

## State Minimum Wage

### Evidence Review Findings: Effective / Roadmap Policy

A state minimum wage of at least \$10.00 per hour increases parents' earnings and family incomes with minimal or no adverse effects on employment. Higher state and local minimum wages promote greater economic security for families with young children, contribute to healthier birth outcomes, and can reduce racial disparities in poverty. Most of the rigorous research examines the impacts of incremental increases in the wage floor, such as a \$1.00 or 10 percent increase, rather than the effects of a specific level (e.g., \$10.00, \$12.00, or \$15.00), but evidence to date suggests that increases to at least \$10.00 per hour have positive impacts on infants, toddlers, and their parents. Future research may reveal similar or greater benefits for higher minimum wage levels.









State minimum wage policies establish a floor for workers' hourly wages. Although the federal minimum wage requires that most hourly workers<sup>i</sup> be paid at least \$7.25, states can individually establish higher minimum wages; as of October 1, 2022, 31 states<sup>ii</sup> have set wage floors greater than \$7.25, with 25 states currently at \$10.00 or higher.<sup>86</sup> By increasing pay for workers with low wages, a higher minimum wage may increase access to basic resources, helping to lift families with low incomes out of poverty and alleviate parental stress. In turn, reduced stress and greater access to resources may improve outcomes for infants and toddlers by reducing the likelihood of adverse early experiences. Although some studies show positive impacts of minimum wage increases to as high as \$12.00 or \$15.00, most causal evidence on statewide minimum wages extends to approximately \$10.00. As states continue to set minimum wages in the \$12.00 to \$15.00 range, the effects of levels above \$10.00 on families' economic and social wellbeing will become clearer.

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

<sup>i</sup> Some classes of workers (e.g., tipped employees, teenage workers, and workers with disabilities) are exempted from the regular federal minimum wage in the Fair Labor Standards Act and therefore may earn below \$7.25 before tips.

<sup>ii</sup> State counts include the District of Columbia.

Table 1: Impacts of Higher State Minimum Wages on Policy Goals

Positive Impact	Policy Goal	Overall Findings
	Access to Needed Services	Mostly null impacts on access to prenatal care and health care
	Parents' Ability to Work	Mixed impacts on employment and work hours
	Sufficient Household Resources	Positive impacts on earned income and child poverty
	Healthy and Equitable Births	Positive impacts on healthy births
	Parental Health and Emotional Wellbeing	Mixed impacts, with positive effects on stress but negative impacts on maternal smoking
	Nurturing and Responsive Child-Parent Relationships	Trending mixed impacts on child-parent relationships
	Nurturing and Responsive Child Care in Safe Settings	Trending null impacts on number of child care arrangements
	Optimal Child Health and Development	Mixed impacts, with positive effects for reducing neglect and improving long-term child health

## What Are State Minimum Wages?

State minimum wages are legislative mandates setting a floor for the hourly wage that employers must pay their workers. The United States has had a federal minimum wage since the Fair Labor Standards Act was passed in 1938, and the federal floor currently stands at \$7.25 (with exceptions for tipped workers, teenagers early in their employment, and some workers with disabilities).<sup>44,87</sup> The federal minimum wage has not increased since 2009. Although recent bills have proposed phasing in an increase to \$15.00 by 2025, July 2021 marked the longest time without a minimum wage increase since the Fair Labor Standards Act was passed.<sup>2,3,90</sup> In June 2022, when accounting for inflation, the federal minimum wage reached its lowest value in 66 years.<sup>90</sup> States can legislate their own higher minimum wages, and as of October 1, 2022, 31 states have adopted and implemented minimum wages higher than \$7.25.<sup>86</sup> A minimum wage is a policy lever states can use to ensure a basic standard of economic wellbeing for all workers and prevent exploitation by employers, but raising state minimum wages may have the greatest effect on reducing poverty and improving the standard of living for the workers with the lowest wages and their families.

A “living wage” is a distinct, more subjective concept that represents the minimum adequate wage that an organization or group (such as a labor union) believes is necessary to meet basic needs and provide a decent standard of living for workers. More than 140 local governments have adopted living

wage ordinances since the 1990s, but they tend to cover a smaller, more specific share of workers than do state or local minimum wages, often applying to workers with jobs connected to the public sector, either directly or through contracts.<sup>iii,68</sup> This review focuses on state and local minimum wages rather than examining the impact of living wage ordinances, but the policies are related.

### ***Who Is Affected by State Minimum Wages?***

According to the US Bureau of Labor Statistics, 1.1 million workers earned at or below the federal minimum wage of \$7.25 in 2021 (representing 1.4% of hourly workers).<sup>5</sup> This proportion varied by state—with the highest percentages of workers largely concentrated in the South. In 2021 a large number of states had less than 1 percent of hourly workers earning the federal minimum wage or less (Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Montana, Nevada, New York, Oregon, South Dakota, and Washington).<sup>5</sup> Part-time hourly workers are more likely than full-time hourly workers to be paid the minimum wage or less (approximately 3% compared to 1%).<sup>5</sup>

With a \$7.25 hourly wage and a 40-hour work week, a full-time minimum wage worker earns just \$15,080 each year, which is below the poverty level for households above two persons.<sup>6,91</sup> A \$10.00 per hour wage also keeps a worker below the poverty level if the worker is the only earner supporting a household of three or more people. A \$10.00 level should therefore be considered a floor in 2022 and increases above that level in future years may yield better child and family outcomes, but further research is needed as more states implement at higher levels.

According to the Economic Policy Institute (EPI), if all states raised their minimum wages to at least \$15.00 by 2025, whether through a federal mandate or state legislation, 32 million workers, or 21 percent of the US workforce, would see a raise, and approximately 28 percent of those who would benefit are parents.<sup>7</sup> In particular, women and workers of color would benefit from minimum wage increases to \$15.00 because they comprise a large share of those currently paid under that level.<sup>8</sup> A federal \$15.00 minimum wage would mean that 31 percent of Black workers and 26 percent of Latino<sup>iv</sup> workers would see a raise, and 60 percent people who would benefit are women.<sup>7</sup> Among hourly workers, women are twice as likely as men to earn the minimum wage or below (2% compared to 1%).<sup>5</sup>

The Congressional Budget Office (CBO) estimated in a 2019 report that if all states raised their minimum wages to at least \$10.00 per hour by 2025, 1.5 million workers would see their wages increase, family income would increase by \$400 million overall for those who would otherwise be in poverty, and this option would lead to a smaller decrease in employment than a \$12.00 or \$15.00 federal minimum wage.<sup>44</sup> As of October 1, 2022, 25 states have minimum wages of at least \$10.00.<sup>4,86</sup> A later report by the CBO in 2021 examined the impacts of a \$15.00 federal minimum wage that would be fully implemented by 2025 and found that 17 million workers currently making under \$15.00 would see a pay increase, although job loss would affect approximately 1.4 million workers.<sup>75</sup>

---

<sup>iii</sup> For example, a local living wage policy may require that “firms receiving contracts from local governments must pay their workers enough to provide an above-poverty standard of living”<sup>68</sup> (p. 3).

<sup>iv</sup> This study used “Latino” rather than Hispanic.

Total pay for directly or potentially affected workers<sup>v</sup> would increase by \$333 billion from 2021 to 2031, and poverty would decline by 0.9 million people. The findings from the EPI and the CBO reports together suggest that a \$15.00 minimum wage would benefit between 17 and 32 million workers, depending on the inclusion of directly and indirectly affected workers.

Some workers remain uncovered even by the protections of the current federal minimum wage due to exceptions in the Fair Labor Standards Act.<sup>87</sup> Wage levels for tipped workers vary from a low of \$2.13, in states where the tipped wage is set to the federal subminimum, to a high of \$15.00 in California, where tipped workers are currently paid the same minimum wage as nontipped workers.<sup>62,86</sup> See Table 3 at the end of this review for details by state. Employers are legally required to make up the difference if tips fall short (the supplement is called a “tip credit”), but the tipped wage shifts the burden of wages to customers, whose tipping practices may be inconsistent for a variety of reasons and may result in more precarious and unstable wages for workers.

According to the EPI, in 2021, 1.3 million American workers were subject to the \$2.13 tipped wage floor, and another 1.8 million were subject to a level above \$2.13, but still less than their state’s regular minimum wage.<sup>7</sup> The subminimum wage contributes to disproportionate poverty among tipped workers, and about 46 percent of such workers rely on public benefits to make ends meet, compared to approximately 35.5 percent of workers covered by the full minimum wage.<sup>53</sup> In addition, this policy leads to inequitable wages for workers of various racial and gender groups, who have been shown to receive disparate tips because of racism, sexism, and other forms of bias.<sup>71</sup> The policy also opens the door to wage theft if employers do not comply with the requirement to supplement tips to reach \$7.25 per hour. A 2014 report by the EPI noted that the Department of Labor’s compliance investigation of 9,000 restaurants between 2010 and 2012 found 1,170 tip violations, totaling \$5.5 million in wages that failed to have been paid.<sup>53</sup>

Other classes of workers, including individuals with disabilities, are also exempt from the full minimum wage in the Fair Labor Standards Act. Certain firms, primarily those known as “sheltered workshops,” which offer employment to individuals with disabilities separately from others, can obtain certificates from the federal government allowing them to pay workers as little as \$1.00 per day.<sup>65</sup> Advocates for individuals with disabilities have been working to eliminate this exemption in many states.<sup>84</sup>

In April 2021, President Biden signed an executive order (No. 14026) requiring all federal contractors to pay a minimum of \$15.00 per hour to workers beginning on January 30, 2022.<sup>79</sup> This floor was previously set at \$10.10 under the Obama administration and was indexed to inflation, rising to \$10.95 just prior to the 2021 executive order. The 2021 order will also eliminate tipped wages for federal contractors by 2024 and will eliminate subminimum wages for federal contractors with disabilities.

---

<sup>v</sup> “Potentially affected” or “indirectly affected” workers are those making just slightly above the proposed minimum wage, who may see an increase as wage distributions change in response to the higher wage floor.

### ***What Are the Funding Options for State Minimum Wage Increases?***

Evidence shows that the costs of minimum wage increases are typically absorbed by employers and, to some extent by consumers resulting from small price increases. For example, research from Princeton University found that an increase of 10 percent in the minimum wage increases the price of a McDonald's Big Mac by just 1.4 percent and has no significant impact on restaurant entry or exit into the market.<sup>76</sup>

Raising state minimum wages may save taxpayer costs, however, by increasing earned income and reducing the amount of support workers may need from public assistance programs.<sup>B,J</sup> An analysis by the University of California, Berkeley estimated that a \$15.00 federal minimum wage may potentially save up to \$107 billion in state and federal safety net spending that currently supports individuals in states with a minimum wage below \$15.00.<sup>72</sup> For example, spending for the Supplemental Nutrition Assistance Program would likely decline because fewer individuals would have earnings that fall below the threshold that the government has determined is necessary to qualify for food assistance.

Many large employers, such as Amazon and Costco, have recently raised their minimum wages significantly above federal and state floors (e.g., to \$18.00 per hour), with business leaders noting that higher pay can improve employee retention and performance and may therefore benefit their businesses in the long run.<sup>67</sup>

### **Why Should Higher Minimum Wages Be Expected to Impact the Prenatal-to-3 Period?**

Raising the wage floor can increase the incomes of workers with low wages and their families, and in some cases lift them out of poverty. Higher family incomes can, in turn, lead to better social, economic, and health outcomes for parents and children. Greater access to resources such as housing, food, health care, and transportation can lower parental stress, improving a child's caregiving environment and reducing the likelihood that a child will experience abuse, neglect, or other adverse experiences at home.<sup>10</sup> Higher minimum wages may also facilitate greater health care access among parents and children, including greater prenatal care use, which may improve birth outcomes and affect children's later health status.<sup>H,I,48</sup>

Raising the minimum wage is a contentious policy issue due to concerns regarding unintended consequences. For example, some scholars expect that to pay for higher wages, employers may cut the number of jobs or work hours for workers with low wages, with detrimental impacts on employment and family income that may offset the increased wages.<sup>11</sup> This argument is one of the most commonly cited (and empirically tested) objections to minimum wage increases in the literature. Other scholars contend that better-paid workers will be more productive, reducing turnover and costs associated with hiring and training new workers.<sup>12</sup> Still others argue that some reductions in work hours observed after a minimum wage increase may reflect a rational choice by workers themselves to work fewer hours, and gain leisure time, while still earning the same overall income given the higher hourly wage.<sup>40</sup>

Another anticipated effect of an increased minimum wage is that costs of goods and services will increase. This can pass the cost of the higher wage to consumers or employers may cut or freeze



the wages of workers with higher incomes to compensate for the increases for workers with lower wages (leading to “wage compression,” which describes a trend toward a smaller difference in pay between the lowest-paid and highest-paid workers).

