI program. Only 16 percent of employers were very or somewhat opposed.[61]
- In New York, a survey of small- to medium-size employers found that 64 percent of employers were somewhat or very supportive of New York's PFLI program, which had been passed but not yet begun at the time of the survey. Only 14 percent of employers were very or somewhat opposed.[62]

PART II: STRUCTURAL AND OPERATIONAL ASPECTS OF EXISTING U.S. STATE PAID FAMILY LEAVE INSURANCE PROGRAMS

STRUCTURAL ASPECTS OF EXISTING STATE PFLI PROGRAMS

As of 2018, six states and Washington, D.C. have developed local solutions implementing paid family leave insurance programs. California, New Jersey, New York, and Rhode Island have established, and Massachusetts, Washington state, and Washington, D.C. are now developing, state-run programs that provide paid leave to employees to bond with a new child, care for a sick relative, or manage their own illness or injury.[63] In this section, we examine the different state solutions providing paid family leave insurance throughout the United States for the five states for which sufficient information is available: California, New Jersey, New York, Rhode Island and Washington (final rulemaking is not yet complete in Massachusetts or Washington, D.C). Please see Appendix A for further detail on additional states that have generated simulations of what paid family leave insurance programs could look like for them.



Funding Methods

California, New Jersey, New York, Rhode Island, and Washington fund their respective PFLI programs through employee payroll contributions. In New York, employers are required to either purchase private insurance or fund state PFLI through employee payroll deductions. In Washington, employers are responsible for 55 percent of the premium contributions to the medical leave program, while employees contribute the full share of premiums for the family leave program unless the employer elects to contribute.

Leave for one's own health is sometimes referred to as a separately program called Temporary Disability Insurance (TDI). In some states, deductions for all types of PFLI – including TDI, new child, and family caregiving – are combined. In those states (California, Rhode Island, Washington), deductions are larger than in states in which the PFLI deduction covering new child and family caregiving leave is separate from the TDI deduction (New Jersey, New York).[64, 65]

Table 1. Comparison of State Funding Methods

State	2018 Percent of Payroll Deduction	2018 Deductions cap
California[66]	1.0% (includes TDI and PFLI)	$1,126 per year
New Jersey[67]	0.09% of the first $33,700 earned (PFLI Only, TDI deducted separately)	$33.50 per year
New York[68]	0.126% of employees' weekly wage (PFLI Only, TDI deducted separately)	$85.56 per year
Rhode Island[69]	1.1% (includes TDI and PFLI) of first $69,300 earned	$762.30 per year
Washington[70]	0.4% (includes TDI and PFLI) up to the Social Security cap	$513.60 per year

Covered Events

California, New Jersey, New York, Rhode Island and Washington provide PFLI for bonding with new children and taking care of seriously ill family members. States differ on which family members qualify for PFLI leave-taking. In addition to bonding with new children and caring for ill relatives, New York allows employees to take leave to assist family members who are preparing for active military deployment abroad.

Bonding with children: All four states allow parents to take PFLI to bond with biological and adopted children. In addition, California, New York, and Rhode Island allow parents to take PFLI to bond with newly placed foster children. All four states allow parents to take paid leave at any time during the first twelve months of a child entering the family.

Table 2. Children Covered

State	Children for whom employees are eligible to take leave
California	• Birth, • adopted child, or • foster child[71]
New Jersey	• Birth (employee's biological child, employee's domestic partner's biological child, or employee's civil union partner's child) or • adopted child[72]
New York	• Birth, • adopted child, or • foster child[73]
Rhode Island	• Birth, • adopted child, or • foster child[74]
Washington	• Birth, • adopted child, or • foster child[75]

Caring for family members: California, New Jersey, New York, Rhode Island and Washington allow employees to take PFLI to care for family members who are seriously ill or have a serious health condition. All five states define a "serious health condition" as including physical or mental conditions that require in-patient care or continuing medical treatment by a healthcare provider.[76, 77, 78, 79] Each of the states cover non-married partners as defined by state law.

Given the rise of the opioid crisis, many states have made explicit that this policy can allow family members time to care for relatives struggling with addiction. New York offers information specifically for caregivers of family members dealing with opioid addition.[80] Addiction treatment qualifies as a "serious health condition" given proof of medical care.

Table 3. Family Members Covered

State	Family members for whom employees are eligible to take leave
California	Child, parent, parent-in-law, grandparent, grandchild, sibling, spouse, or registered domestic partner[81]
New Jersey	Child, spouse, domestic partner, civil union partner, parent, grandparent, grandchild, sibling, adult child, parent-in-law, or chosen family[82, 83]
New York	Spouse, domestic partner, child, stepchild, parent, stepparent, parent-in-law, grandparent, or grandchild[84]
Rhode Island	Spouse, domestic partner, child, parent, parent-in-law, or grandparent[85]
Washington	Parent, spouse, or state registered domestic partner[86]

Eligibility

PFLI programs determine eligibility by either the amount an employee earned and/or the number of hours or weeks an employee worked during a "base period." Base periods vary from 5 to 18 months prior to taking leave.

New Jersey's policy requires employees both to earn a certain dollar amount and work a certain number of weeks in order to receive PFLI benefits. California and Rhode Island only require employees to earn a certain dollar amount. New York and Washington only require employees to have worked a certain number of hours or weeks prior to taking PFLI.

Table 4. Employees' Eligibility Criteria

State	Eligibility Criteria to take PFLI
California[87]	Employees must have: • earned at least $300 and paid deductions into State Disability Insurance (SDI) during the 12-month base period.[88]
New Jersey[89]	Employees must have: • worked 20 calendar weeks in the base year, each being either a week in which the employee had New Jersey earnings of $168 or more or a week (up to 13 weeks) in which the employee was separated from employment due to a declared state of emergency during the base year; or • earned $8,400 or more during the base year.
New York[90]	Full-time employees (regardless of citizenship and/or immigration status) must have: • worked a regular work schedule of 20 or more hours per week, after 26 consecutive weeks of employment. Part-time employees (regardless of citizenship and/or immigration status) must have: • worked a regular work schedule of less than 20 hours per week, after working 175 days, which do not need to be consecutive.
Rhode Island[91]	Employees must have: • earned wages in Rhode Island and paid into the PFLI fund (called TDI/TCI in Rhode Island); and • been paid at least $12,120 in either the base period or an "alternate base period." If employees did not earn this amount, they may be eligible if they meet all of the following conditions: • earned at least $2,020 in one of the base period quarters, • earned total base period taxable wages at least one and one-half times the employee's highest quarter of earnings, and • earned base period taxable wages of at least $4,040.[92]
Washington[93]	Employees must have: • Completed 820 hours of work in the base period.

Included Employers

As with all forms of insurance, PFLI operates most efficiently and effectively when the broadest share and greatest number of workers are covered, because costs go down for the individual when more people contribute. PFLI in California, New Jersey, New York, and Rhode Island covers workers at most private sector employers. In California, New York, and Rhode Island, some public employees are also covered. In New York, federal employees are unable to claim PFLI benefits, due to a conflict between state and federal law.

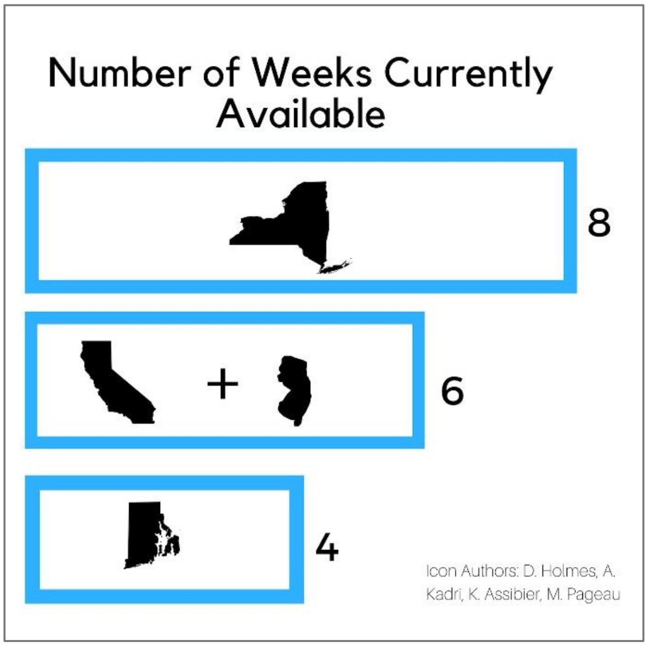
In California, self-employed individuals can opt into the PFLI program. New Jersey generally covers all employment but includes specific exceptions for the following types of employment: domestic workers who make less than $1,000 per quarter in a private home, certain types of agricultural labor, brokers working solely for commission, individuals working for a board of directors, and full-time students working as part of their financial aid package.

Job Protection

New York and Rhode Island require employers to restore employees to positions with equivalent seniority, status, benefits, pay, and other conditions after returning from PFL. California and New Jersey's PFLI programs do not guarantee job protection to all employees. However, employers to which the federal Family and Medical Leave Act (FMLA) applies must comply with its requirements with respect to job protection. In New Jersey, job protection is also guaranteed for those working in businesses employing 30 or more workers.[94]

Length of Leave

California, New Jersey, New York, and Rhode Island's PFLI programs vary in terms of length of leave available. In Rhode Island, employees are allowed to take four weeks of PFLI and in total, employees can take up to thirty weeks total for own illness and family care combined. In California, employees are able to take six weeks of PFLI.



In New York, employees are able to take up to eight weeks of PFLI. New Jersey recently expanded its program to make it the most generous in the country, with employees able to take 12 weeks of PFLI. Washington's PLFI program will also allow for up to 12 weeks of leave.