Some stakeholders worry about the impact of higher minimum wages on the child care industry, specifically the possibility that employers will raise child tuition to cover higher employee wages, pushing the cost burden onto families who may already struggle to afford the cost of care.<sup>13</sup> If a higher minimum wage incentivizes greater employment among some parents, then access to affordable and high-quality child care may become even more critical if more workers require care or additional care hours.<sup>42,43</sup>

Another concern is that higher wages may push families just over the income eligibility thresholds for child care subsidies or other public benefits, preventing them from receiving support even when they still need the assistance. Finally, some scholars argue that a higher minimum wage is not a well-targeted policy lever for reducing poverty, given that many minimum-wage workers, such as adolescents working a part-time job, may belong to high-income households.

The empirical evidence addressing some of these considerations is presented later in this evidence review.

## What Impact Do State Minimum Wage Increases Have, and for Whom?

Historically, most of the research on minimum wage policy, both federal and state, has focused on overall economic impacts such as income and employment effects. Very limited research, until the past decade, has examined how minimum wage increases impact child and family poverty, birth outcomes, and parent and child health, but the emerging evidence finds positive impacts in these areas. This review identified 19 strong causal studies that examined the impacts of higher state and local minimum wages specifically for families, children, and parents. The literature on the minimum wage is vast, and many additional rigorous studies offer important findings on employment, earnings, health, and other outcomes for adults or national samples more generally. These findings are mentioned throughout this review but are not the focus.

Most of the studies in this review examined incremental increases in state minimum wages, such as the impacts of a \$1.00 increase,<sup>G</sup> a 10 percent increase,<sup>D</sup> or any given increase above the federal minimum wage,<sup>E</sup> rather than examining the impacts of a particular minimum wage. However, a review of the state data included in the studies found that most of the empirical evidence revealing beneficial impacts extended to minimum wages up to the \$10.00 level. Some studies showed positive impacts for minimum wages as high as \$15.00,<sup>46,47</sup> but such studies employed simulations and estimates projecting future impacts, rather than examining the effects of increases that had already been implemented, or they were focused on specific localities (e.g., New York City, Santa Clara County) rather than statewide increases. More statewide research on the effects of a \$12.00 to \$15.00 minimum wage, as more states implement wages in this range, will be valuable for confirming the threshold that provides the greatest impact to families with the least detrimental impacts on employment.

The research discussed here meets our standards of evidence for being methodologically strong and allowing for causal inference, unless otherwise noted. Each strong causal study reviewed that focused on the impact of state and local minimum wages on families with children has been assigned a letter, and a complete list of causal studies can be found at the end of this review, along with more details about our standards of evidence and review method. The findings from each strong causal study reviewed align with one of our eight policy goals from Table 1. The Evidence of Effectiveness table (Table 2) displays the findings associated with higher state minimum wages (beneficial, null,<sup>vi</sup> or detrimental) for each of the strong studies (A through S) in the causal studies reference list. For each indicator, a study is categorized based on findings for the overall study population; subgroup findings are discussed in the narrative. The Evidence of Effectiveness table also includes our conclusions about the overall impact on each policy goal. The assessment of the overall impact for each studied policy goal weighs the timing of publication and relative strength of each study, as well as the size and direction of all measured indicators.

Of the 19 causal studies included in this review, nine examined how outcomes differed by race or ethnicity (beyond simply presenting summary statistics or controlling for race/ethnicity).<sup>vii</sup> Where available, this review presents the analyses' causal findings for subgroups by race/ethnicity and other aspects of variation, such as family structure, age, or citizenship status. A rigorous evaluation of a policy's effectiveness should consider whether the policy has equitable impacts and should assess the extent to which a policy reduces or exacerbates pre-existing disparities in economic and social wellbeing.

Table 2: Evidence of Effectiveness for Higher State Minimum Wages by Policy Goal

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Access to Needed Services	Number of Prenatal Care Visits		H		Mostly Null
	Prenatal Care in First Trimester		H		
	Health Insurance Coverage		K	S	
	Child Has Medical Home		K		
	Doctor Visits		K		
Parents' Ability to Work	Employment	F, J	C, Q	M	Mixed
	Hours or Weeks Worked		C, J		

<sup>vi</sup> An impact is considered statistically significant if  $p \leq 0.05$ . Results with p-values above this threshold are considered null or nonsignificant.

<sup>vii</sup> The studies, as labeled in our reference list, are studies A, B, C, F, G, J, K, M, and N.

Table 2: Evidence of Effectiveness for Higher State Minimum Wages by Policy Goal (Continued)

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Sufficient Household Resources	Earnings/Income	B, F, J, M	Q		Positive
	Child Poverty	B, C, F, J, L, M			
	Reduced Public Assistance	B, J			
	Child Support		Q		
Healthy and Equitable Births	Birthweight	E, H			Positive
	Gestation Length	H			
	Postneonatal Mortality	D, E			
	Adolescent Births	A, P			
	Healthy Infant Size for Gestational Age	O			
	Preterm Births		H		
Parental Health and Emotional Wellbeing	Maternal Stress/Depression		Q		Mixed
	Smoking During Pregnancy		H		
	Number of Cigarettes Per Day During Pregnancy			H	
	Poverty-Related Antenatal Stress	N			
Nurturing and Responsive Child-Parent Relationships	Spanking (Maternal and Paternal)	Q			Trending* Mixed
	Activities with Children (Maternal)		Q		
	Activities with Children (Paternal)	Q			
Nurturing and Responsive Child Care in Safe Settings	Number of Child Care Arrangements		Q		Trending* Null



Table 2: Evidence of Effectiveness for Higher State Minimum Wages by Policy Goal (Continued)

Optimal Child Health and Development	Neglect	G, R			Mixed
	Physical Abuse		G		
	Psychological Abuse		R		
	Missed School Days Due to Illness/Injury	I			
	Long-Term Health	I			
	Parent-Reported Child Health		K		
	Frequency of Illnesses		K		
	Emergency Room Use		K		

\*Trending indicates that the evidence is from fewer than two strong causal studies or multiple studies that include only one location, author, or data set.

### Access to Needed Services

Three studies identified for this review examined the effects of a higher minimum wage on access to medical and prenatal care, finding null<sup>H,K</sup> and detrimental results<sup>S</sup>. A 2020 study examining 46 million births from 1989 to 2012 found that a \$1.00 increase in state minimum wages led to no significant increases in the number of prenatal visits or in the likelihood of a mother receiving care in the first trimester, although both results were in the beneficial direction.<sup>H</sup> A 2019 study examined the impact of higher minimum wages on children's health care access from 2000 to 2015, finding overall null results for the likelihood of health insurance coverage, having a medical home (a consistent place to receive medical care), and frequency of doctor's visits (e.g., child saw a doctor in the past year, child had more than one visit in the past year, child had a checkup in the past year).<sup>K,viii</sup>

A 2022 study examined whether state and federal minimum wage increases, of any size and occurring between 2004 and 2015, affected the level or source of health insurance coverage for families with low incomes. The authors found that a nominal \$1.00 increase in the minimum wage reduced the probability of employer-sponsored insurance coverage by 0.99 percentage points for families below 300 percent of the federal poverty level. Reductions in coverage were observed for both workers and their dependents, with the effects indicating similar declines in subscriber and dependent coverage. Although employer-sponsored insurance coverage declined, the study did not find a decline in overall rates of insurance coverage. The authors suggested that the decline in employer-sponsored insurance may have been offset by an increased uptake in Medicaid due to the concomitant expansion of Medicaid during the time of the study.<sup>S</sup>

Subgroup analyses in the 2019 study revealed results in various directions that do not clearly align with the theory of change—for example, children with immigrant parents were significantly less

<sup>viii</sup> Study K included some indicators in the 2019 Institute of Labor Economics version that were not included in the 2020 published paper. Table 2 reflects indicators from both papers because correspondence with the authors confirmed that the 2019 results are still valid but were not the focus of the 2020 paper.

likely to have had a checkup in the past year with a higher minimum wage.<sup>k</sup> Results for all groups were null when the authors examined whether a child saw a doctor at all in the past year and whether a child saw a doctor for behavioral/mental health needs. More research examining the impact of higher wages on access to health care, including prenatal care, would be valuable, given that only three causal studies currently inform the conclusions for this policy goal.

### ***Parents' Ability to Work***

The possibility that higher minimum wages may lead employers to cut jobs or reduce the number of hours offered to employees is one of the most frequently cited objections to increasing the wage floor. Evidence suggests that state minimum wage increases have mixed effects on employment and hours for workers with low wages,<sup>ix</sup> with most wage increases leading to small, statistically insignificant reductions in employment or no effects at all.<sup>45,49,50</sup> Most studies that have found detrimental impacts on employment have examined specific cities or industries rather than statewide increases, have examined levels between \$13.00 and \$15.00, and/or have found small effect sizes.<sup>32,46,51,52,M</sup> Some scholars have argued that the minimum wage's labor supply effects on parents with young children may be different than the findings for adult workers overall, because parents are eligible for different means-tested transfer programs and "face fixed costs of work in the form of childcare [payments]" that other workers may not face (p. 29).<sup>J</sup> A higher minimum wage may allow parents to "overcome these costs and enter the labor force" (p. 29).<sup>J</sup> Therefore, an understanding of the minimum wage's effects on the prenatal-to-3 period requires an examination of studies that focus on parents with children rather than samples of workers in general.

Among the five studies in this review that focused on employment effects for families with children, two found positive impacts on parental employment.<sup>F,J</sup> A 2011 study using data from 1997 to 2006 found that a 10 percent increase in a state's minimum wage increased the employment of single mothers (ages 21 to 44) by 7.4 percent when coupled with a 10 percent state earned income tax credit (EITC).<sup>F</sup> The effects were even greater (9.5%) when limiting the sample to mothers with lower levels of education, who are often the population most affected by a minimum wage increase. A higher wage may therefore incentivize parents to enter the workforce when paired with policies like the EITC, which amplify the returns of each hour of work. This study also found that a higher minimum wage increased the positive earnings and employment effects of the EITC for single Black or Hispanic mothers to a greater degree than for White mothers.

A 2019 study using data from 1980 through 2015 found that a 10 percent increase in the minimum wage increased the likelihood that children of mothers with no college degree had a working parent by 4 percent, with the greatest effects for children ages 0 through 5 (a significant increase of 7.4% in parental employment).<sup>J</sup> These results were driven by a significant increase in employment among single mothers and married fathers. The study showed null effects overall for hours/weeks worked conditional on employment, but effects were significant and positive for Black mothers' employment and their annual hours (over 299 additional hours worked per year). The study's findings, with the greatest positive effects for families with young children (under age 6), are consistent with the authors' hypothesis about child care costs as a barrier to work for parents with low wages, and the positive impacts that a higher wage can have for facilitating employment.<sup>J</sup>

---

<sup>ix</sup> See studies C, F, J, M, and Q.

Another 2019 study, by the same authors as the paper discussed above (Study J), examined minimum wage increases specifically in low-wage regions of the US and detected no significant adverse effects on employment or hours worked.<sup>c</sup> The study did not find that higher minimum wages had significantly different effects by race (although it did find significant reductions in child poverty in low-wage areas, discussed in the Sufficient Household Resources section of this review).

A report by the National Academies of Sciences, Engineering, and Medicine (NASEM) employed rigorous simulation techniques to estimate the impacts that a variety of economic policies would have on child poverty.<sup>M</sup> The report examined two possible minimum wage changes using 2015 data. The first was “an increase in the federal minimum wage to \$10.25 in 2020 dollars [\$9.15 in 2015 dollars], in all states” and the second scenario was one in which “the new value for the regular minimum wage in each state equals the lesser of \$9.15 or the 10<sup>th</sup> percentile of the hourly earnings distribution in that state” (p. 506).<sup>M</sup> The authors found that the first policy would reduce child poverty, as measured by the Supplemental Poverty Measure,<sup>x</sup> from 13 percent to 12.8 percent, and the second scenario would lead to a slightly smaller reduction, bringing child poverty to 12.9 percent. The 0.2 percentage point reduction for the first policy translates to approximately 1.4 million fewer children in poverty, given that the 2015 population of children ages 0 to 18 was approximately 73.6 million.<sup>78</sup>

The NASEM report estimated an associated job loss of 121,000 among adults and 28,000 among teenagers resulting from the first minimum wage policy, and a smaller impact with the second policy. However, the two policies would have additional positive impacts on earnings and tax revenue. According to the authors, “the two minimum wage policies actually reduce net government expenditures, owing to the fact that they increase earnings, so tax revenues on the earnings increase and expenditures on benefits from transfer programs decrease” (p. 160).<sup>M</sup> This finding suggests that despite some job loss, workers and families may be overall better off as a result of increased earnings and reduced poverty.

A 2020 study using the Fragile Families and Child Wellbeing data set, which followed approximately 5,000 children born between 1998 and 2000 in 20 cities in 15 states, aimed to examine how local minimum wage increases affect child-parent interactions, such as discipline behaviors like spanking, and the authors examined employment as a possible mechanism that may influence parenting behaviors.<sup>Q</sup> The authors found no significant impact of higher minimum wages on maternal or paternal employment at age 3. However, maternal employment was significantly reduced at age 5 by 3.6 percentage points.

Studies that focus on large samples of adults or workers in general, rather than parents or families, are not included in the Evidence of Effectiveness table (Table 2), but they find similarly mixed results for employment. One of the earliest and most widely cited studies of state minimum wage increases was a 1994 analysis of the fast food industry in a region that included the New Jersey and Pennsylvania border.<sup>54</sup> The study found that employment in New Jersey, which had raised its

---

<sup>x</sup> The Supplemental Poverty Measure is an alternative way that the US Census Bureau measures poverty that accounts for cash and in-kind public benefits, taxes, and certain expenses when measuring household income. The measure also sets different thresholds for poverty than the official measure, adjusting for family size and regional housing costs.

minimum wage by 80 cents, actually increased 13 percent relative to neighboring Pennsylvania, which did not raise its wage. Three additional studies have found null impacts of higher minimum wages on employment,<sup>45,49,50</sup> and three others have found small negative impacts.<sup>46,51,52</sup> For example, two studies identified possible job loss in the range of 1,350 to 5,000 fewer jobs per year resulting from city-level increases to \$13.00 and \$15.00 in Seattle and Santa Clara County, respectively.<sup>46,51</sup>

### ***Sufficient Household Resources***

Evidence from five studies<sup>xi</sup> suggests that minimum wage increases lift earnings for workers with low wages and their families. This can leave families better off given evidence that minimum wage increases do not reduce the likelihood of employment.<sup>19</sup> (Four additional studies also support higher state minimum wages as an effective policy to increase household income,<sup>32,45,46,50</sup> but their samples were not specific to families with children and effects are therefore not shown in Table 2).

For example, a 2019 study using national data from 1984 to 2013 found that a 10 percent minimum wage increase led to a significant 4.9 percent reduction in child poverty (under age 18).<sup>B</sup> Significant, large effects were also found for Black and Latino<sup>xii</sup> individuals (an 8.7% reduction in poverty), and people under age 30 without a high school degree (a 4.3% reduction in poverty). The results suggested that if all states were to raise their minimum wages from their January 2017 levels to \$12.00, the US would see a 1.9 percentage point (or 15%) reduction in poverty, representing 6.2 million people transitioning out of poverty. The author also projected a 12.2 percent (\$1,826) annual increase in after-tax-and-transfer family earnings among families with the lowest-incomes (those near the 10<sup>th</sup> percentile).<sup>B</sup>

Evidence also supports the combination of a higher minimum wage and more generous earned income tax credits (EITCs) as an effective anti-poverty approach. A 2011 study using data from 1997 to 2006 found that a 10 percent increase in the minimum wage, coupled with a 10 percent state EITC,<sup>xiii</sup> led to an 8.3 percent increase in earnings for single mothers.<sup>F</sup> The authors concluded that a 10 percent state EITC reduced poverty among families headed by single mothers with children by 1.6 percentage points at the sample mean of state minimum wages, but reduced poverty by 2.3 percentage points when the minimum wage was 10 percent higher than the mean and by 3.4 percentage points when the minimum wage was 25 percent higher than the sample mean.<sup>F</sup>

A 2019 study measuring effects of a state minimum wage increase between 1980 to 2015 found a significant increase in earned income (\$349 in annual earnings, amounting to almost an additional week's wages at a \$10.00 per hour level) for families headed by single mothers following a 10 percent minimum wage increase.<sup>J</sup> The study found that a 10 percent increase in a state's minimum wage reduced poverty by 0.6 percentage points (or 5.9%) among children with mothers with no college degree. The effects were found to be greatest (9.7%) for children under age 6. A 2008 study using data from 1991 to 2002 found that a 10 percent increase in the real minimum wage (wage adjusted for inflation) reduced the child poverty rate for families headed by single mothers by 1.8 percentage points.<sup>L</sup>

---

<sup>xi</sup> See studies B, F, J, M, and Q.

<sup>xii</sup> The referenced report used "Latino" rather than Hispanic.

<sup>xiii</sup> The study did not require the 10 percent supplement to be refundable in this analysis, but the authors noted that over 80 percent of the families in the sample who lived in states with an EITC were in states with a refundable EITC.

A 2021 study examining data from 2005 through 2017 found that higher minimum wages led to significant reductions in child poverty (1.3 percentage points) in regions of the country with the lowest median wages,<sup>xiv</sup> where proportionately more individuals benefited from minimum wage increases.<sup>c</sup> The study did not disaggregate the child poverty effects by race or ethnicity, but did examine parent employment and wages by race and ethnicity. The positive wage effects were slightly greater for Black and Hispanic workers with a high school degree or less (a 0.6%, statistically significant increase) compared to White non-Hispanic individuals of the same education level (a 0.5% increase, not statistically significant).<sup>xv</sup> In the lowest-wage counties, the differential wage effects were even greater with a higher minimum wage: a 2.2 percent increase in wages for Black and Hispanic workers compared to a small, statistically insignificant 0.4 percent decrease for White non-Hispanic workers.

As discussed in the previous section, the 2019 NASEM report also found significant, positive impacts of higher minimum wages (approximately the \$10.00 level) on family earnings and child poverty.<sup>M</sup> The analysis simulated how the higher minimum wage policies would affect subgroups differently, and did not detect a differential effects minimum wage scenarios on Black or Hispanic children. However, the study did find that the first minimum wage policy would benefit noncitizen children to a greater degree than children overall (see Table 5-1 of the NASEM report).

Two of the studies discussed above also found significant reductions in the receipt of public benefits alongside reduced poverty and higher earned income, suggesting that families achieved greater economic security after minimum wage increases, even after accounting for the reduction in public assistance.<sup>B,J</sup>

Finally, a 2020 working paper found no significant effects of local minimum wage increases on annual household income at child ages 1 or 3 or on child support payments.<sup>Q</sup> This result may be viewed as an outlier in the context of the many other positive results for household income and poverty reduction.

### ***Healthy and Equitable Births***

Although a large research base links greater overall income and wealth to better health across the life span, comparatively few studies have examined the relationship between higher minimum wages and birth outcomes.<sup>20,21</sup> However, six recent studies, discussed below, have begun to build the evidence base in this area with modest beneficial results.<sup>xvi</sup>

A 2016 study examined data on birth outcomes from 1980 to 2011 across the US and found that state minimum wages that were higher than the federal floor (\$7.25) were significantly associated with a reduced prevalence of low birthweight and postneonatal mortality.<sup>xvii,E</sup> In particular, each dollar above the federal minimum wage led to approximately a 1 to 2 percent decrease in the

---

<sup>xiv</sup> The study found that the reduction in child poverty was significant in regions of the country where the ratio of the minimum wage to the median wage was 0.6 or greater. (See Table 2, column 4 in the original study).<sup>c</sup>

<sup>xv</sup> See Table A3, column 1 in the original study.

<sup>xvi</sup> See studies A, D, E, H, O, and P.

<sup>xvii</sup> Postneonatal mortality refers to deaths from the end of first month to the end of the first year of an infant's life. Infant mortality more generally refers to deaths at any time in the first year.



prevalence of low birthweight (<2,500 grams) (corresponding to 2,790 fewer low birth weights) and a 4 percent decrease in postneonatal mortality (corresponding to 518 fewer postneonatal deaths).<sup>E</sup>

A 2020 analysis, with data collected between 1989 and 2012, examined 46 million births to women with a high school degree or less and found that a \$1.00 minimum wage increase was linked to a significant 2 gram increase in birthweight and very small, but statistically significant increases in fetal growth (0.03 grams per week) and gestation length (0.01 weeks).<sup>H</sup> The \$1.00 wage increase had small, insignificant effects on reducing the number of preterm births in the authors' preferred model specification.<sup>H</sup>

A 2018 study using data from 1995 to 2013 found that a 10 percent increase in the cost-of-living adjusted minimum wage was associated with a significant 5.6 percent reduction in postneonatal mortality<sup>xviii</sup> among mothers with a high school degree or less.<sup>D</sup> The effect was also significant for the sample of mothers overall, regardless of education level (a 4.5% decrease).

Research suggests a causal relation between higher state minimum wages and reduced teen births. A 2017 study of birth rates in the US from 2003 to 2014 found that a \$1.00 increase in a state's minimum wage led to a 2 percent decrease in births to adolescents.<sup>A</sup> Overall, this result means that a national \$1.00 increase in the minimum wage may lead to 5,000 fewer teen births each year. The decrease was driven by Hispanic and non-Hispanic White teens, who were more likely to be employed than Black teenagers in the sample. The author posited that “[h]igher wages might keep adolescents attached to the labor market...and thus provide a reason to delay childbearing or offer a chance to substitute work for leisure” (p. 1).<sup>A</sup>

A 2021 study using data from 1995 to 2017 also found a positive association between state minimum wage increases and teen births, such that each \$1.00 increase in a state's minimum wage led to a decreases in teen (adolescents ages 15 to 19 ) births from between 2.8 and 3.4 percent, depending on the number of controls included in the model.<sup>P</sup> Notably, the author found that the relationship was significant only in states that had their own earned income tax credits. This finding suggests that higher state minimum wages can work alongside policies like federal and state EITCs to have the greatest positive effect on children and teens in low-income families—a result seen in other studies as well.<sup>F,P</sup>

A 2020 study assessed the impacts of higher subminimum wages on birth outcomes—subminimum wages are the wages that can be paid to tipped workers, which are often set much lower than the floor for nontipped workers.<sup>O</sup> The federal subminimum wage was set at \$2.13 per hour in 1991 and has remained static since then, even though the federal full minimum wage has increased multiple times since that year.<sup>53</sup> The 2020 study used state variation in tipped wages from 2004 to 2016 to examine the effects on infant size for gestational age, and the authors found that when the tipped wage was set at the federal full minimum wage level, the birthweight of the smallest 5 percent of infants increased, and the birthweight of the largest 5 percent of infants decreased, leading to overall healthier birthweights for gestational age.<sup>O</sup>

---

<sup>xviii</sup> The infant mortality effect in this study was a 3.2 percent reduction, but it was only marginally significant (p<0.1) when state policy controls were included.