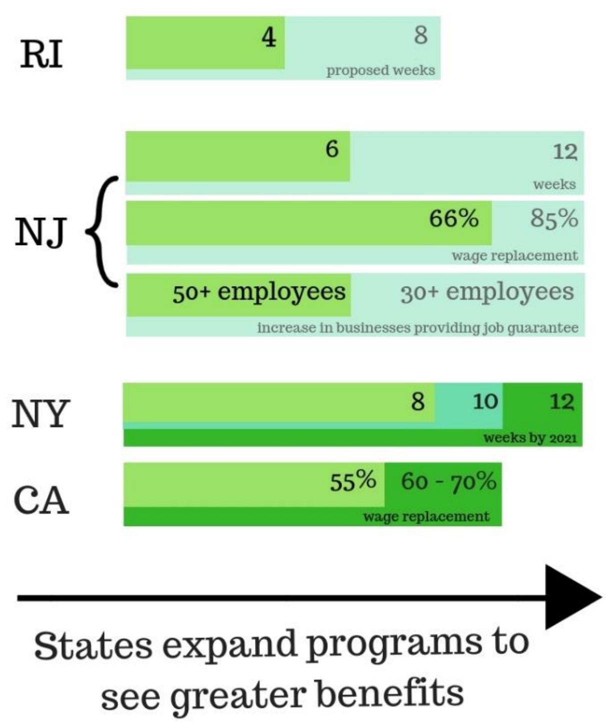
States with PFLI, however, are now moving toward increasing the maximum length of leave provided.[95] By 2021, New York will extend the length of leave to twelve weeks, covering the same period as New Jersey and the FMLA. The House Labor Committee in Rhode Island is considering a bill that would double leave length from 4 to 8 weeks.[96]

Benefit Amount

California, New Jersey, New York, and Rhode Island's PFLI policies provide varying benefit amounts to employees. The benefit amount is typically calculated as a percentage of an employee's salary.

California increased their benefit amount to allow for increased financial security for families.[97] Their wage replacement rate went up from 55 to 60-70 percent (depending on income level) in January 2018.

All states that have a currently operating program have expanded either leave length, benefit amount, or both, seeking increased benefits for their population.



Mandatory or Optional Participation

Most employees in California, New Jersey, New York, and Rhode Island are required to participate in their state's PFLI programs, while employers in these states have the discretion to choose either to offer private insurance for family leave or instead participate in the state PFLI program:

- Employees in California cannot opt out of the program; the California Unemployment Insurance Code requires that employees contribute to PFLI insurance as a part of the State Disability Insurance Program (SDI).[98]
- In New Jersey, employees are required to participate in the PFLI program, but employers have the choice of offering either state or private insurance plans to their employees. If a New Jersey employer opts for private insurance, the plan must offer employees equal or higher benefits with equal or lower costs compared to state plans.[99]
- In New York, all private employees are automatically included in the state PFLI program, but they may opt out if they do not expect to meet the minimum number of working days required to be eligible to receive PFLI benefits.[100]
- In Rhode Island, workers are required to pay into the PFLI program, with an exemption for 14- and 15-year-old workers.

Table 5. Summary of PFLI Programs in the United States

	California	**New Jersey**	**Rhode Island**	**New York**	**Washington**
Effective Date	2004	2009	2014	2018	2019/2020
Maximum Leave	Six weeks for family leave 52 weeks for own disability through existing	12 weeks for family leave 26 weeks for own disability through existing state TDI program	Four weeks for family leave 30 weeks for own disability through existing state TDI program	Eight weeks for family leave (increasing to 10 weeks in 2019 and 12 weeks in 2021) 26 weeks for own disability through	12 weeks for family leave 12 weeks for own disability through newly created PFLI program

	state TDI program		*No more than 30 total weeks claimed for family leave and own disability	existing state TDI program	*No more than 16 total weeks can be claimed for family leave and own disability
Average Wage Replacement Rate	60-70% of average weekly wage, up to $1,216, earned between the last 5 to 18 months[101]	85% of average weekly wage, up to $859 [102]	60% wage replacement; calculated as 4.62% of wages paid during the highest quarter of a worker's base period, up to $831[103, 104]	50% of average weekly wage in 2018, increasing to 55% in 2019, 60% in 2020, and 67% in 2021[105]	90% of average weekly wage for workers making less than 50% of the state's average weekly wage Above this threshold, 50% of average weekly wages, up to $1000[106]
Qualifying Family Members	Child, parent, spouse, domestic partner, grandparent, grandchild, sibling, parent-in-law	Child, parent, spouse, domestic partner, civil union partner, grandparent, grandchild, sibling, adult child, parent-in-law, chosen family	Child, parent, grandparent, spouse, domestic partner	Child, parent, grandparent, grandchild, spouse, domestic partner	Child, grandchild, grandparent, parent, sibling, spouse, domestic partner

Employee Eligibility	Employees must have been paid $300 during the base period The base period covers 12 months, divided into quarters. The highest earning quarter is used to determine benefits	Employees must have worked in New Jersey for 20 calendar weeks, earning $168 or more each week, or have been paid at least $8500 or more during the base year (the preceding 12 months)	Employees must have been paid at least $11,520 in the base period in Rhode Island and paid into the temporary disability insurance fund The base period is the first 4 of the last 5 completed calendar quarters prior to claim, or last 4 completed quarters if needed to meet earnings minimum	For family care, employee must be employed by a covered employer for at least 26 consecutive weeks For own disability, employee must be employed by a covered employer for four or more consecutive weeks	Employees must have worked four out of five quarters prior to leave application and have been employed for at least 820 hours in four out of five quarters prior to applying
Scope of Employer Coverage	All private-sector and some public-sector employees Self-employed individuals can opt in	All private- and public-sector employees covered by the New Jersey Unemployment Compensation Law, with some exceptions for government employees	All private-sector and some public-sector employees	All private-sector employees Self-employed individuals and some public sector employees can opt in	All employees Self-employed individuals and private contractors can opt in

OPERATIONAL ASPECTS OF EXISTING STATE PFLI PROGRAMS

Appeals and Dispute Resolution

California, New Jersey, New York, Rhode Island, and Washington have outlined specific appeals processes that employees need to follow if they feel that their employers have unfairly or inappropriately denied their requests for PFL.

Table 6. Appeals Process

State	Process for appealing or disputing denied PFL
California[107]	Disqualified employees receive an appeal form with their letter of disqualification. Employees submit the form with their disqualification notice to the State of California's Employment Development Department (EDD) within 30 days of disqualification. If the form is lost, employees may also send the EDD a detailed letter. If employees can show that they are eligible for benefits, the EDD will issue payments on the claim. If the EDD is unable to issue payments, employee cases will be sent to the California Unemployment Insurance Appeals Board local Office of Appeals. Employees will be mailed a hearing date. At the hearing an impartial judge will listen to both sides of the appeal and make a determination.
New Jersey[108]	New Jersey's Division of Temporary Disability determines whether or not an employee is eligible for PFL. If an employee or employer disagrees with the determination, either may file a formal appeal. The appeal must be filed in writing within seven calendar days of the determination or within ten calendar days after the decision is mailed. Appealing is free and does not require a lawyer.
New York[109]	Employees may request a neutral arbitrator if their request for PFLI is denied. Arbitration is done by National Arbitration and Mediation (NAM).
Rhode Island[110]	Employees may appeal if their PFLI is denied by submitting a written request to an Appeals Coordinator. The appeal is assigned to a "referee" at the Board of Review. The Board of Review is impartial and not under the Rhode Island Department of Labor and Training. The Referee schedules a hearing and the employee may state their argument, bring witnesses, and legal representation.[111]

Washington[112]	Employees may file an appeal with the commissioner within 30 days after denial of benefits.[113]

Penalties for Noncompliance or Fraud

California, New Jersey, New York, Rhode Island, and Washington have unique systems to handle employer noncompliance and employee or employer fraud. New York and Rhode Island adopted broader policies on fraud for their PFLI programs. California and New Jersey created specific penalties for employees who are found to have committed fraud in order to receive PFLI benefits.

Table 7. Penalties for Noncompliance

State	Penalty for employer noncompliance	Penalty for employee fraud
California	Employer fraud will be prosecuted according to state fraud laws.[114] Examples of businesses that have been found guilty of fraud, their crimes, and penalties can be found online on the DD Actively Prosecutes Fraud page at CA.gov.[115]	Violations are punishable by prison time, a fine of not more than $20,000, or both. EDD can issue a penalty for 25% of benefits paid as a result of false medical certifications.[116]
New Jersey	Employer noncompliance or fraud shall be liable for a fine of $250 to be paid to the division as well as any benefits due to employees. Upon refusal to pay, the State of New Jersey may file a civil action in order to recover the fine and benefit amounts.[117]	Violations are punishable by a fine of $250. Upon refusal to pay, the State of New Jersey may file a civil action in order to recover the fine amount.[118]
New York	Employer noncompliance to provide PFLI benefits can be punishable by a sum of one-half of a per centum of the employer's weekly payroll for the	Violators will be guilty of a misdemeanor.[120]

	noncompliant period. The sum may not exceed 500 dollars.[119]	
Rhode Island	Employer noncompliance will be prosecuted according to state fraud laws.[121]	Violations are punishable by a penalty against the employee in the amount of twenty-five percent (25%) of the benefits paid as a result of the false certification.[122]
Washington	Currently being developed	Employees found to have committed fraud face "tiered" penalties that become more severe for repeat offenses. For first offenses, employees are denied eligibility for benefits for 26 weeks, required to repay overpaid benefits plus 15%. For the second offense, employees are denied benefits for 52 weeks and required to repay benefits plus 25%. For three or more offenses, employees are denied eligibility for 104 weeks and are required to repay benefits plus 50%.[123]

Claims Process

Each of the five states has, or will create, its own processes for claiming benefits.

Table 8. Claims Process

State	Claims Process
California	• Employees register an online account with California's SDI program • Employees complete the designated form (DE 2503F) and attach supporting documents (can also submit by mail) • Employees file a "Notice of Paid Family Leave Claim" and send the form to their employer • Employers complete the form and send it to the EDD within 2 working days for validation • The EDD reviews employees' claims within 2 weeks • If approved, employees receive benefits within 2 weeks[124]

New Jersey	• Employees must fill out PFLI application found on the NJ Department of Labor and Workforce Development's website (or by calling or writing)[125] • Claims must be filed within 30 days after the start of family leave (penalties if filed late)[126]
New York	• Employees notify their employer 30 days prior to leave • Employees fill out the claim form which can be downloaded on the NY PFLI website • Employers enter information on the claim form and return it to their employee within 3 days • Employees attach supporting documents and submit the package to their insurer[127]
Rhode Island	• Employees file TCI claims within 30 days of their first day of leave (cannot file a claim before the first day of leave) • Employees then apply for TCI benefits by filing a claim online or mailing an application • Once the Department of Labor and Training approves the claim, benefits are received within 48 hours[128]
Washington	• Currently being developed[129]

Premium Collection

In all five states, premiums for PFLI are collected via employee payroll contributions. New York State has mandated that all employers are responsible for withholding contributions to pay for state or private PFLI premiums. The method and frequency of payment to insurance brokers can vary and is negotiated by the employer and insurance broker. Payments are typically made annually, semi-annually, or retrospectively. Employers in New York are able to fully-insure or self-insure to cover PFLI benefits.

Fund Management and Solvency

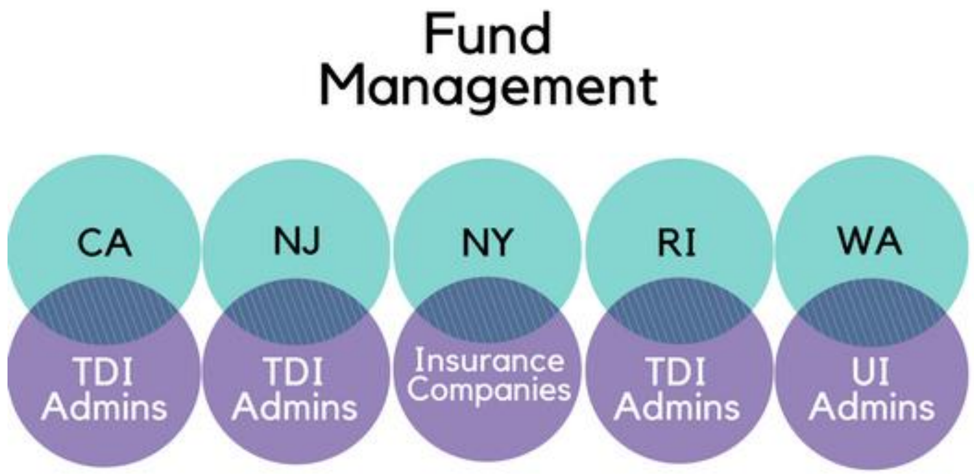


Table 9. Fund Management and Solvency

State	Fund Management and Solvency
California	• California's Paid Family Leave program is funded by premiums paid through the State Disability Insurance Program which is managed by the California Employment Development Department (EDD). • The EDD administers multiple programs including the state disability program (which includes PFLI and disability), nonindustrial disability insurance, unemployment insurance, and job services programs.
New Jersey	• The State of New Jersey created a "Family Temporary Disability Leave" account within the preexisting "disability benefits fund." • Benefits and administrative costs of the paid family leave program must come from this account. • The contribution rate is reviewed and adjusted annually to ensure solvency of the account.
New York	• Funds from employee contributions are directly passed from employers to private or public insurance companies. Various NY government agencies help manage compliance with the collection and distribution of contributions and benefits.[130]
Rhode Island	• The State of Rhode Island created the "temporary disability insurance fund."

	• The funds are managed by the state's general treasurer who is authorized to pay all vouchers. • The fund includes payments from the unemployment trust fund and the temporary disability insurance fund as well as any property, securities, and interest acquired from the fund. All funds are combined. • Benefits are paid via employment offices or designated government agencies.[131]
Washington	• The state treasurer is the creator and custodian of the "Family and Medical Leave Insurance Account." • All premiums to pay for family and medical leave must be deposited into this account and funds from this account may only be used for the family and medical leave program. • Authorization for expenditures must come from the Commissioner or the Commissioner's designee. • Additional authorization in the form of an appropriation is required for administrative expenditures.[132]

Coordination with Other Public and Private Benefits

All five states prohibit employees from collecting PFLI benefits while receiving disability insurance or workers' compensation. California and New Jersey also specify that employees may not collect unemployment benefits while receiving PFLI benefits.

Table 10. Coordination with Other Benefits

State	**Coordination with other benefits**
California	Employees may not receive disability insurance or unemployment benefits for the same time period in which PFLI benefits are paid.[133]
New Jersey	Employees may not receive PFLI benefits for any period in which they are also receiving New Jersey Temporary Disability Insurance Benefits, unemployment benefits, workers' compensation, or benefits from a disability or cash sickness program or similar law of any state or the federal government including but not limited to Social Security Disability benefits.

New York	Employees cannot receive workers' compensation or short-term disability while receiving PFLI benefits. If employer is also covered by FMLA, employee can take both at the same time.
Rhode Island	Employees are not able to take Temporary Disability Insurance or Temporary Caregiver Insurance while receiving Unemployment Insurance or Workers' Compensation. Employees can receive PFLI payments while continuing to be paid by their private employer or a private short-term disability insurance program as long as they are not performing services for their employer.[134]
Washington	In any week in which an employee is eligible to receive benefits or other applicable federal or state unemployment compensation, industrial insurance, or disability insurance laws, they are also disqualified from receiving family or medical leave benefits.[135]

Administrative Bodies Operating PFLI Programs

California, New Jersey, New York, Rhode Island, and Washington vary in how they administer their PFLI programs. In order to minimize costs, most PFLI programs are incorporated into existing state infrastructures such as disability insurance administration.

Table 11. Agencies Operating the PFLI Program

California	• Employment Development Department
New Jersey	• Department of Labor and Workforce Development
New York	• Workers' Compensation Board: Creates regulations for PFLI and monitors employer compliance • Department of Financial Services: Implements regulations for all insurance carriers in New York and determines employee contributions • Department of Labor: Implements statutory regulations over wage deductions.
Rhode Island	• Department of Labor and Training
Washington	• Employment Security Department

Operations Budget

New Jersey and Rhode Island are able to clearly delineate costs of their PFLI programs. It is more difficult to estimate the operating costs of California and New York's PFLI programs as they are administered jointly with existing programs. Washington has not begun implementing its program so operating costs are not yet available.

Table 12. Operations Budget

State	PFLI Budget
California	Unable to estimate because PFLI program is integrated into the existing DI program
New Jersey	TDI and PFLI budgets are combined. The limit on administrative costs is 0.1 percent of total wages subject to TDI taxes, allowing for more than \$60 million per year from 2005 forward. However, annual TDI operations expenditures have been consistently below \$40 million.[136]
New York	Unable to estimate because PFLI program is integrated into the existing DI program
Rhode Island	\$1.98 million in FY2018[137]
Washington	Currently being developed

PART III: SIMULATIONS FOR PFLI IN NORTH CAROLINA

This report uses selected elements from the current state models described above to simulate two PFLI policy options, Proposal A and Proposal B, for North Carolina. Side-by-side analysis of these two models allows comparison of the potential costs and benefits of implementing PFLI in North Carolina.

Table 13. Proposals for NC PFLI

	Proposal A	**Proposal B**
Duration	8 weeks	12 weeks
Wage Replacement	55% up to max	80% up to max
Weekly Benefit Cap	$486	$875
Wages	$25,292	$45,526
Waiting Period	One week	No waiting period
Eligibility	80 hours At least $1,560 total earnings in the last year	80 hours At least $1,560 total earnings in the last year

OVERVIEW OF PROPOSAL ELEMENTS

Duration

Maximum duration options in the simulations include eight and twelve weeks, because evidence suggests that leaves of less than eight weeks may not be widely used.[138, 139]

- In a 2016 Rhode Island Department of Labor report on the state's paid leave program, respondents stated that 8 weeks was sufficient to make leave usable; they emphasized that if the leave duration was less than six weeks, they would have been less likely to take leave.

- The bipartisan American Enterprise Institute (AEI)-Brookings Institution Project on Paid Family Leave expert consensus report proposed that leave duration should range between eight and twelve weeks.

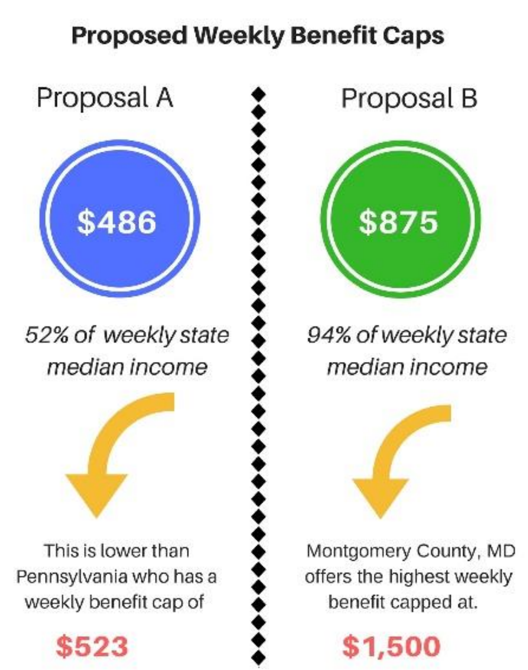
Wage Replacement

Wage replacement rates in the simulations include 55 and 80 percent, in order to align with existing state policies, which replace wages in a range between 55 and 90 percent.

- Some states with existing programs have experienced low uptake because the replacement rate was too low for families to take leave and feel financially secure. In particular, California raised its replacement rate from 55 to 67 percent for this reason.
- The bipartisan AEI-Brookings Project on Paid Family Leave expert consensus report recommends a wage replacement rate of 70 percent for parental leave at the federal level.
- Nonetheless, this report models 55 percent as well as 80 percent because of North Carolina's relatively lower cost of living compared to other states.

Weekly Benefit Caps

Weekly benefit caps in the simulations are $486 per week (52 percent of the state median income of $928 per week, according to Census data) and $875 per week (94 percent of state median income).



- The consensus recommendation of the AEI-Brookings Project on Paid Family Leave is a weekly benefit cap of about $600, while some members strongly supported higher replacement rates for lower-income families.
- Compared to other state proposed or enacted policies, as well as the AEI-Brookings recommendation, the lower benefit of $486 examined here is very low. Of all state PFLI

proposals considered through a grant from the U.S. Department of Labor, the lowest, considered as one option by Pennsylvania, was $523 (representing 52 percent of median Pennsylvania income of $56,907).

- The highest benefit cap in absolute dollars in any reviewed proposal is significantly higher than the higher cap of $875 considered here, at $1500 (78 percent of median income of $100,352) in Montgomery County, Maryland. Both Montana and Washington State considered or are enacting caps of 107 percent of their respective state median incomes.

Eligibility

To provide the smoothest possible implementation for North Carolina's employers, the proposed eligibility requirements in these simulations are the same as the eligibility requirements of the unemployment insurance program in North Carolina.[140]

- Employees eligible for paid family leave insurance must have earned at least $1,560 total in earnings in the last year.[141]
- Using the same eligibility requirements as the unemployment insurance programs **avoids any and all employer burdens** in connection with the implementation of a paid family leave insurance system in North Carolina, as employers are already required to report their employees' quarterly earnings to the state.
- These simulations include employees of all employers regardless of business size. Eligibility depends upon employee characteristics, not employer characteristics.