Finally, a 2021 study using data from 2001 to 2018 examined the relationship between state wage preemption laws (state laws that prevent cities, counties, and other local jurisdictions from adopting minimum wages higher than the state level) and infant mortality.<sup>63</sup> The study found that each additional \$1.00 increase in state minimum wages was associated with a 1.3 percent reduction in the infant mortality rate, and as a result, state preemption laws that restricted local increases were linked to as many as 605 preventable infant deaths in 2018.<sup>63</sup> The authors considered their analysis to offer “compelling evidence of a causal effect”<sup>xix</sup> of preemption laws, without establishing a definite causal relationship, so the results are not reflected in Table 2.

### ***Parental Health and Emotional Wellbeing***

This review identified three causal studies that examined the impact of minimum wages specifically on the physical or mental health of parents.<sup>H,N,Q</sup> A 2020 national study using data from 1989 to 2012 found that a \$1.00 increase in a state’s minimum wage was not associated with a significant decline in smoking during pregnancy,<sup>H,xx</sup> and was actually linked to a small increase in the number of cigarettes that pregnant women smoked (given that they smoked at all), likely because of the “income effect,” or the tendency to purchase more of certain goods when income increases. The effect was 0.2 cigarettes per day for each \$1.00 increase in a state’s minimum wage (from a sample mean of 2.1 cigarettes per day).

A 2020 study using data from 2004 to 2014 found that setting the tipped wage at the same level as the federal full minimum wage (\$7.25) reduced prenatal poverty-related stress scores<sup>xxi</sup> by 19.7 percent among unmarried women of color (defined as non-White and/or Hispanic) with no college degree compared to setting tipped wages at the subminimum (\$2.13) level.<sup>N</sup> The study also found significant results for unmarried women overall (a 15.9% decrease in stress) and for women of color (regardless of marital status—a 10.2% decrease). The 2020 paper using the Fragile Families and Child Wellbeing data set, mentioned previously, found no significant impact of local minimum wage increases on maternal depression or stress at child age 3.<sup>Q</sup>

A broader array of studies have examined impacts on adult health more generally, with samples that included both parents and nonparents, and the overall results have been more positive when these studies were considered. For example, a simulation study of adults in New York City estimated that a \$15.00 minimum wage, had it been implemented between 2008 and 2012, may have prevented between 2,800 and 5,000 premature deaths (deaths before age 65) in that timeframe in communities with low incomes.<sup>47</sup> Both large and small employers currently must pay a minimum wage of at least \$15.00 in New York City.<sup>22</sup>

Three causal studies have examined links between state minimum wages and adult mental health, finding overall positive results. One study examined the effects of higher minimum wages on suicides, estimating that a 10 percent increase in a state’s minimum wage may reduce nondrug suicides among adults with at most a high school degree by 2.7 percent, and the authors noted that

---

<sup>xix</sup> This characterization was offered in email correspondence.

<sup>xx</sup> Given the risks that smoking while pregnant can pose to infants’ health, in addition to that of their mothers, this outcome could also be considered part of the “Healthy and Equitable Births” goal.

<sup>xxi</sup> Scores were derived from summing and weighting the occurrence of 10 stressful antenatal events (e.g., moved to a new address, experienced homelessness, separated from partner, lost job, etc.).

higher wages may have prevented 4,800 suicides over the 19 years of data analyzed (from 1999 through 2017).<sup>56</sup> The authors also examined the impacts of state earned income tax credits, estimating that if both the minimum wage and state EITCs were increased by 10 percent across states, the US may see 787 fewer completed suicides per year. A 2020 study (using data from 1990 through 2015) corroborated those results, finding that a \$1.00 increase in state minimum wages reduced suicides by between 3.4 and 5.9 percent for less-educated adults.<sup>56</sup>

A 2019 correlational study using data from 2006 through 2016 found that a \$1.00 increase in state minimum wages was associated with a 1.9 percent decline in suicides.<sup>23</sup> This finding translates to 8,000 fewer suicides during the study years. Finally, a 2021 study found statistically insignificant, though beneficial, effects of a higher minimum wage on the proportion of adults who reported themselves to be in serious psychological distress (a 6% decrease).<sup>58</sup>

A higher minimum wage may also have impacts on adult physical health; a recent longitudinal study using 13 years of data found that a \$1.00 increase in a state's minimum wage led to lower rates of sexually transmitted infections (STI) among women; the authors measured between an 8.5 percent and 19.7 percent decrease depending on the specific STI.<sup>59</sup> The authors hypothesized that “poverty, low-wage jobs, income inequality, and other economic structural factors may spread STIs by creating high-risk partner pools, facilitating transactional sex, and perhaps undermining women’s sexual agency” (p. 2).

However, a 2021 study using data from 2008 through 2015 found null effects on adult health outcomes including diabetes, hypertension, overall health, and obesity for the full sample, although women saw an increased likelihood of diabetes with a higher minimum wage, men saw a higher likelihood of obesity, and men saw a lower likelihood of hypertension.<sup>58</sup> The authors suggested that a variety of mediating factors complicate the link between higher pay and health; for example, outcomes like hypertension have genetic contributions, and some individuals may still not have access to affordable health coverage even with a higher wage.

A recent analysis examined how New Jersey’s planned incremental minimum wage increase from \$8.85 in 2019 to \$15.00 by 2024 may affect adults’ eligibility for Medicaid given the Affordable Care Act’s (ACA) expansion in health coverage for adults with low incomes.<sup>69</sup> The authors concluded that less than 5 percent of adults (excluding elderly individuals or people with disabilities) on Medicaid would lose Medicaid eligibility as a result of a \$15.00 minimum wage, and all would still qualify for ACA subsidies to help them afford health coverage. Overall, family earnings would rise by 17 percent, or an average annual increase of \$6,700 in the state.

### ***Nurturing and Responsive Child-Parent Relationships***

One study examined the impacts of higher minimum wages on child-parent relationships, finding mixed results.<sup>9</sup> The authors of the 2020 study found that a \$1.00 minimum wage increase was linked to a decline in spanking of children at age 3 by both mothers and fathers (spanking was approximately 7.8 percentage points lower among fathers and 7.4 percentage points lower among mothers affected by the higher minimum wage). Mothers and fathers were each asked to report their own answers for the spanking measure. Mothers were also asked to report how often they, and the child’s biological father, participated in certain activities with children, including: “read

stories, told stories, played with blocks or toys, played games, and played outside, among others” (p. 12). The impact of minimum wage increases on maternal activities at age 3 was not significant, whereas paternal activities (as reported by mothers) showed a slight significant increase at age 3 (phasing out by age 5).

### ***Nurturing and Responsive Child Care in Safe Settings***

Child care workers are much lower paid, on average, than educators in the public pre-K to grade 12 system.<sup>60</sup> Many scholars and advocacy groups argue that paying child care workers more would improve staff retention and increase the quality of child care, ultimately leading to better outcomes for children.<sup>60</sup> According to the National Women’s Law Center (NWLC), one in 10 child care workers lives below the federal poverty level, which is twice the poverty rate for all workers.<sup>60</sup> The Bureau of Labor Statistics reported that the median hourly wage for child care workers was \$12.24 in 2020, which was significantly lower than the national median hourly wage (\$20.17).<sup>80</sup> The NWLC reported in 2020 that “the child care workforce is 93% women and approximately 40% women of color” (p. 3), so the low wage in this industry has disproportionate impacts by race and gender, exacerbating existing inequities.<sup>60</sup>

If caregivers struggle with meeting their own basic needs and experience stress as a result, their interactions with children in a child care setting may not be conducive to optimal child outcomes. Recent findings from an ongoing study of child care workers in centers in Seattle and South King County, Washington (where minimum wages were at \$15.00 and \$12.00, respectively, during the study), and in Austin, Texas (where the federal level of \$7.25 continues to apply, per Texas law), found that wages below the median at each site were associated with worse worker health for some indicators (stress, general health, BMI<sup>xxii</sup>, and cholesterol).<sup>85</sup>

However, the interaction between higher minimum wages and the child care sector has raised concerns about the supply and affordability of care.<sup>27</sup> A descriptive study examined the responses of Seattle child care providers to the city’s gradual minimum wage increase from \$9.47 to \$15.00 (\$16.39 for large employers) between 2014 and 2021.<sup>13</sup> The study’s survey of 41 child care centers found that by 2017, 90 percent of the centers had raised prices to account for the increased minimum wage, and the second most common response was to reduce hours or staff.

A 2021 report estimated that a \$15.00 federal minimum wage may lead to child care prices rising by 21 percent, or equivalent to a cost of over \$3,700 per family per year in a household with two children.<sup>70</sup> However, data suggest that child care workers themselves may be better able to support their own families if they were paid a higher wage.<sup>77</sup> A minimum wage increase to \$15.00 by 2025 would have a significant positive impact for child care workers, over a third of whom are Black or Hispanic.<sup>82</sup> Such an increase would raise pay for 44 percent of child care workers, with an average increase of \$2,900, and annual earnings of Black and Hispanic child care workers would increase over \$3,100.<sup>82</sup> This policy would greatly reduce pay disparities within child care and across the country; the 10<sup>th</sup> percentile wage in the child care industry would increase by 42 percent, and child

---

<sup>xxii</sup> BMI (Body Mass Index), as a measure, can be beneficial when looking across large groups of a population, but it is far less useful and can be harmful when using it to evaluate individuals, especially women and people of color.<sup>92</sup>

care workers in southern states would benefit disproportionately as their state minimum wages are currently lower than in other regions of the country.<sup>82</sup>

Only one causal article addressing the prenatal-to-3 period examined impacts of higher minimum wages on child care, finding that an increased local minimum wage had no significant impact on the number of child care arrangements for children ages 3 or 5.<sup>Q</sup> More rigorous, empirical research on family and provider responses to higher minimum wages as they relate to child care would be valuable to the prenatal-to-3 field; in particular, research is needed that allows for an assessment of the impact of wages on child care workers, providers, and families simultaneously.

### ***Optimal Child Health and Development***

Evidence suggests that higher minimum wages may have positive impacts on children's health outcomes. Researchers at the University of Iowa College of Public Health began an ongoing project in 2019 to examine the links between minimum wages and long-term child health and development.<sup>24</sup> A 2020 study published as part of that project (using data from the 2003, 2007, and 2011/12 waves of the National Survey of Children's Health) found that a \$1.00 increase in state minimum wages during pregnancy had a null effect on children's health, but a \$1.00 increase from birth through age 5 had a significant positive impact on the likelihood that a child was reported to be in excellent or very good health from ages 6 through 12 (an 8.7% increase).<sup>1</sup> A \$1.00 increase from birth through age 5 also significantly reduced the likelihood that children would miss school from ages 6 through 12 because of illness or injury (a 15.6% reduction in the number of missed school days).

A 2020 study using survey data from 2000 through 2015 found no significant effects of higher minimum wages on the health outcomes of children (including those with immigrant or native parents) in the US. These health outcomes included health ratings on a scale of poor to excellent, frequency of emergency room visits, or frequency of specific illnesses.<sup>K</sup>

A 2017 study (using data from 2004 to 2013) revealed that higher state minimum wages led to reduced child maltreatment rates; in particular, the authors found a 9.6 percent reduction in neglect reports with each \$1.00 increase in a state's minimum wage (a 10.8% reduction for children ages 0 to 5).<sup>G</sup> Effects were not significant for physical abuse, but were in the beneficial direction (a reduction of 15 reports per 100,000 children for each \$1.00 increase). This finding is consistent with prior research on the link between poverty and child neglect reports,<sup>25</sup> and the results suggest that higher minimum wages may be an effective tool for improving child welfare by improving parents' ability to meet their children's material needs.<sup>26</sup> This study found no differences in the impacts of minimum wages by race or ethnicity. A 2021 study, using the Fragile Families and Child Wellbeing data, reinforced these findings. The authors found that a \$1.00 increase in state minimum wage was associated with a decrease of 0.28 self-reported neglect incidents per year (from a baseline of less than 1). Effects for both physical and psychological abuse were not significant.<sup>R</sup>

### **Is There Evidence That a Higher State Minimum Wage Reduces Disparities?**

Large gaps in wages, annual income, and wealth persist between White and Black workers; a 2020 report showed that White workers earn, on average, 25 percent more in annual income than Black

workers.<sup>28,xxiii</sup> Women, Black workers, and Latino<sup>xxiv</sup> workers are disproportionately paid less than \$15.00 per hour compared to their White counterparts, and wage disparities can contribute to income and wealth disparities.<sup>8</sup> White families' median net wealth is estimated at 10 times that of Black and Latino families.<sup>8</sup>

Many of the studies summarized in this review revealed differential impacts of state minimum wages by race, gender, and/or education level. For example, a 2019 study found that increases in state minimum wages reduced poverty to a greater degree for Black and Latino individuals and for workers with less education compared to the population overall.<sup>B</sup> A 2011 examination of the interaction between the EITC and higher minimum wages also found that positive earnings effects were strongest for Black and Hispanic women with lower education levels.<sup>F</sup> Research suggests that local minimum wage increases to \$15.00 and above in cities such as San Jose and Los Angeles will significantly benefit Hispanic workers, who will account for 53 percent and 80 percent, respectively, of affected workers in those cities once the increases are fully phased in.<sup>29</sup>

One study, which was not included in Table 2 because of limitations to causal inference, found that higher state minimum wages significantly reduced infant mortality among infants born to Black mothers (a 20% reduction among states at or above the 75<sup>th</sup> percentile of state minimum wage levels), whereas no significant impact was found for infants with White mothers.<sup>30</sup> The overall rate of infant mortality among Black infants has been found to be more than twice that of infants born to non-Hispanic White mothers, so this study provides promising evidence that higher state minimum wages may reduce disparities in this outcome.<sup>30,31</sup> Further causal research on this link would be valuable to corroborate these results.

As described in the Parental Health section of this review, a higher subminimum wage may reduce parents' antenatal stress, particularly among women of color with less than a college degree.<sup>N</sup> More research on the effects of higher subminimum wages would broaden the evidence base for marginalized populations, such as young women of color, who are disproportionately paid subminimum wages.<sup>N</sup>

Two additional studies that were excluded from our analysis of impacts in Table 2 (because they did not focus on families and children) provide insight into how higher minimum wages may affect marginalized populations, including immigrants and individuals involved in the criminal justice system.<sup>32,34,37</sup> One study found that higher minimum wages can reduce the incarceration rate in the US<sup>32</sup>—the country with the highest current rate.<sup>35</sup> In particular, a \$1.00 increase in a state's minimum wage was associated with 12 to 25 fewer incarcerations per 100,000 people, primarily driven by reductions in the jailing of men of color. The US incarcerates 698 people per 100,000, so the results represent up to a 3.6 percent reduction.<sup>36</sup>

A recent study examining the impacts of higher state minimum wages on immigrants with no high school degree (including both documented and undocumented workers) found null effects on poverty and negative effects on employment: A 10 percent increase in state minimum wages was associated with a 1.1 percent decline in employment among immigrants from Mexico.<sup>37</sup> However, it is

xxiii This study did not examine Hispanic or Latino workers.

xxiv The referenced report used "Latino" rather than Hispanic.



difficult to disentangle the effects of state minimum wages from ongoing changes in immigration policies that may affect where and how immigrants can safely seek employment, and which may increase exploitation by employers, who may not always pay the full minimum wage to immigrants.<sup>37</sup>

A study of the historical impact of federal minimum wage increases found that the 1967 expansion of federal minimum wage coverage to new industries that employed large numbers of Black workers (agriculture, restaurants, and nursing homes, among others) had a significant, positive impact on reducing racial income inequality between Black and White workers.<sup>28</sup> Specifically, this change was found to “explain more than 20% of the decline in the racial earnings gap between 1965 and 1980” and the reform did not negatively impact employment for workers.<sup>28</sup> Nevertheless, gaps in income and wealth by race continue to limit opportunities for economic mobility among Black and Hispanic workers as compared to White workers.

In addition, the persistence of subminimum wage policies for tipped workers and workers with disabilities means that many individuals in communities that are marginalized are still paid at rates far lower than the federal minimum wage. The subminimum wage is a controversial policy that has been criticized for being racist, sexist, and ableist as a result of its roots in the end of slavery, when White business owners wanted to employ Black individuals but did not want to pay them a full wage.<sup>71</sup> Eight states have eliminated subminimum wages for tipped workers, instead requiring that restaurant workers and other tipped employees receive the full minimum wage that applies to other industries (Alaska, California, Hawaii, Minnesota, Montana, Nevada, Oregon, and Washington).<sup>61,73</sup> Given that approximately 70 percent of tipped workers are women,<sup>71</sup> and 45 percent of restaurant workers are people of color,<sup>61</sup> whom research shows are often subject to discriminatory tipping practices, the subminimum wage is a critical equity issue.

Research shows that restaurant sales do not suffer, and in fact may be higher, in states that enact a single minimum wage for all.<sup>61,73</sup> Disagreement exists among service industry workers about which approach results in higher wages, with some surveys finding that service workers would prefer to maintain a tipped model rather than move to a higher standard wage without tipping.<sup>81</sup>

However, an important finding, relevant to families with young children, is that in states with one standard minimum wage, “half as many tipped workers with children under age 5 are in poverty” compared to states with tiered wages.<sup>73</sup> For example, the poverty rate for tipped workers with at least one child under age 5 is 12.8 percent in the single-wage states, compared to over 24 percent in states with tiered wages.<sup>73</sup> The poverty gap between men and women in tipped positions is also smaller in states that have eliminated the subminimum wage (a gap of 1.2 percentage points compared to up to 3 percentage points).<sup>73</sup> The poverty gap for all workers, overall, is also smaller between men and women in single-wage states; a 1.4 percent gap between men and women compared to a 5.8 percent gap.<sup>73</sup>

## Has the Return on Investment for State Minimum Wages Been Studied?

Two strong causal studies found that higher minimum wages increased earned income and reduced reliance on public assistance.<sup>B,J</sup> In addition, a policy brief by the Economic Policy Institute



estimated that for workers with the lowest incomes,<sup>xxv</sup> a \$1.00 increase in hourly wages would reduce the likelihood of receiving public assistance by 3.1 percentage points (a reduction of 850,000 individuals).<sup>38</sup> A study estimating the effects of a federal minimum wage increase from \$7.25 to \$9.80 (which would, by default, raise state minimum wages for those states that default to the federal floor) predicted an increase in gross domestic product of \$25 billion and a net increase in jobs of 100,000 over 2 years.<sup>9</sup>

As mentioned previously, an analysis of the impacts of a \$15.00 federal minimum wage estimated that such a policy may save up to \$107 billion in state and federal public assistance benefits.<sup>72</sup> However, it is important to ensure that families do not lose critical benefits (such as Medicaid or food assistance) or experience a net loss in resources as a result of a higher wage floor. An analysis of New Jersey, for example, found that the impact of the state's incremental wage increase to \$15.00 on Medicaid eligibility would be negligible, but it is important that policymakers and scholars continue to monitor the interaction between higher wage policies and other benefits to examine how low-income families may be affected.<sup>69</sup>

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

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

The evidence indicates that increases in state minimum wages increase earnings and family incomes with minimal or no adverse effects on employment, leaving families better off overall. Studies show that minimum wage increases can reduce poverty rates, with the most significant effects in areas with the lowest median wages and for subgroups including children, Black and Hispanic individuals, and people with lower levels of education. The evidence also suggests that higher minimum wages may lead to modest improvements in birth outcomes and may reduce child neglect rates.

Less is known about how minimum wages may affect child health past infancy and how large minimum wage increases will affect the child care market, given that many child care workers earn wages below the highest proposed levels.<sup>39</sup> Most of the studies on child and family outcomes noting positive results have examined minimum wages up to the \$10.00 level, but many states<sup>xxvi</sup> will have implemented minimum wages of at least \$15.00 by 2026, based on scheduled increases in current legislation.<sup>86</sup> Additional research will be necessary to examine whether minimum wages at the highest levels produce more negative employment impacts than wages at the \$10.00 level, for example. Evidence from a 2018 study of Seattle revealed that the city's minimum wage increase from \$9.47 to \$11.00 produced better outcomes than the subsequent move from \$11.00 to \$13.00, but more nationally representative studies are needed to determine the optimal wage level for supporting families and producing positive outcomes.<sup>51</sup> Beyond simulations and estimates, more empirical research on large minimum wage increases, as more states implement them, will be valuable for determining the optimal state minimum wage.

---

<sup>xxv</sup> This analysis examined individuals earning up to \$12.16 per hour.

<sup>xxvi</sup> See the section entitled "How Do State Minimum Wages Vary Across the States?" for details.

Analyses that account for changes in the real wages (minimum wage adjusted for inflation), rather than the nominal value, will also be important. The value of the \$7.25 federal minimum wage is currently “worth less than at any point since February 1956”.<sup>41,90</sup> More research examining the differential impacts of minimum wage increases by race and ethnicity, particularly for birth outcomes, would add to the growing evidence base. Finally, evidence on how higher minimum wages affect fathers and noncustodial parents, such as through greater child support payment cooperation, would be valuable for the prenatal-to-3 field. Only one study in this review included child support as a measured outcome, finding null results.<sup>Q</sup>

## Is a Higher State Minimum Wage an Effective Policy for Improving Prenatal-to-3 Outcomes?

Evidence shows that state minimum wage increases, especially those extending to \$10.00 per hour or greater, are effective for increasing household resources, improving birth outcomes, and reducing child poverty, particularly in families of color. Higher minimum wages can improve parent mental health and have been shown to improve adults’ physical health in more general samples. Although evidence for children’s health is mixed, some studies have found reduced maltreatment and better long-term child health linked to exposure to higher wages during the prenatal-to-3 period. Studies of local minimum wages as high as \$12.00 to \$15.00 have shown some positive results, but more causal research is needed at the statewide level for wages in that range.

## How Do State Minimum Wages Vary Across the States?<sup>xxvii</sup>

States vary in the level of their minimum wages in current legislation, as well as how they set their minimum wages.<sup>86</sup> For example, three states (Kansas, North Dakota, and Wisconsin) set their minimum wages at \$7.25 by statute, whereas four states set their minimum wages to the federal minimum or at \$7.25, whichever is higher (Idaho, Iowa, Kentucky, and Pennsylvania). Five states adopt the federal minimum wage in their statutory language, regardless of the level (Indiana, New Hampshire, Oklahoma, Texas, and Utah), and another five have no state minimum wage in their statutory language at all, which means they default to the federal minimum (Alabama, Louisiana, Mississippi, South Carolina, and Tennessee). Two states (Georgia and Wyoming) set their minimum wages at levels below the federal minimum, but the federal level overrides state law. Finally, North Carolina’s statute sets a minimum wage below \$7.25 as well; however, its statutory language also specifies that if the federal minimum is higher, then it overrides the lower state minimum. See Table 3 for state variation in the minimum wage level, with additional nuances by state.

The cost of living (i.e., the amount of money required to maintain a standard of living) varies significantly across the country because of regional differences in consumer prices. This variation means that a nominal wage (wage not adjusted for inflation) of \$10.00 in two different states may buy a family more in one state than another. A nominal wage can be converted into a real wage by accounting for inflation or a cost-of-living adjusted (COLA) wage by accounting for state price differences. A COLA wage offers a way to compare purchasing power more consistently across states. For example, Hawaii’s prices are 12 percent higher than the national average, whereas

<sup>xxvii</sup> For details on state progress implementing state minimum wages, see the state minimum wage section of the US Prenatal-to-3 State Policy Roadmap: <https://pn3policy.org/pn-3-state-policy-roadmap-2022/us/state-minimum-wage/>

Mississippi's prices are 12.2 percent lower than the national average.<sup>83</sup> It can therefore be beneficial to compare Hawaii's minimum wage in terms of real purchasing power, \$10.71 (nominal minimum wage of \$12.00 in 2022), to Mississippi's minimum wage in terms of real purchasing power, \$8.26 (nominal minimum wage of \$7.25 in 2022).