ESTIMATING COSTS AND BENEFITS OF A NC PFLI PROGRAM

Models

Each of the two simulated PFLI policy proposals was evaluated using two different estimating models:

- Model 1 is a modified version of the estimating model created by the Montana Budget and Policy Center, which was originally created to estimate the costs of a paid family leave insurance program in Montana. This model bases its estimates on leave-taking behavior in states with existing PFLI programs, adjusting for North Carolina's demographics. Additional details about Model 1 can be found in Appendix B.

- Model 2 uses the Albelda Clayton-Matthews/IWPR 2017 Paid Family and Medical Leave Simulator model. This model estimates and predicts leave-taking behavior as a function of demographic characteristics of individuals.[142] Additional details about Model 2 can be found in Appendix C.

Results from Model 1:

Estimating Program Use

Using Census data to approximate the program's eligibility requirements, Model 1 predicts that both proposals would cover 4,707,099 workers in North Carolina in 2016. Based on usage rates in California, New Jersey, and Rhode Island, Model 1 projects that in the program's first year, there would be 192,991 program leaves, with leave taken by four percent of the eligible population. Of that 192,991, 154,393 leaves would be for the worker's own serious health condition, including non-work-related injuries, and an additional 38,598 leaves would be to bond with a new child or care for an ill family member.

Based on average duration of leave taken in other states, Model 1 predicts that North Carolinians would take 87.33 percent of weeks provided. Under Proposal A, this translates to **6.99 of 8 weeks** provided. Under Proposal B, this translates to **10.48 of 12 weeks** provided.

Estimating Program Costs

Proposal A would have paid out $360.3 million in family and medical leave benefits in 2016, including $90.79 million in family leave benefits and $269.5 million in medical leave benefits. The taxable wage base for Proposal A is $102.9 billion, meaning that the per-person insurance premium applied to employees in order to cover expenses would be 0.35 percent of wages up to the earnings cap. Proposal A would provide average weekly individual benefits of $335.

Proposal B would have paid out $865.2 million in family and medical leave benefits in 2016, including $218.1 million in family leave benefits and $647.1 million in medical leave benefits. The taxable wage base for Proposal B is $149.4 billion, meaning that the per-person insurance premium applied to employees in order to cover expenses would be 0.58 percent of wages up to the earnings cap. Proposal B would provide average weekly individual benefits of $537.

Table 14. Model 1 Estimates of NC PFLI Leave Duration, Benefits, and Employee Premium

	Total Annual Leave Benefits	**Average weekly benefit**	**Employee Premium (as percent of wages up to cap)**
PROPOSAL A	$360.3 million	$335	0.35%
PROPOSAL B	$865.1 million	$537	0.58%

Results from Model 2:

Estimating Program Use

Model 2 predicts that both proposals would cover 4,847,072 workers in North Carolina. Under Proposal A, Model 2 projects that the annual number of program leaves would be 229,483, or 4.7 percent of the covered, eligible workforce. Of those 229,483 leaves, 88,372 would be for pregnancy or to care for a new child, 10,167 would be to care for an ill relative, and 130,944 would be for reasons of one's own health. Under Proposal B, Model 2 projects that the annual number of program leaves would be 277,744, or 5.7 percent of the covered, eligible workforce. Of those 277,744 leaves, 101,194 would be for pregnancy or to care for a new child, 13,268 would be to care for an ill relative, and 163,282 would be for reasons of one's own health.

Estimating Program Costs

Model 2 estimates the annual benefits paid under Proposal A to be $496.6 million dollars, and annual benefits under Proposal B's to be $1,156.6 million. The taxable wage base would be $92.2 billion under Proposal A and $130.6 billion under Proposal B, meaning that the per-person insurance premium applied to employees in order to cover expenses would be 0.54 percent of wages up to the cap under Proposal A and 0.89 percent under Proposal B. Proposal A would provide average weekly individual benefits of $330; Proposal B would provide average weekly individual benefits of $520.

The average yearly cost of Proposal A to an individual worker would be $103, or $1.97 per week. The average yearly cost of Proposal B to a North Carolina worker would be $239, or $4.59 per week.

Table 15. Model 2 Estimates of NC PFLI Annual Benefits, Weekly Benefits, and Employee Premium

	Total Annual Leave Benefits	Average Weekly Benefit	Employee Premium (as percentage of wages)
Proposal A	$496.6 million	$330	0.54%
Proposal B	$1,156.6 million	$520	0.89%

Administrative Costs:

With no temporary disability insurance (TDI) program infrastructure on which to build a PFLI program, estimating administrative costs for a PFLI program in North Carolina is difficult because all other states with current PFLI program added on to an existing TDI program infrastructure. North Carolina would face the start-up costs of implementing a new program infrastructure along with ongoing annual administrative costs to run the program.

Claims Processing

This report assumes that a new paid family leave insurance program would be run in conjunction with the state's unemployment insurance (UI) program. In 2017, 307 full-time employees processed 1,181,417 unemployment insurance claims in North Carolina.[143] This means that, on average, employees at the NC Employment Security Commission completed about 3,848 claims per year per person. Extrapolating from this figure, the NC Employment Security Commission would need to hire an additional 50 full-time employees in order to process the 192,991 family and medical leave claims estimated in Model 1, at a cost of $2.2 million annually.[144] To process the estimated 277,744 claims estimated in Model 2, the NC Employment Security Commission would need to hire 72 full-time employees, at a cost of $3.2 million annually.

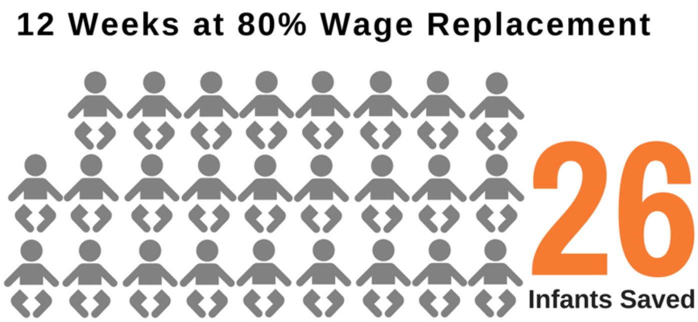
Advertising

In order for a paid family leave insurance program to succeed, employees must be aware of their eligibility for it. Funds for audio and visual advertisements such as radio ads, pamphlets, and posters could be used to ensure that employees learn about the program. States with state funded outreach campaigns have higher take up rates than those that have not had funding.[145] New Jersey lawmakers recently passed an appropriation of $1.2 million annually to fund outreach and education initiatives that increase public awareness.[146]

ESTIMATED IMPACTS OF PFLI IN NORTH CAROLINA

Infant Mortality

According to research, a 10-week expansion in paid family leave leads to a 2.5 percent fall in infant mortality.[147]



Researchers believe this drop occurs because parents are able to take more time off from work to spend with their child just after birth when they gain access to paid leave. This added time increases parents' ability to access pre- and post-natal medical care, facilitates visiting the doctor when an infant is ill, and increases adherence to vaccination schedules. It also reduces stress by relaxing financial constraints and improves child health through increased breast feeding, among other infant-health-improving pathways.[148] In addition, paid family leave may reduce the incidence of low birth weight (see below),[149] one major cause of infant mortality in North Carolina and another pathway through which paid family leave insurance may reduce infant mortality.

In 2016, 120,765 babies were born in North Carolina.[150] Infant mortality in North Carolina was 7.2 per 1000 babies in 2016,[151] which was above the national average. Proposal A would reduce infant mortality by an estimated 6.8 babies,[152] while Proposal B would reduce infant mortality by an estimated 26.1 babies.[153]

While it is not possible to place a nominal value to a human life, economists use estimates of the benefits from reducing mortality risk to measure the impact of a policy; the impact of reducing the likely number of fatalities by 1 is called the "value of a statistical life," or VSL. Department of Transportation economists adjust their VSL estimates over time to account for changes in real prices and income. The VSL used for 2016 is $9.6 million. Using this figure, the value of saving 7 infants is $67.2 million, and that for 26 infants is $249.6 million.

Under Proposal A, the cost savings through reduced infant mortality is 18.5 percent or 13 percent of annual program cost, depending on the model used.[154] Under Proposal B, the cost savings through reduced infant mortality is 29 percent or 21.5 percent of program costs, depending on the model used.[155] This program cost includes the annual benefit total, which is funded through payroll deductions at no cost to the employer, and which is returned to employees when they claim their PFLI benefits. When only considering the taxpayer-funded administrative costs of operating the program (an estimated $2.2 million to $3.2 million), these infant mortality reductions greatly exceed costs.

Low Birthweight

Paid leave is estimated to reduce the percentage of infants with low birthweight by 3.2 percent,[156] perhaps by increasing access to time off before the baby's delivery to focus on prenatal health.

The percentage of infants with low birthweight in NC was 9.2 percent in 2016.[157] Proposal A would reduce the number of infants with low birthweight by an estimated 356 infants.[158] As low-birthweight infants require more care than normal birthweight infants, the reduction in low birthweight would result in an estimated statewide cost-savings between $935,446 and $5,300,861.[159] Proposal B would reduce the number of infants with low birthweight by 776 infants, leading to statewide cost-savings between $2,040,972 and $11,656,513.