Nominal state minimum wages range from \$7.25 to \$16.10 (in the District of Columbia). As of October 1, 2022, California has a minimum wage of \$15.00 and 11 other states have approved gradual increases to at least \$15.00 (Connecticut, Delaware, Florida, Hawaii, Illinois, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and Virginia).<sup>4,86</sup> Ten of these states will reach a \$15.00 minimum wage by 2026, barring any changes to the states' scheduled increases. New York's scheduled increases are based on annual inflation, so the state may not necessarily reach the \$15.00 level by 2026. Beyond New York, several other states have planned to adjust the state minimum wage annually for inflation. This adjustment is an important step given that, from June 2021 through June 2022, the Consumer Price Index increased 9.1 percent—the largest increase over a one-year period in 40 years.<sup>93</sup>

Cities such as Chicago, San Francisco, Oakland, San Jose, New York City, and Seattle have implemented local minimum wages that exceed the current state levels or that are being implemented on a faster phase-in schedule than approved state increases.<sup>45</sup> For example, large employers in Seattle (those with over 500 workers) are required to pay at least \$17.27 per hour in 2022, whereas the state of Washington implemented a minimum wage increase to \$14.49 in 2022.<sup>14</sup> In contrast, 25 states have enacted legislation preventing cities from passing higher minimum wages than the state or federal levels (preemption laws).<sup>64</sup> Analyses have found that these laws have cost workers \$1.5 billion in wages that they may have earned had the higher local levels been enacted.<sup>64</sup>

As discussed in the section regarding disparities, states also vary in the minimum wages set for tipped workers (ranging from \$2.13 to \$15.00 as of October 1, 2022) and individuals with disabilities, who are sometimes exempted from the regular minimum wage.<sup>16,17</sup> A total of eight states require employers to pay tipped workers the full state minimum wage, 27 states have a subminimum wage between \$2.13 and their full minimum wage, and 16 require just the \$2.13 federal subminimum wage for tipped workers.<sup>61,62</sup> As of June 2022, 13 states have either eliminated the subminimum wage for individuals with disabilities or have signed legislation that will eliminate the subminimum wage—Alaska, California, Colorado, Delaware, Hawaii, Maine, Maryland, New Hampshire, Oregon, Rhode Island, South Carolina, Tennessee, and Washington. Other states are considering similar legislation or have issued policy statements on this issue.<sup>84,88</sup> For example, Arizona's Labor Department issued a policy statement in 2007 discouraging the payment of subminimum wages to workers with disabilities, but this policy is not law.<sup>89</sup>

Table 3: State Variation in State Minimum Wages

State has adopted and fully implemented a minimum wage of \$10.00 or greater				
State	Policy Adoption Yes/No	Current State Minimum Wage (As of 10/1/2022)	Cost-of-Living Adjusted Minimum Wage	Tipped Minimum Wage
Alabama	No	\$7.25**	\$8.12	\$2.13**
Alaska	Yes	\$10.34	\$10.02	\$10.34
Arizona	Yes	\$12.80	\$12.92	\$9.80
Arkansas	Yes	\$11.00	\$12.33	\$2.63
California	Yes	\$15.00	\$13.59	\$15.00
Colorado	Yes	\$12.56	\$12.21	\$9.54
Connecticut	Yes	\$14.00	\$13.53	\$6.38
Delaware	Yes	\$10.50	\$10.73	\$2.23
District of Columbia	Yes	\$16.10	\$14.44	\$5.35
Florida	Yes	\$11.00	\$10.92	\$7.98
Georgia	No	\$7.25**	\$7.67	\$2.13**
Hawaii	Yes	\$12.00	\$10.72	\$12.00
Idaho	No	\$7.25	\$7.95	\$3.35
Illinois	Yes	\$12.00	\$11.94	\$7.20
Indiana	No	\$7.25	\$7.84	\$2.13
Iowa	No	\$7.25	\$7.96	\$4.35
Kansas	No	\$7.25	\$7.85	\$2.13
Kentucky	No	\$7.25	\$8.08	\$2.13
Louisiana	No	\$7.25**	\$7.82	\$2.13**
Maine	Yes	\$12.75	\$13.17	\$6.38
Maryland	Yes	\$12.50	\$11.74	\$3.63
Massachusetts	Yes	\$14.25	\$13.26	\$6.15
Michigan	No**	\$9.87	\$10.49	\$3.75
Minnesota	Yes	\$10.33	\$10.47	\$10.33
Mississippi	No	\$7.25**	\$8.26	\$2.13**
Missouri	Yes	\$11.15	\$12.05	\$5.58
Montana	No**	\$9.20	\$9.95	\$9.20
Nebraska	No**	\$9.00	\$9.69	\$2.13
Nevada	Yes	\$10.50	\$10.82	\$10.50
New Hampshire	No	\$7.25	\$6.99	\$3.26
New Jersey	Yes	\$13.00	\$11.69	\$5.13
New Mexico	Yes	\$11.50	\$12.56	\$2.80

Table 3: State Variation in State Minimum Wages (Continued)

State has adopted and fully implemented a minimum wage of \$10.00 or greater				
State	Policy Adoption Yes/No	Current State Minimum Wage (As of 10/1/2022)	Cost-of-Living Adjusted Minimum Wage	Tipped Minimum Wage
New York	Yes	\$13.20	\$11.98	\$8.80
North Carolina	No	\$7.25**	\$7.89	\$2.13
North Dakota	No	\$7.25	\$7.88	\$4.86
Ohio	No**	\$9.30	\$10.14	\$4.65
Oklahoma	No	\$7.25	\$7.94	\$2.13
Oregon	Yes	\$13.50	\$13.16	\$13.50
Pennsylvania	No	\$7.25	\$7.43	\$2.83
Rhode Island	Yes	\$12.25	\$12.03	\$3.89
South Carolina	No	\$7.25**	\$7.91	\$2.13**
South Dakota	No**	\$9.95	\$10.87	\$4.98
Tennessee	No	\$7.25**	\$7.87	\$2.13**
Texas	No	\$7.25	\$7.28	\$2.13
Utah	No	\$7.25	\$7.61	\$2.13
Vermont	Yes	\$12.55	\$12.63	\$6.28
Virginia	Yes	\$11.00	\$10.89	\$2.13
Washington	Yes	\$14.49	\$13.50	\$14.49
West Virginia	No**	\$8.75	\$9.95	\$2.63
Wisconsin	No	\$7.25	\$7.78	\$2.33
Wyoming	No	\$7.25**	\$7.86	\$2.13
Best State	N/A	\$16.10	\$13.02	\$15.00
Worst State	N/A	\$7.25	\$6.81	\$2.13
Median State	N/A	\$9.95	\$9.90	\$3.75
State Count	22	N/A	N/A	N/A

"No\*\*" denotes a state minimum wage higher than the federal minimum but less than \$10.00 per hour.

"\*\*" in the Current State Minimum Wage column indicates no state minimum wage legislated or it is set lower than the federal minimum wage of \$7.25 from the Fair Labor Standards Act. The FLSA applies for covered workers in these states.

\$2.13\*\* in the tipped minimum wage column indicates no state tipped minimum wage legislated or it is set lower than the federal subminimum wage of \$2.13 in the Fair Labor Standards Act. The FLSA applies for covered tipped workers in these states.

Policy adoption status data: As of October 1, 2022. State labor statutes and United States Department of Labor. Current state minimum wage data: As of October 1, 2022. State labor statutes and United States Department of Labor.

Cost-of-living adjusted minimum wage data: As of December 14, 2021. Bureau of Economic Analysis. Reflects Regional Price Parities for FY 2020.

For additional source and calculation information, please refer to the [Methods and Sources](#) section of [pn3policy.org](https://pn3policy.org).



## How Did We Reach Our Conclusions?

### **Method of Review**

This evidence review began with a broad search of all literature related to state minimum wages and their impacts on child and family wellbeing during the prenatal-to-3 period. First, we identified and collected relevant peer-reviewed academic studies as well as research briefs, government reports, and working papers, using predefined search parameters, keywords, and trusted search engines. From this large body of work, we then singled out for more careful review those studies that endeavored to identify causal links between the policy and our outcomes of interest, taking into consideration characteristics such as the research designs put in place, the analytic methods used, and the relevance of the populations and outcomes studied. We then subjected this literature to an in-depth critique and chose only the most methodologically rigorous research to inform our conclusions about policy effectiveness. Studies with samples focused on families, parents, and children are included in Table 2 (Evidence of Effectiveness). Other studies with broader samples (e.g., all workers, regardless of family status) informed our discussion, but are not included in Table 2. All causal studies considered to date for this review were released on or before February 28, 2022.

### **Standards of Strong Causal Evidence**

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

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

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

### **Studies That Meet Standards of Strong Causal Evidence**

- A. Bullinger, L. (2017). The effect of minimum wages on adolescent fertility: A nationwide analysis. *American Journal of Public Health*, 107(3), 447–452. <https://doi.org/10.2105/AJPH.2016.303604>
- B. Dube, A. (2019). Minimum wages and the distribution of family incomes. *American Economic Journal*, 11(4), 268–304. <https://doi.org/10.1257/app.20170085>



- C. Godøy, A. & Reich, M. (2021). Are minimum wage effects greater in low-wage areas? *Industrial Relations*, 60(1), 36–83. <https://doi.org/10.1111/irel.12267>
- D. Jalali, A. (2018). *The minimum wage and infant mortality*. University of Utah, Department of Economics. <https://dx.doi.org/10.2139/ssrn.3308213>
- E. Komro, K., Livingston, M., Markowitz, S., & Wagenaar, A. (2016). The effect of an increased minimum wage on infant mortality and birth weight. *American Journal of Public Health*, 106(8), 1514–1516. <https://doi.org/10.2105/AJPH.2016.303268>
- F. Neumark, D. & Wascher, W. (2011). Does a higher minimum wage enhance the effectiveness of the earned income tax credit? *Industrial and Labor Relations Review*, 64(4), 712–746. <https://doi.org/10.1177%2F001979391106400405>
- G. Raissian, K.M., & Bullinger, L.R. (2017). Money matters: Does the minimum wage affect child maltreatment rates? *Children and Youth Services Review*, 72, 60–70. <https://doi.org/10.1016/j.childyouth.2016.09.033>
- H. Wehby, G., Dave, D., & Kaestner, R. (2020). Effects of the minimum wage on infant health. *Journal of Policy Analysis and Management*, 39(2), 411–443. <https://doi.org/10.1002/pam.22174>
- I. Wehby, G., Kaestner, R., Lyu, W., & Dave, D. (2020). *Effects of the minimum wage on child health* (No. w26691). National Bureau of Economic Research. <https://www.nber.org/papers/w26691.pdf>
- J. Godøy, A., Reich, M., & Allegretto, S. (2019). *Parental labor supply: Evidence from minimum wage changes*. University of California, Berkeley, Institute for Research on Labor and Employment. <https://irle.berkeley.edu/parental-labor-supply-evidence-from-minimum-wage-changes/>
- K. Averett, S., Smith, J., & Wang, Y. (2020). Minimum wages and the health of immigrants' children. *Applied Economics Letters*, 1–8. <https://doi.org/10.1080/13504851.2020.1784832>  
Working Paper: Averett, S., Smith, J., & Wang, Y. (2019). *Minimum wages and the health and access to care of immigrants' children*. Institute of Labor Economics Discussion Paper No. 12606. <https://www.iza.org/publications/dp/12606/minimum-wages-and-the-health-and-access-to-care-of-immigrants-children>
- L. DeFina, R. (2008). The impact of state minimum wages on child poverty in female-headed families. *Journal of Poverty*, 12(2), 155–174. <https://doi.org/10.1080/10875540801973542>
- M. National Academies of Sciences, Engineering, and Medicine. (2019). *A roadmap to reducing child poverty*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25246>
- N. Andrea, S., Messer, L., Marino, M., Goodman, J., & Boone-Heinonen, J. (2020). The tipping point: Could increasing the subminimum wage reduce poverty-related antenatal stressors in US women? *Annals of Epidemiology*, 45, 47–53. <https://doi.org/10.1016/j.annepidem.2020.03.007>
- O. Andrea, S., Messer, L., Marino, M., Goodman, J., & Boone-Heinonen, J. (2020). A nationwide investigation of the impact of the tipped worker subminimum wage on infant size for gestational age. *Preventive Medicine*, 133, 1–7. <https://doi.org/10.1016/j.ypmed.2020.106016>
- P. Lenhart, O. (2021). The effects of minimum wages on teenage birth rates. *Economics Letters*, 198, 1–6. <https://doi.org/10.1016/j.econlet.2020.109670>
- Q. Bullinger, L., Raissian, K., & Schneider, W. (Aug. 17, 2020). How does the minimum wage affect child maltreatment and parenting behaviors? An analysis of the mechanisms. SSRN Working Paper. <https://dx.doi.org/10.2139/ssrn.3686088>
- R. Livingston, M., Woods-Jaeger, B., Spencer, R., Lemon, E., Walker, A., Komro, Kelli. (2021). Association of State Minimum Wage Increases with Child Maltreatment. *Journal of Interpersonal Violence*, Vol. 0(0) 1–11. <https://doi.org/10.1177/08862605211056727>
- S. Dworsky, M., Eibner, C., Nie, X., Wenger, J. (2021). The Effect of the Minimum Wage on Employer-Sponsored Insurance for Low-Income Workers and Dependents. *American Journal of Health Economics* Vol. 8(1). <https://doi.org/10.1086/716198>

## Other References

1. Shonkoff, J., & Phillips, D. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/9824>
2. United States House Committee on Education and Labor. (2019). *Raise the wage fact sheet*. <https://edlabor.house.gov/imo/media/doc/RAISE%20THE%20WAGE%20ACT%20-%20Fact%20Sheet.pdf>

3. National Employment Law Project. (2019). *Why America needs a \$15 minimum wage*. <https://www.nelp.org/publication/america-needs-15-minimum-wage-2/>
4. National Conference of State Legislatures. (2021). *State minimum wages: 2021 minimum wage by state*. <http://www.ncsl.org/research/labor-and-employment/state-minimum-wage-chart.aspx>
5. US Bureau of Labor Statistics. (2022). *Characteristics of minimum wage workers, 2021*. <https://www.bls.gov/opub/reports/minimum-wage/2021/home.htm>
6. Zipperer, B. (2018). *The erosion of the federal minimum wage has increased poverty, especially for black and Hispanic families*. Economic Policy Institute. <https://www.epi.org/publication/the-erosion-of-the-federal-minimum-wage-has-increased-poverty-especially-for-black-and-hispanic-families/>
7. Economic Policy Institute. (2021). *Why the U.S. needs a \$15 minimum wage*. <https://files.epi.org/pdf/219045.pdf>
8. Huizar, L. & Gebreselassie, T. (2016). *What a \$15 minimum wage means for women and workers of color*. National Employment Law Project. <https://s27147.pcdn.co/wp-content/uploads/Policy-Brief-15-Minimum-Wage-Women-Workers-of-Color.pdf>
9. Cooper, D. & Hall, D. (2012). *How raising the federal minimum wage would help working families and give the economy a boost*. Economic Policy Institute. <https://www.epi.org/publication/ib341-raising-federal-minimum-wage/>
10. Hill, H. & Romich, J. (2018). How will higher minimum wages affect family life and children's well-being? *Child Development Perspectives*, 12(2), 109-114. <https://doi.org/10.1111/cdep.12270>
11. Neumark, D. (2018). *Employment effects of minimum wages*. World of Labor. <https://wol.iza.org/articles/employment-effects-of-minimum-wages/long>
12. Duke, B. (2016). *To raise productivity, let's raise wages*. Center for American Progress. <https://cdn.americanprogress.org/wp-content/uploads/2016/09/01103126/BoostingProductivity-brief0902.pdf>
13. Otten, J., Getts, K., Althausen, A., Buszkiewicz, J., Jardim E., Hill, H., Romich, J., & Allard, S. (2018). Responding to an increased minimum wage: A mixed methods study of child care business during the implementation of Seattle's minimum wage ordinance. *Social Work and Society*, 16(1), 1-22. <https://ejournals.bib.uni-wuppertal.de/index.php/sws/article/view/538>
14. Seattle Office of Labor Standards. (2022). *Minimum wage ordinance*. <http://www.seattle.gov/laborstandards/ordinances/minimum-wage>
15. 2 Tex. Lab. Code §62.001 (1993). <https://statutes.capitol.texas.gov/Docs/LA/htm/LA.62.htm>
16. Cesario, L. (2019). *States weigh options on subminimum wages for workers with disabilities*. The NCSL Blog. National Conference of State Legislatures. <https://www.ncsl.org/blog/2019/08/28/states-weigh-options-on-subminimum-wages-for-workers-with-disabilities.aspx>
17. US Dept. of Labor (2020). *Minimum wages for tipped employees*. <https://www.dol.gov/agencies/whd/state/minimum-wage/tipped>
18. Hutton, A. (2019). *Silicon valley's minimum wage workers will see bigger paychecks in 2020*. San José Spotlight. <https://sanjosespotlight.com/silicon-valleys-minimum-wage-workers-will-see-bigger-paychecks-in-2020/>
19. Schmitt, J. (2013). *Why does the minimum wage have no discernible effect on employment?* Center for Economic and Policy Research. <http://cepr.net/documents/publications/min-wage-2013-02.pdf>
20. Woolf, S., Aron, L., Dubay, L., Simon, S., Zimmerman, E., & Luk, K. (April 2015). *How are income and wealth linked to health and longevity?* Urban Institute. <https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>
21. American Academy of Pediatrics, Council on Community Pediatrics. (2016). Poverty and child health in the United States. *Pediatrics*, 137(4), 1-14. <https://doi.org/10.1542/peds.2016-0339>
22. New York State Department of Labor. (n.d.). *Minimum wage FAQs*. <https://dol.ny.gov/minimum-wage-frequently-asked-questions>
23. Gertner, A., Rotter, J., & Shafer, P. (2019). Association between state minimum wages and suicide rates in the US. *American Journal of Preventive Medicine*, 56(5), 648-654. <https://doi.org/10.1016/j.amepre.2018.12.008>
24. University of Iowa College of Public Health. (Jan. 29, 2019). *Wehby to study effects of minimum wage on long-term child health and development*. <https://www.public-health.uiowa.edu/news-items/wehby-to-study-effects-of-minimum-wage-on-long-term-child-health-and-development/>
25. Dale, M. (2014). *Addressing the underlying issue of poverty in child-neglect cases*. American Bar Association. <https://www.americanbar.org/groups/litigation/committees/childrens-rights/articles/2014/addressing-underlying-issue-poverty-child-neglect-cases/>

26. Shook Slack, K., Holl, J., McDaniel, M., Yoo, J., & Bolger, K. (2004). Understanding the risks of child neglect: An exploration of poverty and parenting characteristics. *Child Maltreatment*, 9(4), 395–408. <https://doi.org/10.1177%2F1077559504269193>
27. Fernandes, D. (2015). *Minimum wage increase will lead to less child care, centers say*. Southern California Public Radio (SCPR). <https://www.scpr.org/news/2015/05/22/51864/minimum-wage-increase-will-lead-to-less-child-care/>
28. Derenoncourt, E., & Montialoux, C. (2020). *Minimum wages and racial inequality*. Princeton University and the University of California, Berkeley. <http://www.clairemontialoux.com/files/DM2020.pdf>
29. Marotta, J. & Greene, S. (2019). *Minimum wages: What does the research tell us about the effectiveness of local action?* Urban Institute. [https://www.urban.org/sites/default/files/publication/99645/minimum\\_wages.\\_what\\_does\\_the\\_research\\_tell\\_us\\_about\\_the\\_effectiveness\\_of\\_local\\_action\\_0.pdf](https://www.urban.org/sites/default/files/publication/99645/minimum_wages._what_does_the_research_tell_us_about_the_effectiveness_of_local_action_0.pdf)
30. Rosenquist, N., Cook, D., Ehntholt, A., Omaye, A., Muennig, P., & Pabayo, R. (2019). Differential relationship between state-level minimum wage and infant mortality risk among US infants born to white and black mothers. *Journal of Epidemiology and Community Health*, 74(1), 14–19. <http://dx.doi.org/10.1136/jech-2019-212987>
31. US Department of Health and Human Services, Office of Minority Health. (2017). *Infant mortality and African Americans*. <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=23>
32. Fahimullah, F., Geng, Y., Hardy, B., Muhammad, D., & Wilkins, J. (2019). Earnings, EITC, and employment responses to a \$15 minimum wage: Will low-income workers be better off? *Economic Development Quarterly*, 33(4), 331–350. <https://doi.org/10.1177%2F0891242419880269>
33. Ghosh, P., Hoover, G., & Liu, Z. (2020). Do state minimum wages affect the incarceration rate? *Southern Economic Journal*, 86(3), 845–872. <https://doi.org/10.1002/soej.12400>
34. Bureau of Justice Statistics Special Report. (2010). *Parents in prison and their minor children*. <https://www.bjs.gov/content/pub/pdf/pptmc.pdf>
35. Equal Justice Initiative. (2019). *United States still has the highest incarceration rate in the world*. <https://eji.org/news/united-states-still-has-highest-incarceration-rate-world/>
36. Prison Policy Initiative. (2020). *What percent of the US is incarcerated?* <https://www.prisonpolicy.org/blog/2020/01/16/percent-incarcerated/>
37. Churchill, B. & Sabia, J. (2019). The effects of minimum wages on low-skilled immigrants' wages, employment, and poverty. *Industrial Relations*, 58(2), 275–314. <https://doi.org/10.1111/irel.12232>
38. Cooper, D. (2016). *Balancing paychecks and public assistance: How higher wages could strengthen what government can do*. Economic Policy Institute. <https://www.epi.org/files/2015/balancing-paychecks-and-public-assistance.pdf>
39. US Bureau of Labor Statistics. (2019). *Occupational outlook handbook: Childcare workers*. <https://www.bls.gov/ooh/personal-care-and-service/childcare-workers.htm>
40. Soule, G. (1957). The economics of leisure. *The ANNALS of the American Academy of Political and Social Science*. <https://doi.org/10.1177%2F000271625731300106>
41. Cooper, D., Gould, E., & Zipperer, B. (2019). *Low-wage workers are suffering from a decline in the real value of the federal minimum wage*. <https://www.epi.org/publication/labor-day-2019-minimum-wage/>
42. Hsin, A. & Felfe, C. (2014). When does time matter? Maternal employment, children's time with parents, and child development. *Demography*, 51(5), 1867–1894. <https://dx.doi.org/10.1007%2Fs13524-014-0334-5>
43. Donoghue, E. & Council on Early Childhood. (2017). Quality early education and child care from birth to Kindergarten. *Pediatrics*, 140(2), 1–6. <https://doi.org/10.1542/peds.2017-1488>
44. United States Congressional Budget Office (CBO). (2019). *The effects on employment and family income of increasing the federal minimum wage*. <https://www.cbo.gov/system/files/2019-07/CBO-55410-MinimumWage2019.pdf>
45. Allegretto, S., Godøy, A., Nadler, C., & Reich, N. (2018). *The new wave of local minimum wage policies: Evidence from six cities*. Center on Wage and Employment Dynamics, University of California, Berkeley. <https://irle.berkeley.edu/files/2018/09/The-New-Wave-of-Local-Minimum-Wage-Policies.pdf>
46. Reich, M., Montialoux, C., Allegretto, S., Jacobs, K., Bernhardt, A., & Thomason, S. (2016). *The effects of a \$15 minimum wage by 2019 in San Jose and Santa Clara County*. Center on Wage and Employment Dynamics, University of California, Berkeley. <https://www.cupertino.org/home/showdocument?id=11886>
47. Tsao, T., Konty, K., Van Wye, G., Barbot, O., Hadler, J., Linos, N., & Bassett, M. (2016). Estimating potential reductions in premature mortality in New York City from raising the minimum wage to \$15. *American Journal of Public Health*, 106(6), 1036–1041. <https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2016.303188>