Nursing Home Costs

Researchers have found that paid family leave insurance reduces annual nursing home usage by 0.65 percentage points, or an 11 percent relative decline.[160]

As of 2014, there were 37,058 individuals in North Carolina nursing homes,[161] of whom the majority are 85 years old or older.[162] An estimated 205 North Carolinians could avoid nursing homes each year in the presence of a paid family leave insurance policy.[163]

The annual median cost in North Carolina for a semi-private room is $82,125 and for a private room is $91,250.[164] The estimated reduction would therefore reduce nursing home costs in North Carolina by between $16.7 million and $18.6 million, depending on room type occupied.[165]

Use of Government Assistance

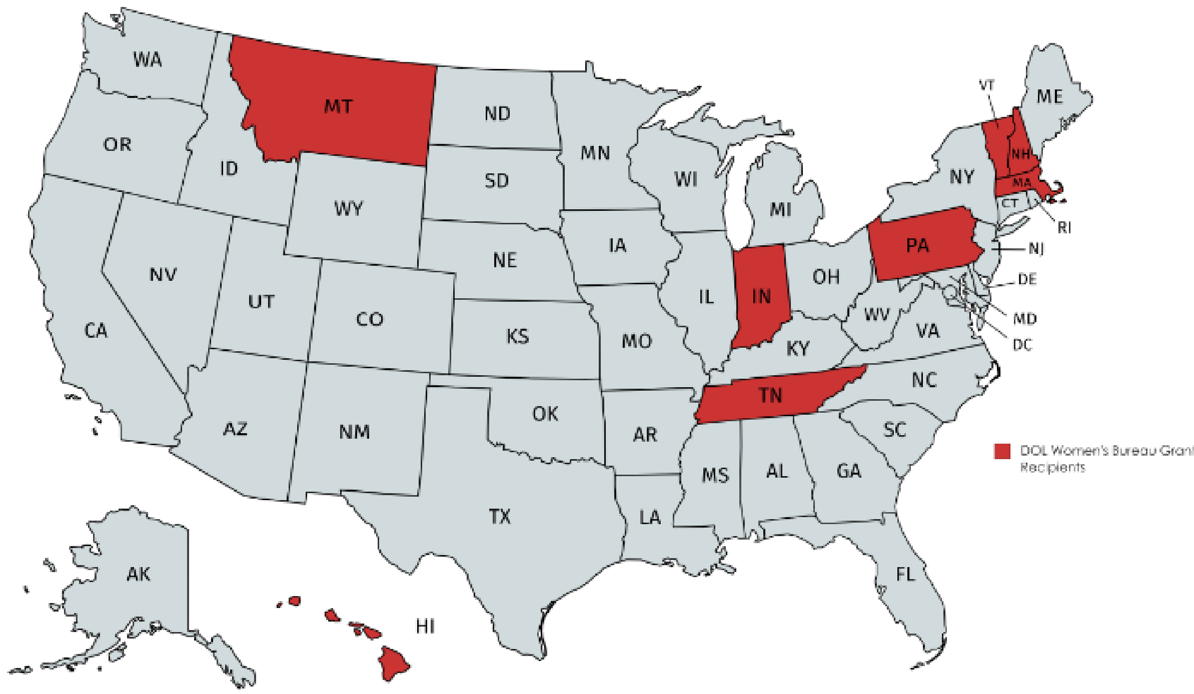
Studies have shown that paid family leave insurance use reduces the likelihood of Supplementary Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) use. One study finds that women utilizing PFLI have a 39 percent lower likelihood of receiving public assistance than those who do not take leave.[166] Another finds that PFLI reduces TANF receipt by 4 to 5 percentage points.[167]

A state PFLI program could reduce the number of North Carolinians receiving TANF by 956. This drop would reduce TANF costs $451,232 to $676,848 annually (Proposal A), or by $520,064 to $780,096 (Proposal B).[168]

Future Research Opportunities

- Data were unavailable at the time of this report to generate a comprehensive analysis of costs or benefits to businesses, such as the costs of covering employees' work while they are taking leave or the benefits of decreased employee turnover. Future research is needed to analyze the costs and benefits to businesses in a way that is generalizable to the business community at large.
- It was also not possible in this report to estimate the effects of PFLI on the North Carolina economy as a whole. Future research is needed to consider effects on the statewide economy.
- Finally, it is possible that PFLI has other effects on families or children, such as emergency room visits or school performance, that cannot be measured here.

APPENDIX A: STRUCTURAL ASPECTS OF PFLI PROGRAMS STUDIED BY DEPARTMENT OF LABOR WOMEN'S BUREAU GRANT RECIPIENTS



Source: Mapchart.net, DOL Women's Bureau

HAWAII

The U.S. Department of Labor report for Hawaii investigated the costs and uptake of four different paid family leave insurance models. Models 1 and 2 explore the differences between providing 12 and 16 weeks of paid family leave when providing benefits parallel to Hawaii's existing TDI program (58% of weekly wages up to a maximum of $594). Models 3 and 4 explore the differences between providing 12 and 16 weeks of paid family leave when providing a higher percentage of weekly wages to workers with lower incomes. For models 3 and 4, workers earning less than 50% of Hawaii's average weekly wage would receive 90% of their weekly income while workers earning 50% to 100% would receive 75% of their weekly income. Workers earning more than 100% of Hawaii's average weekly wage would receive 50% of their weekly wage up to a maximum of $1,000 per week. The models included private, state government, and local government employees. Self-employed individuals were not included in the estimates. For eligibility, the models included individuals who worked for 14 weeks for at least 20 hours per week and earned a minimum of $400.

The plan included in the model does not include job protections for workers. The table below can be found on page 6 of the Hawaii State Paid Family Leave Analysis Grant Report.

Table 16. Hawaii's Paid Family Leave Analysis[169]

Structure	Model 1: 12 weeks, benefits similar to TDI	Model 2: 16 weeks, benefits similar to TDI	Model 3: 12 weeks, benefits higher for low-wage workers	Model 4: 16 weeks, benefits higher for low-wage workers
Weekly cost for a full-time, minimum wage worker ($9.25/hr)	$0.25	$0.29	$0.40	$0.62
Weekly cost for a full-time, $15/hr worker	$0.40	$0.47	$0.65	$1.11
Weekly cost for a full-time, average wage worker ($48,184/year)	$32.10	$37.56	$51.81	$57.76
Administrative Cost	$1 million	$1.1 million	$1.5 million	$1.7 million
Total Cost	$18.3 million	$21.4 million	$29.5 million	$32.9 million
Average weekly benefit	$405	$407	$608	$608

PENNSYLVANIA

The U.S. Department of Labor report for Pennsylvania looked at four different paid family leave insurance models.[170] Each of these models proposed a maximum of 12 weeks of paid leave for family leave. Three of the models allowed up to 26 weeks of leave for own leave, including pregnancy, while the final model offered 12 weeks for both family leave and own leave. In order to be eligible for this program, individuals must have worked 18 weeks and earned at least $2,718 in the last year. This eligibility was derived from the criteria for receiving unemployment insurance in Pennsylvania.

The maximum weekly benefit available to eligible employees in the models varies from $573 to $995 a week. The wage replacement rate in the four Pennsylvania options further ranges from 50% to 90%. The proposed paid family leave program in Pennsylvania recommends four different funding mechanisms. Each policy would finance the program through employee payroll contributions, ranging from 0.295% to 0.672%. The proposals also contemplated waiting periods ranging from zero to one week. This proposed plan does not contemplate job protections for workers or specifications for different size employers. The chart below details the mechanisms of the four proposed policies in Pennsylvania.

Table 17. Pennsylvania's Paid Family Leave Analysis

	Proposal 1a	**Proposal 1b**	**Proposal 2**	**Proposal 3**
Eligibility	18 weeks $2,718	18 weeks $2,718	18 weeks $2,718	18 weeks $2,718
Weekly Benefits Cap	$995	$995	$750	$573
Maximum Weeks (Own Health)	26	26	26	12
Maximum Weeks (Family Leave)	12	12	12	12
Replacement Rate	90%, phasing down to 50% at PA average weekly wage; 50% above that	90% of PA average weekly wage	75% of PA average weekly wage	60% of PA average weekly wage
Employee Payroll Contribution	0.588%	0.672%	0.488%	0.295%
Waiting Period	No waiting period	No waiting period	0 for ill relative; 1 for all others	1 week for all leaves

MASSACHUSETTS

In 2018, Massachusetts passed PFLI. Prior to the passage of that law, the state had conducted a U.S. Department of Labor report. Rather than reviewing the Department of Labor report, provided below are the details for the PLFI law that was passed. The MA PLFI legislation allows for 20 weeks of own health and maternity disability leave and 12 weeks for bonding with a new child or caring for an ill family member. MA defines family member as spouse, child, partner, grandparent, grandchild, sibling, or the parent of a spouse or domestic partner. The maximum amount of combined family and medical leave that an individual may take is capped at 26 weeks per benefit year. Job protection for all leaves up to a cap of 26 weeks.

All employees of a business or a state or federal government agency are eligible if they have approximately 15 weeks or more of earnings and have earned at least $4,700 in the 12-month period before applying for PFLI. The earnings requirements are aligned with the state's unemployment insurance eligibility rules. Self-employed individuals can opt into coverage and employees of local government agencies may be eligible if their agency opts into the program.

The wage replacement rate is graduated between 50% and 80% of a worker's average weekly wage up to an amount equal to 50% of the statewide average weekly wage, with lower earners having a higher replacement rate than higher earners. The maximum weekly benefit available to eligible employees is $850 a week. The weekly benefit cap will be adjusted annually to 64% of the state's average weekly wage. There is a one-week waiting period before receiving benefits.

The program will be funded through 0.63% payroll contributions that will be split between employee and employer. Workers pay premiums on earnings up to the maximum taxable earnings for social security. All employee contributions go into the state PFLI fund. For the employer contributions, employers may pay into the state fund, or provide a private insurance plan of at least the same level of benefits as the state plan.

MONTANA

The proposed paid family leave insurance policy in Montana contemplates allowing workers to take up to 12 weeks of paid leave.[171] Eligible employees in Montana would apply for paid leave benefits because of the birth, adoption, or foster placement of a child, the care of a sick family member, or the inability to work due to one's own illness. In order to be eligible for this program, individuals must have worked at least 680 hours in the past 12 months prior to applying for paid leave benefits.

The maximum weekly benefit available to eligible employees is $1,000 a week. The wage replacement rate is graduated between 66% and 95%. Low-wage workers who earn between 0% and 30% of the annual state mean wage receive a 95% replacement rate. Workers who earn between 30% and 50% of the annual state mean wage receive a 90% replacement rate. Further, those earning between 50% and 80% of the annual state mean wage receive an 85% replacement rate and those earning greater than 80% of the annual state mean income receive a 66% wage replacement rate.

The proposed paid family leave program in Montana would be funded through employee contributions of 0.451% of total annual earnings up to $78,000 for all Montana earners. This proposed plan does not contemplate job protections for workers, specifications for different size employers, or waiting periods.

NEW HAMPSHIRE

The U.S. Department of Labor report for New Hampshire investigated the costs and uptake of three different paid family leave insurance models.[172] The models also included costs and uptake for a person's own health, as New Hampshire does not currently have a disability insurance program. The first model examined costs and uptake when all New Hampshire employees are covered. The second and third models examined costs and uptake of leave when businesses with more than 25 or 50 employees are covered, respectively. The report also included analyses on costs and uptake under a scenario in which workers can opt out of the program.

In all three models, workers were eligible for benefits after six months of employment. The replacement rate was 60% of a worker's usual weekly earnings, with a maximum benefit level of $996.35, which was the average weekly wage for a private sector worker in New Hampshire in 2014.

VERMONT

Vermont conducted research to gauge public opinion on a paid family leave law before running their simulations. Vermonters do not clearly favor one wage replacement level. They do favor funding the policy by having employee pay less than one percent of their paycheck toward premiums each week. Vermonters strongly favor having both employees and employers foot the bill. Supported reasons for leave eligibility include: personal health, a new child, and family care.

In Vermont's simulations, in order to be eligible, workers must have earned a minimum of $9,079 in the last year. Leave benefits would equal 100 percent of wages, up to a maximum of double the Vermont Livable Wage. Employees can take a maximum of six weeks out of a one-year period. Employees would contribute to the premium in order to fund this program. Job protection is recommended. Additional models for 6 and 12 weeks of leave using a Modified Benefit formula are also included in the report.

APPENDIX B: MODEL 1 TECHNICAL APPENDIX

METHODOLOGY: ESTIMATING ELIGIBILITY, UPTAKE, PROGRAM COSTS, AND PFLI PREMIUMS[173]

Estimating North Carolina's Eligible Population

The primary data source was the 2016 Public Use Micro Data sample (PUMS) of the American Community Survey (ACS), fielded annually by the U.S. Census Bureau. The following four variables for North Carolina from the PUMS dataset were pulled in order to determine eligibility and replacement wages:

- wagp: Annual wages for the past 12 months
- wkhp: Average hours worked per week in the past 12 months
- wkw: Categorical variable for ranges of weeks worked in the past 12 months
- pwgtp: Sample weights to generate population estimates

These raw ACS variables enabled the construction of the following new variables for use in Model 1:

- weeks: This variable represents the number of weeks worked in the past 12 months. To create it, the "wkw" ACS variable, coded as 1 through 6 for various ranges, was transformed into a continuous measure of weeks worked using the midpoint of all ranges provided by ACS. For example, the range of "27 to 39 weeks", coded as 4 in the ACS "wkw" variable, was transformed into a value of 33 for the "weeks" variable.
- hours: This variable represents the total number of hours worked in the past 12 months. It was calculated by multiplying the "wkhp" variable from ACS (average hours worked per week) by the new "weeks" variable (weeks worked in the past 12 months).
- wage_hr: This variable represents the average hourly wage for the respondent. It was calculated by dividing the "wagp" variable from ACS (annual wages for the past 12 months) by the new "hours" variable (hours worked in the past 12 months).

- wage_wk: This variable represents the average weekly wage for the respondent. It was calculated by dividing the "wagp" variable from ACS (annual wages for the past 12 months) by the new "weeks" variable (weeks worked in the past 12 months).

The proposals in this report base eligibility criteria for Paid Family Leave Insurance on North Carolina's existing Unemployment Insurance program to reduce administrative and reporting burdens.
The ACS data did not allow precise matching on the UI eligibility criteria but it was possible to approximate eligibility. For the purposes of this model, any worker is defined as eligible who:

- Earned $1,560 or more in the past 12 months ("wagp" >= $1560)
- Worked at least 80 hours in the past 12 months ("hours" >= 80)

Using the above eligibility criteria and the ACS sample weights suggested that an estimated **4,707,099** North Carolina workers would be eligible to take paid family or medical leave in 2016.

Estimating Program Uptake

Estimates of own health and family leave uptake in North Carolina are based on the actual take-up rates in the first year of PFLI and TDI programs in California, New Jersey, and Rhode Island.[174] California and New Jersey uptake rates come from calculations by the Montana Budget and Policy Center.

Comparable take-up figures for Rhode Island were calculated using ACS PUMS data and administrative reports on actual claims filed, following the same methodology described in "Estimating North Carolina's Eligible Population" (above) to estimate Rhode Island's eligible population in the first year of its program, 2014. As with North Carolina, it was not possible to exactly replicate the state's eligibility rules[175] with ACS data; instead, eligibility was approximated using the following criteria:

- Earned at least $3,600 in the last 12 months
- Worked at least 80 hours in the last 12 months

These criteria imply that **500,939** Rhode Islanders were eligible in the program's first year at. Since administrative data show 2,848 bonding claims and 3,870 total PFLI claims in 2014, Rhode Island's first year bonding take-up rate was an estimated **0.57%** and its first year non-bonding take-up rate was an estimated **0.20%**.

	PFLI Bonding Take-Up Rate	PFLI Non-Bonding Take-Up Rate	TDI Take-Up Rate
California (2004)	0.77%	0.11%	4.12%
New Jersey (2009)	0.57%	0.15%	2.45%
Rhode Island (2014)	0.57%	0.20%	n/a
Average	**0.63%**	**0.15%**	**3.29%**

The projected bonding take-up rate of 0.63% shown in the table above was next adjusted to account for the larger share of North Carolina employees who gave birth last year, compared to the other three states. First, two additional 2016 ACS PUMS variables were used to calculate share of employees who gave birth in the last 12 months for California, New Jersey, Rhode Island, and North Carolina:

- esr: Categorical variable for employment status. Following the methodology of the Montana Budget and Policy Center, a person was considered employed unless they were coded one of the following: missing, under age 16, unemployed, or not in labor force
- fer: Categorical variable for whether the respondent gave birth in the last 12 months

These variables were combined to estimate the average share of employed people giving birth for California, New Jersey, and Rhode Island. North Carolina's share was then divided by that average to get an adjustment ratio.

	Share of employed who gave birth in the last 12 months
California (2016)	1.42%
New Jersey (2016)	1.43%
Rhode Island (2016)	1.46%
Three-State Average (2016)	1.44%
North Carolina (2016)	1.52%
North Carolina / Three-State Average	**1.06**

The average bonding take-up rate of 0.63% of employees was scaled up by this adjustment ratio of **1.06** to get the estimated North Carolina bonding take-up rate of **0.67%**

North Carolina's non-bonding care take-up rate **(0.15%)** was estimated by averaging the non-bonding care take-up rates of the other three states. North Carolina's own-health take-up rate (**3.29%**) comes from averaging figures from California and New Jersey only.

	PFLI Bonding Take-Up Rate	PFLI Non-Bonding Take-Up Rate	TDI Take-Up Rate (CA and NJ only)
Average Take-up Rate (CA, NJ, RI)	0.63%	0.15%	3.29%
Adjusted Take-up Rate (NC)	0.67%	0.15%	3.29%

Estimating Leave Duration

Average leave duration for PFLI was estimated by averaging the percentages of eligible leave taken in the first year of PFLI for California, New Jersey, and Rhode Island.

In the first year of California's PFLI program, participants took an average of 5.37 weeks of the 6 provided, or 89.5%.[176] In New Jersey, participants took an average of 5.1 weeks of the 6 provided, or 85.0%.[177] In Rhode Island, participants took an average of 3.5 week of the 4 provided, or 87.5%.

Averaging these percentages yielded a North Carolina duration estimate of **87.33% of weeks provided**. Under Proposal A, this translates to 6.99 of 8 weeks provided. Under Proposal B, this translates to 10.48 of 12 weeks provided.

Average leave duration for own health was estimated following the methodology of the Montana Budget and Policy Center, which determined using the 2012 DOL FMLA survey that average leave taken for personal health was 7.8 weeks out of 12 available, or 65%. Under Proposal A, this translates to 5.2 of 8 weeks provided. Under Proposal B, this translates to 7.8 of 12 weeks provided.

Estimating Program Costs

The ACS PUMS wage data and the take-up rates estimated above were next used to calculate how much North Carolina would pay eligible workers in wage replacement under Proposals A and B.

To determine program costs under Proposal A, the eligible population was divided into two groups, those earning more than $884 per week (high earners) and those earning $884 or less (low earners). The cutoff of $884 was selected because the Proposal A wage replacement rate of 55% will return to someone earning $884 exactly the Proposal A benefit cap of $486 (50% of the Area Median Income (AMI)).

Eligible workers in the high earner category were assigned the maximum benefit of $486 per week as their replacement wage. Eligible workers in the low earner category were assigned 55% of the average wage among this group, 55% of $464, or $255. Aggregating these eligible replacement wages yielded estimated eligible weekly wages of **$1.58 billion** for Proposal A.

Applying the expected caregiving take-up rate of 0.82% and the average weekly leave duration of 6.99 weeks generated estimated annual caregiving benefits paid under Proposal A of **$90.8 million**. Applying the expected own-health take-up rate of 3.28% and the average weekly leave duration of 5.2 weeks generated estimated annual own-health benefits paid under Proposal A of **$269.5 million.**

To determine program costs under Proposal B, the eligible population was divided into two groups, those earning more than $1,094 per week (high earners) and those earning $1,094 or less (low earners). The cutoff of $1,094 was selected because the Proposal B wage replacement rate of 80% will return to someone earning $1,094 exactly the benefit cap of $876 (90% AMI).

Eligible workers in the high earner category were assigned the maximum benefit of $876 per week, as their replacement wage. Eligible workers in the low earner category were assigned 80% of the average wage among this group, 80% of $532, or $426. Aggregating these eligible replacement wages yielded estimated eligible weekly wages of **$2.53 billion** for Proposal B.

Applying the expected caregiving take-up rate of 0.67% and the average weekly duration of 10.48 weeks generated estimated annual caregiver benefits paid under Proposal B to total **$218.1 million**. Applying the expected own-health take-up rate of 3.28% and the average weekly leave duration of 7.8 weeks generated estimated annual own-health benefits paid under Proposal A of **$647.1 million.**

Estimating Employee Premium Contributions

Total premium contributions that employees would make to the PFLI program under Proposal A were generated by first using the ACS PUMS data to divide North Carolina's 2016 working population into two groups: those earning more than $486 (50% of the Area Median Income) and those earning $486 or less.

For each group, weekly wages were averaged and then multiplied by the employed population to get the weekly taxable wages. Weekly totals were multiplied by 52 weeks to get the annual taxable wage base of **$102.9 billion**.

	High earners: >$486/week	Low earners: <= $486/week	Total
North Carolina employed population	3,086,951	1,838,125	4,925,076
Average weekly wages	$486	$260	-
Total taxable wages per week	$1.50 billion	$479 million	$1.98 billion
Total taxable wages per year	$78.0 billion	$24.9 billion	$102.9 billion

Finally, the program cost for Proposal A was divided by the total taxable wage base to arrive at the estimated premium of **0.35%**.

Total premium contributions that employees would make to the PFLI program under Proposal B were generated by first using the ACS PUMS data to divide North Carolina's 2016 working population into two groups: those earning more than $875 (90% of the Area Median Income) and those earning $875 or less.

For each group, weekly wages were averaged and then multiplied by the employed population to get the weekly taxable wages. Weekly totals were multiplied by 52 weeks to get the annual taxable wage base of **$102.9 billion**.