48. World Health Organization. (2016). *New guidelines on antenatal care for a positive pregnancy experience*. <https://www.who.int/news/item/07-11-2016-new-guidelines-on-antenatal-care-for-a-positive-pregnancy-experience>
49. Cengiz, D., Dube, A., Lindner, A., & Zipperer, B. (2019). *The effect of minimum wages on low-wage jobs: Evidence from the United States using a bunching estimator* (No. w25434). National Bureau of Economic Research. <https://www.nber.org/papers/w25434>
50. Dube, A., Lester, W., & Reich, M. (2010). Minimum wage effects across state borders: Estimates using contiguous counties. *The Review of Economics and Statistics*, 92(4), 945–964. <https://www.jstor.org/stable/40985804>
51. Jardim, E., Long, M., Plotnick, R., van Wegen, E., Vigdor, J., & Wething, H. (2018). *Minimum wage increases, wages, and low-wage employment: Evidence from Seattle* (No. 23532). National Bureau of Economic Research. <https://www.nber.org/papers/w23532>
52. Wang, W., Phillips, P., & Su, L. (2019). The heterogeneous effects of the minimum wage on employment across states. *Economics Letters*, 174, 179–185. <https://doi.org/10.1016/j.econlet.2018.11.002>
53. Allegretto, S. & Cooper, D. (2014). *Twenty-three years and still waiting for change*. Economic Policy Institute. <https://www.epi.org/publication/waiting-for-change-tipped-minimum-wage/>
54. Card, D. & Krueger, A. (1994). Minimum wages and employment: A case study of the fast-food industry in New Jersey and Pennsylvania. *American Economic Review*, 84(4), 772–793. <https://www.jstor.org/stable/2677856>
55. US Department of Labor. (2020). *Minimum wages for tipped employees*. <https://www.dol.gov/agencies/whd/state/minimum-wage/tipped>
56. Dow, W., Godøy, A., Lowenstein, C., & Reich, M. (2020). Can labor market policies reduce deaths of despair? *Journal of Health Economics*, 74, 1–19. <https://doi.org/10.1016/j.jhealeco.2020.102372>
57. Kaufman, J., Salas-Hernandez, L., Komro, K., & Livingston, M. (2020). Effects of increased minimum wages by unemployment rate on suicide in the U.S.A. *Journal of Epidemiology and Community Health*, 74(3), 1–6. <http://dx.doi.org/10.1136/jech-2019-212981>
58. Buszkiewicz, J., Hill, H., & Otten, J. (2021). State minimum wage rates and health in working-age adults using the National Health Interview Survey. *American Journal of Epidemiology*, 190(1), 21–30. <https://doi.org/10.1093/aje/kwaa018>
59. Ibragimov, U., Beane, S., Friedman, S., Komro, K., Edwards, J., Williams, L., Livingston, M., Stall, R., Wingood, G., & Cooper, H. (2019). States with higher minimum wages have lower STI rates among women: Results of an ecological study of 66 US metropolitan areas, 2003–2015. *PLoS One*, 14(10), 1–18. <https://doi.org/10.1371/journal.pone.0223579>
60. Mitchell, E., Narefsky, L., & Dade, A. (2020). *The care minimum: The case for raising the minimum wage and investing in child care together*. National Women's Law Center. <https://nwlc.org/wp-content/uploads/2020/10/Thecareminimum.pdf>
61. One Fair Wage. *Fact sheet*. (2020). [https://onefairwage.site/wp-content/uploads/2020/12/OFW\\_FederalFactSheet\\_3-1.pdf](https://onefairwage.site/wp-content/uploads/2020/12/OFW_FederalFactSheet_3-1.pdf)
62. Economic Policy Institute. (2021). *Minimum wage tracker*. <https://www.epi.org/minimum-wage-tracker/>
63. Wolf, D., Monnat, S., & Karas Montez, J. (2021). Effect of US state preemption laws on infant mortality. *Preventive Medicine*, 145. <https://doi.org/10.1016/j.ypmed.2021.106417>
64. Huizar, L. & Lathrop, Y. (2019). *Fighting wage preemption: How workers have lost billions in wages and how we can restore local democracy*. <https://www.nelp.org/publication/fighting-wage-preemption/>
65. Luterman, S. (2020). *Why businesses can still get away with paying pennies to employees with disabilities*. Vox. <https://www.vox.com/identities/2020/3/16/21178197/people-with-disabilities-minimum-wage>
66. Selyukh, A. (2020). *Workers with disabilities can earn just \$3.34 an hour. Agency says law needs change*. National Public Radio. <https://www.npr.org/2020/09/17/912840482/u-s-agency-urges-end-to-below-minimum-wage-for-workers-with-disabilities>
67. Selyukh, A. (2021). *Costco to raise minimum wage to \$16 an hour: "This isn't altruism."* National Public Radio. <https://www.npr.org/2021/02/25/971338686/costco-to-raise-minimum-wage-to-16-an-hour-this-isnt-altruism>
68. Sosnaud, B. (2016). Living wage ordinances and wages, poverty, and unemployment in cities. *Social Service Review*, 90(1), 3–34. <https://doi.org/10.1086/686581>
69. Gangopadhyaya, A., Haley, J., Blavin, F., & Kenney, G. (2019). *Raising the minimum wage in New Jersey: Implications for earnings and Medicaid eligibility and enrollment*. Urban Institute. [https://www.urban.org/sites/default/files/publication/100993/nj\\_minimum\\_wage\\_and\\_medicaid\\_0.pdf](https://www.urban.org/sites/default/files/publication/100993/nj_minimum_wage_and_medicaid_0.pdf)

70. Greszler, R. (2021). *The impact of a \$15 federal minimum wage on the cost of child care*. The Heritage Foundation. <https://www.heritage.org/jobs-and-labor/report/the-impact-15-federal-minimum-wage-the-cost-childcare>
71. Alexander, M. (2021). *Tipping is a legacy of slavery*. New York Times. <https://www.nytimes.com/2021/02/05/opinion/minimum-wage-racism.html>
72. Jacobs, K., Perry, I. E., & MacGillvary, J. (2021). *The public cost of a low federal minimum wage*. UC Berkeley Labor Center. <https://laborcenter.berkeley.edu/wp-content/uploads/2021/01/The-Public-Cost-of-a-Low-Federal-Minimum-Wage.pdf>
73. Schweitzer, J. (2021). *Ending the tipped minimum wage will reduce poverty and inequality*. Center for American Progress. <https://www.americanprogress.org/issues/poverty/reports/2021/03/30/497673/ending-tipped-minimum-wage-will-reduce-poverty-inequality/>
74. Sabia, J., Burkhauser, R., & Mackay, T. (2018). Minimum cash wages, tipped restaurant workers, and poverty. *Industrial Relations*, 57(4), 637-670. <https://www.doi.org/10.1111/irel.12215>
75. Congressional Budget Office. (2021). *The budgetary effects of the Raise the Wage Act of 2021*. <https://www.cbo.gov/system/files/2021-02/56975-Minimum-Wage.pdf>
76. Ashenfelter, O. & Juradja, S. (2021). *Wages, minimum wages, and price pass-through*. Princeton University Working Paper #646. <https://dataspace.princeton.edu/bitstream/88435/dsp01sb397c318/4/646.pdf>
77. Gould, E. (2015). *Child care workers aren't paid enough to make ends meet*. Economic Policy Institute. <https://www.epi.org/publication/child-care-workers-arent-paid-enough-to-make-ends-meet/>
78. Annie E. Casey Foundation. KIDS COUNT Data Center. (2020). *Child population by age group in the United States*. <https://datacenter.kidscount.org/data/tables/101-child-population-by-age-group#detailed/1/any/false/1729,37,871,870,573,869,36,868,867,133/62,63,64,6,4693/419,420>
79. Exec. Order No. 14026, 86 FR 22835, April 27, 2021. <https://www.federalregister.gov/documents/2021/04/30/2021-09263/increasing-the-minimum-wage-for-federal-contractors>
80. Bureau of Labor Statistics (2020). *Occupational outlook handbook: Childcare workers*. <https://www.bls.gov/ooh/personal-care-and-service/childcare-workers.htm#tab-5>
81. Gringlas, S. (2021). *Some in the food industry want to stay with a subminimum wage – but plenty don't*. National Public Radio. <https://www.npr.org/2021/03/16/977928979/some-in-the-food-industry-want-to-stay-with-a-subminimum-wage-but-plenty-dont>
82. Wolfe, J. & Zipperer, B. (2021). *More than half a million child care workers would benefit from a \$15 minimum wage in 2025*. Economic Policy Institute. <https://www.epi.org/press/more-than-half-a-million-child-care-workers-would-benefit-from-a-15-minimum-wage-by-2025/>
83. Bureau of Economic Analysis. (2021). *Regional price parities by state and metro area*. <https://www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area>
84. Association of People Supporting Employment First (APSE). (2022). *2021 State legislative watch*. <https://apse.org/state-legislation/>
85. Otten, J., Bradford, V., Stover, B., Hill, H., Osborne, C., Getts, K., & Seixas, N. (2019). The culture of health in early care and education: Workers' wages, health, and job characteristics. *Health Affairs*, 5, 709-720. <https://doi.org/10.1377/hlthaff.2018.05493>
86. As of October 1, 2022. Review of state statutes by Prenatal-to-3 Policy Impact Center staff. For additional source and calculation information, please refer to the Methods and Sources section of [pn3policy.org](https://pn3policy.org).
87. US Dept. of Labor. (2021). *Wages and the Fair Labor Standards Act*. <https://www.dol.gov/agencies/whd/flsa>
88. Bloomberg Tax. *Colorado governor signs bill eliminating subminimum wage by 2025*. <https://news.bloombergtax.com/payroll/colorado-governor-signs-bill-eliminating-subminimum-wage-by-2025>
89. Industrial Commission of Arizona. (2007). *Substantive policy statement regarding application of Arizona Minimum Wage Act to work activities performed by individuals with disabilities*. <https://www.azica.gov/labor-substantive-policy-disabilities>
90. Cooper, D., Hickey, S., & Zipperer, B. (2022). The value of the federal minimum wage is at its lowest point in 66 years. *Economic Policy Institute*. <https://www.epi.org/blog/the-value-of-the-federal-minimum-wage-is-at-its-lowest-point-in-66-years/>
91. Office of the Assistant Secretary for Planning and Evaluation (2022). *HHS Poverty Guidelines for 2022*. U.S. Department of Health and Human Services. <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>

92. Callahan, A. (2021). Is B.M.I. a Scam? The New York Times. <https://www.nytimes.com/2021/05/18/style/is-bmi-a-scam.html>
93. Bureau of Labor Statistics. (2022). Consumer prices up 9.1 percent over the year ended June 2022, largest increase in 40 years. *The Economics Daily*. <https://www.bls.gov/opub/ted/2022/consumer-prices-up-9-1-percent-over-the-year-ended-june-2022-largest-increase-in-40-years.htm>





Prenatal-to-3 Policy Impact Center

Vanderbilt University | Peabody College of Education and Human Development

pn3policy.org | Twitter: @pn3policy #pn3policy

**Evidence Review Citation:**

Prenatal-to-3 Policy Impact Center. (2022). *Prenatal-to-3 policy clearinghouse evidence review: State minimum wage* (ER O4C.1022). Peabody College of Education and Human Development, Vanderbilt University. <https://pn3policy.org/policy-clearinghouse/state-minimum-wage/>