	High earners: >$875/week	Low earners: <= $875/week	Total

North Carolina employed population	1,682,078	3,242,998	4,925,076
Average weekly wages	$875	$432	-
Total taxable wages per week	$1.5 billion	$1.4 billion	$2.9 billion
Total taxable wages per year	$76.5 billion	$72.9 billion	$149.4 billion

Finally the program cost for Proposal A was divided by the total taxable wage base to arrive at the estimated premium of **0.58%**.

APPENDIX C: MODEL 2 TECHNICAL APPENDIX

Model 2 uses the ACM/IWPR Paid Family and Medical Leave Simulator Model (March 2, 2018 version) to estimate the cost and program leave usage under Proposal A and Proposal B. This model estimates behavioral models of leave-taking behavior conditional upon demographic characteristics of individuals and then predicts leave-taking behavior conditional on the demographic characteristics of individuals. The simulation runs individuals through a series of decisions based on logit behavioral equations. After each individual passes through the entire simulation, a year of leave-taking behavior is formed. The simulation model is more fully described at:
http://scholarworks.umb.edu/econ_faculty_pubs/41/.

The estimates do not depend on (or change) based on whether the program is paid by employer or employee contributions or through tax revenues. These estimates are of the benefits paid out to workers, and do not include the costs of administering a program. The covered workforce includes all private sector employees, self-employed workers, and all municipal and state government workers. It excludes federal government workers. The data are from the 5-year sample of the ACS 2012-2016.

The simulation model needs a basic set of policy parameters to run, but also requires assumptions about usage of the program. One key assumption is the percentage of eligible leave takers that would take up the program. The take up rates used in these simulation runs are 40 percent among those eligible for non-pregnancy own health leave, 95 percent for pregnancy and new child leave, and 8 percent for ill spouse, ill child, and ill relative leave. These are largely based on calibrating the model with other states that have TDI and paid family leave programs, assuming a new program will take a few years for people to know about and use. Another necessary assumption is how a state-wide program will be used by a worker who already receives full wage replacement when on leave from their employer. Model 2 assumes that 50 percent of all workers with employer-provided full wage replacement who take a leave totaling four weeks (20 days) or more will use the state-mandated program for as long as the leave is eligible (presuming the employer will "top-off" the program benefits for full wage replacement). This assumption does not increase the estimates of number of total leaves taken nor the total length of leaves, but it does increase the number of program leaves, length of program leaves, and the total program cost estimates.

APPENDIX D: MODEL 2 COMMAND APPENDIX

This document provides the commands (or directions) that the simulation model uses. The values of these commands are specified by the model user. There are three different kinds of commands. The first includes the policy parameter commands. These are the commands that facilitate tailoring the model to a specific set of eligibility rules, benefit levels, and program usage rules provided in particular legislation or proposals.

The second set of commands incorporates the necessary assumptions around leave behavior. Using these commands provides the simulator with behavior "rules" that help determine who might use the specified paid leave program leave and for how long (among the universe of those predicted to take a leave or need a leave). There is considerable discretion and educated/researched guessing that goes into the values of these parameters. The discussion below provides some guidance on how these commands have been used for Model 2.

The third type of command relates to the statistical reliability of the simulator. In each section, commands are listed in alphabetical order. A change in any command requires a new "run" through the simulator.

1. *Policy specific commands*

DEPENDENT ALLOWANCE

If there is a dependent allowance, this command sets the dollar amount of financial support for dependent children in dollars per week. This is not included in Model 2.

ELIGIBILITY RULES

This command specifies the eligibility requirements for the paid leave program. This includes requirements based on earnings, weeks or hours worked in the last 12 months, and/or employer size conditions.

For example, California has a requirement of 300 hours of work annually. New Jersey requires a minimum of $8,300 earnings and 20 weeks of employment in the previous year. The FMLA requires 1250 hours of work with an employer that has 50 or more employees.

MAXIMUM WEEKS

This command sets the maximum number of paid weeks for each type of leave. The types of leave are: OH (own health); MD (maternity disability); NC (new child); IC (ill child); IS (ill spouse); and IP (ill parent).

REPLACEMENT RATIO

This command specifies the weekly benefit amount as a proportion of weekly pay. A formula subcommand allows for the replacement ratio to change for earnings levels to provide a "sliding scale" replacement rate.

SELF EMPLOYMENT

If self-employed people are eligible, this command includes them (the default is not to include them).

GOVERNMENT

Various levels of government workers can be excluded from the analysis during the simulator run.

STATE OF WORK

In most cases, state-level programs included worked employed in the state, regardless of residence. This command allows the simulator to find workers that reside in other states but work in the state proposing paid leave. The user has to provide the ACS files of the other states. Typically, the ACS data for all states bordering the state in question are used.

WAITING PERIOD

This command specifies the waiting period, in weeks, before paid benefits begin.

WEEKLY BENEFIT CAP

This command sets the maximum weekly benefit paid by the program.

2. Behavior commands about program usage

EXTEND LEAVES

Specifies whether the presence of the paid leave program will, on average, lengthen leaves. If this command is not included, the default of "no" will be in effect, meaning that the average leave length (conditional on a person's demographic characteristics) will not be affected by the program (although the propensity to take a leave might be affected). In Model 2, it is assumed that leaves are extended in the presence of a paid leave program.

EXTENSION OF LEAVES

There are three commands that specify how to extend leave length:

1. EXTEND PROBABILITY: This command sets the probability that, in the presence of a paid leave program, leave length increases. The probability can differ by leave type. For example, setting this parameter at .9 for own health leaves would mean that 90% of all own-health leavers using the program would extend that leave (compared to the leave taken without a program in place)
2. EXTEND DAYS: For those who do extend their leave, this command specifies a fixed number of days that this leave might be extended which is then added on to the proportion of days of the pre-program leave length (described next). Days can differ by leave type.
3. EXTEND PROPORTION: For leaves that get extended, this command increases the length proportionately. Proportions can differ by leave type.

For a particular leave type, if the original length in the absence of a program is "x" days, the value of the EXTEND DAYS parameter is "a", and the value of the EXTEND PROPORTION parameter is "b", and the leave is extended (by "passing" the extend probability sieve), then the leave is extended by "a + bx" days, and the length in the presence of the program is "a + (1+b)x" days. This length may be subject to certain limits, depending on the maximum allowable program leave length and whether the FMLA PROTECTION CONSTRAINT is in effect. For example, let EXTEND DAYS=30 and EXTEND PROPORTION=.5 for own health leaves. An own-health leaver of 30 days (6 weeks) prior to the program that is determined to use the new program and to extend the leave would extend that leave by 30+(.5)*30=45 days for a total of 75 days leave under the program.

The values used in Model 2, based on replicating TDI leave lengths in CA, NJ and RI are:

Extend probability OH = .60 MD = .60 NC = .50 IC = .1 IS = .1 IP = .1;

Extend proportion OH = .50 MD = .50 NC = .50 IC = .1 IS = .1 IP = .1;

Extend days OH = 30 MD = 30 NC = 15 IC = 5 IS = 5 IP = 5;

Where 'OH' means Own Health, 'NC' means New Child, 'MD' equals Maternity Disability, 'IC' means Ill Child, 'IP' means Ill Parent, and 'IS' means Ill Spouse.

LEAVE PROBABILITY

This allows the probability of needing or taking a leave for each type of leave to exceed the probability of a leave above that calculated by the model's behavioral equations.

FMLA PROTECTION CONSTRAINT

Indicates whether or not leaves that are extended in the presence of a program that originally were less than 12 weeks in length are constrained to be no longer than 12 weeks in the presence of the program. Model 2 uses "no," which indicates that people would extend a leave beyond 12 weeks of FMLA protection if needed.

NEEDERS FULLY PARTICIPATE

Indicates the program participation behavior of leave needers who said they did not take a leave because it was unaffordable in the absence of a program (leave needers who said affordability was not a reason they did not take a leave are leave needers who do not take leave even in the presence of a program). If "yes" is specified, all needers who said they did not take a leave because it was unaffordable and whose leave would be longer than the waiting period will participate in the program. If "no" is specified, needers who said they did not take a leave because it was unaffordable will participate according to the same parameters that apply to leave takers. Whether or not "yes" or "no" is specified, if a needer's leave length would have been equal to or shorter than the waiting period, then they would remain a leave needer. Model 2 uses "no" and treats leave needers like other leavers in terms of use of the program.

TAKE UP RATES

This command sets the take-up rate for each type of leave. The take-up rate is the proportion of eligible leave takers who decide to use the program. The types of leave are: own health; maternity disability; new child; ill child; ill spouse; and ill parent. The rates used have been determined through a process of comparing model outcomes to state live birth rates and usage in the other TDI states. Pregnancy and new child take up rates are adjusted upward to accommodate limitations of the DOL survey (on which the model is built) concerning taking both of these types of leaves.

"TOPOFF" RATE and LENGTH

The first of these commands sets the proportion of leaves taken by employees who receive employer-provided full wage replacement in the absence of a program who would use PFLI if available while continuing to receive "top-off" benefits up to full pay from their employer. The second command limits the "top-off" behavior to leaves with a certain minimum length in days.

As an example of how this works, assume that the top-off rate is 50 percent and the length is 15 days. That means the simulator would "push" half of all leaves in which an employer provides full wage replacement and longer than 15 days onto the program (after the one-week waiting period) for as long as eligible. The simulator would assign the maximum program benefit for a "top-off" leave to the cost of the program, while the difference in weekly salary would be left as an employer cost.

3. Command to increase statistical reliability

CLONE FACTOR

Specifies how many times each sample person will be "run" through the simulator. Increasing the clone factor lowers the variance of the simulator error, that is, the variance of outcome measures due to the stochastic contingencies of the simulator. The clone factor can be used in conjunction with another command that allows for the calculation of standard errors or confidence intervals for the simulator error. For most states, it is recommended that the clone factor be 20-30.

All parameters used in Model 2:

government ;	state local	state local
calibrate ;	yes	yes
benefiteffect Yes;	yes	yes
clonefactor 30;	30	30
dependentallowance 10;	0	0

detail 7;	7	7
fmlaprotectionconstraint no;	no	no
eligibilityrules c_annhours=300;	80	80
extendleaves	yes	yes
extendproportion		
OH	0.5	0.5
MD	0.5	0.5
NC	0.6	0.6
IC	0.3	0.3
IP	0.4	0.4
IS	0.4	0.4
extenddays OH=30 MD=30 NC=15 IC=5 IS=5 IP=5;		
OH	40	30
MD	40	30
NC	30	15
IC	15	5
IP	15	5

IS	15	5

extendprob OH=.6 MD=.6 NC=.5 IC=.1 IP=.1 IS=.1;

OH	0.6	0.6
MD	0.6	0.6
NC	0.7	0.5
IC	0.5	0.1
IP	0.5	0.1
IS	0.5	0.1

takeuprates OH MD NC IP IS IC;

OH	0.4	0.4
MD	0.95	0.95
NC	0.95	0.95
IP	0.08	0.08
IS	0.08	0.08
IC	0.08	0.08

topoffminlength 20;	20	20
topoffrate1 .5;	0.5	0.5
weeklybencap 817;	486	875
weightfactor 1;	1	1
government yes;	yes	yes
calibrate yes;	yes	yes
selfemployed	yes	yes
maxweeks OH=30 MD=30 NC=4 IC=4 IS=4 IP=4;		
OH	8	12
MD	8	12
NC	8	12
IC	8	12
IP	8	12
IS	8	12
missingvalue ".";	.	.
replacementratio .60;	0.55	0.8
stateofwork 44;	37	37

randomseed no;	no	no
waitingperiod OH=0 MD=0 NC=0 IP=0 IS=0 IC=0;		
OH	1	0
MD	1	0
NC	1	0
IP	1	0
IS	1	0
IC	1	0

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[140] “North Carolina Division of Employment Security (DES) Unemployment Insurance Overview.” Raleigh, North Carolina: North Carolina Division of Employment Security. Accessed April 16, 2018. https://des.nc.gov/PortalCommon/Content/Downloads/Unemployment_Insurance_Overview_Final.pdf.

[141] ACS does not provide quarterly data. Because we are using a yearly figure, we are likely overestimating the eligible population and providing what should be considered an upper bound of participation.

[142] Clayton-Matthews, Alan, and Randy Albelda. “Description of the Albelda Clayton-Matthews/IWPR 2017 Paid Family and Medical Leave Simulator Model.” *Economics Faculty Publication Series* 41 (October 1, 2017). https://scholarworks.umb.edu/econ_faculty_pubs/41.

[143] We pulled the FTE numbers and 2017 claims from the Resource Justification Model under "Files below are indexed on Budget (Next) Year (i.e. 2009 contains actual data for FY2007 and projected data for FY2008 & FY2009)" for North Carolina. We then summed positions who processed Initial Claims, Weeks Claimed, Non Monetary Determinations, and Appeals. https://workforcesecurity.doleta.gov/rjm/

[144] The cost per position is $43,726, based on the Resource Justification Model for North Carolina. https://workforcesecurity.doleta.gov/rjm/

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[152] Since the Proposal A has a 55% replacement rate, and the Ruhm study finds that unpaid leave has zero effect on infant mortality, we assume a linear reduction from 0 to .25% per week for replacement rates from 0 to 80%, a 55% replacement rate then gives a fraction of .25% per week of .55/.8, so 8 weeks at 55% produces: (.5/.9)*(0.55/0.8)*0.8*0.025*7.2*120765/1000, or 6.8 babies saved.

[153] A 12-week paid leave with an 80% replacement rate, which matches the average rate in the Ruhm study (.79) but is 20% longer (12 instead of 10 weeks), would reduce infant mortality by (12/10)*.0072*.025*120,765, or 26.1 babies

[154] For Model 1:

$9.6 million*7 infants saved = $67.2 million

Total cost Proposal A: $360.3 million (annual total benefits) + $2.2 million (administrative costs)

$67.2 million / $362.5 million = 18.5% of program costs

For Model 2:

$9.6 million*7 infants saved = $67.2 million

Total cost Proposal A: $496.6 million (annual total benefits) + $3.2 million (administrative costs)

$67.2 million / $499.8 million = 13% of program costs

[155] For Model 1:

$9.6 million*26 infants saved = $249.6 million

Total cost Proposal B: $865.2 million (annual total benefits) + $2.2 million (administrative costs)

$249.6 million / $867.4 million = 29% of program costs

For Model 2:

$9.6 million*26 infants saved = $249.6 million

Total cost Proposal B: $1,156.6 million (annual tot. benefits) + $3.2 million (administrative costs)

$249.6 million / $1,159.8 million = 21.5% of program costs

[156] Jenna Stearns, "The Effects of Paid Maternity Leave: Evidence from Temporary Disability Insurance," Journal of Health Economics 43 (September 1, 2015): 85-102, https://doi.org/10.1016/j.jhealeco.2015.04.005.

[157] "Stats of the State of North Carolina," National Centers for Disease Control and Prevention, April 10, 2018, https://www.cdc.gov/nchs/pressroom/states/northcarolina/northcarolina.htm.

[158] This number is calculated by multiplying the annual percentage of infants born with low birth weight in North Carolina by the percent reduction in low birth weights resulting from paid maternity leave by the annual number of births in North Carolina. All costs calculated using 2000 dollars and subsequently translated to 2016 dollars.

[159] This number is calculated by multiplying the reduction in number of low weight babies by the average cost of caring for a low-weight infant compared to a non low-weight infant. The reduction in low-birth weight was from Jenna Stearns, "The Effects of Paid Maternity Leave: Evidence from Temporary Disability Insurance," Journal of Health Economics 43 (September 1, 2015): 85-102, https://doi.org/10.1016/j.jhealeco.2015.04.005. The average cost of caring for low-weight infant was from Douglas Almond, "The Costs of Low Birth Weight," National Bureau of Economic Research, accessed April 30, 2018, http://www.nber.org/papers/w10552.pdf. Cost estimates were adjusted to 2016 dollars using the "CPI Inflation Calculator," accessed April 30, 2018, https://www.bls.gov/data/inflation_calculator.htm.

[160] Arora, Kanika, and Douglas A. Wolf. "Does Paid Family Leave Reduce Nursing Home Use? The California Experience." *Journal of Policy Analysis and Management* 37, no. 1 (2018): 38-62.

[161] Centers for Disease Control and Prevention. *Table 92. Nursing Homes, Beds, Residents, and Occupancy Rates, by State: United States, Selected Years 1995-2014*. (2015). Accessed May 8, 2018. https://www.cdc.gov/nchs/data/hus/2015/092.pdf.

[162] We use the national estimate of 84.5% of nursing home patients being 85 years of age and older for our calculations. From: *Nursing Home Data Compendium 2015 Edition.* Report. Department of Health and Human Services USA. 2015. Accessed May 8, 2018. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandComplianc/Downloads/nursinghomedatacompendium_508-2015.pdf.

[163] Using the 2014 estimate of individuals in nursing homes in North Carolina, 37,058, we reduce the number by 15.5% to account for individuals who are not aged 65 and over. 37058*.845 = 31,314 individuals 65+. A .65% reduction in 31,314 is equal to 31,314*.0065 = 204 individuals.

[164] "Compare Long Term Care Costs Across the United States." Genworth. June 2017. Accessed May 8, 2018. https://www.genworth.com/aging-and-you/finances/cost-of-care.html.

[165] With an estimated 204 individuals kept out of nursing homes each year (see endnote below), we multiplied 204 by the annual median cost of a semiprivate and a private room to get these cost savings.

[166] Houser, Linda, and Thomas Paul Vartanian. *Pay matters: The positive economic impacts of paid family leave for families, businesses and the public*. Rutgers Center for Women and Work, 2012.

[167] Kung, JiYang, Marcia Meyers, and Jennifer Romich. "Washington State Paid Family Leave Analysis Report." *The Effect of State Paid Maternity Leave on TANF and SNAP Use*, November 7, 2016. Accessed May 8, 2018. https://www.dol.gov/wb/media/WA_Paid_Leave_UW_Final_Report_SNAP_TANF.pdf.

[168] We use the formula on page 14 of Kang et. al. (2016) to find these estimates. Our available data on low educated mothers who gave birth is from 2015, and is from age 18 – 34, with low education also signifying less than a bachelor's degree. This estimate is 73,515 individuals, calculated by aggregating three education levels available from the North Carolina State Center for Health Statistics (1). Kang et. al. use paid family leave length

as length of TANF, which in our proposals are 8 and 12 weeks. Costs are estimated for families of 2 and 3. They cite Falk (2016) who finds that, on average, TANF case households contain 2.5 beneficiaries. In North Carolina, the maximum TANF amount as of July 2015 was $236 a month for 2 recipients, and $272 a month for a household with 3 recipients (2). To calculate how many less people will be on TANF, we multiply our population of interest by the reduction, -1.3%. (73515 individuals) × (.013) = 956 less individuals using TANF after rounding.

To calculate the cost savings for 8 weeks, for a family of 2:

(956) × (2 months) × ($236) = $451,232

To calculate the cost savings for 8 weeks, for a family of 3:

(956) × (2 months) × ($272) = $676,848

To calculate the cost savings for 12 weeks, for a family of 2:

(956) × (3 months) × ($236) = $520,064

To calculate the cost savings for 12 weeks, for a family of 3:

(956) × (3 months) × ($272) = $780,096

[169] Hawaii State Commission on the Status of Women, "Hawaii State Paid Family Leave Analysis Grant Report," November 2017, https://www.dol.gov/wb/media/Hawaii_Report_Final_2.pdf.

[170] Pennsylvania Department of Labor & Industry. (2017). *Paid Family and Medical Leave in Pennsylvania: Research Findings Report* (U.S. Department of Labor, Employment and Training Administration) (pp. 1–61). Harrisburg, Pennsylvania. Retrieved from https://www.dol.gov/wb/media/Pennsylvania_Final_Report.pdf

[171] Montana Budget & Policy Center. (2015). *Helping People Balance Work and Family: It's Within Montana's Reach* (U.S. Department of Labor, Employment and Training Administration) (pp. 1–14). Helena, Montana. Retrieved from
https://www.dol.gov/wb/media/Helping%20Montana%20Families%20Balance%20Work%20and%20Family%20FINAL.pdf

[172] Jeffrey Hayes and Meika Berlan, "Costs and Benefits of Family and Medical Leave for New Hampshire Workers" (Institute for Women's Policy Research, January 6, 2017), https://www.dol.gov/wb/media/NH_Final_Report_2015_Final_Report.pdf.

[173] This methodology follows in large part the structure of Montana's DOL-funded Paid Family Leave study, conducted by the Montana Budget and Policy Center with support from the Colorado Fiscal Institute

[174] Rhode Island's TDI program long predated the PFLI program, so TDI uptake estimates are based on California and New Jersey only.

[175] http://www.ripec.org/pdfs/2015-TDI-TCI.pdf

[176] Montana Budget and Policy Center

[177] Montana Budget and Policy Center