PRENATAL-TO-3 POLICY CLEARINGHOUSE
EVIDENCE REVIEW

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RESEARCH FOR ACTION AND OUTCOMES

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Child Care Workforce Compensation

Evidence Review Findings: Needs Further Study

Limited causal evidence suggests increasing child care workforce compensation may support nurturing and responsive child care in safe settings. However, evidence is mixed and research specific to caregivers serving children in the birth-to-age 3 period is needed. Research to date has only examined the impacts of wage supplement programs and these programs have not been studied at a statewide level; further evidence on other state compensation policies, such as compensation guidelines or relief through tax credits, is needed. Additionally, given that 90 percent of child care workers are women and more than a third are Black (with Black staff disproportionately working with infants and toddlers), more research on reducing workforce inequities is needed.

In the US, low wages in the child care field are common, particularly among teachers and caregivers serving infants and toddlers. To address low child care workforce compensation, states may include compensation guidelines or requirements in licensing or quality rating and improvement systems (QRIS), or provide financial relief to the child care workforce through tax credits, bonuses, or stipends. Higher child care workforce compensation may help recruit more highly skilled staff and reduce staff turnover, which can lead to higher classroom quality and better teacher-child interactions, resulting in improved child social-emotional and cognitive outcomes.

What Is Child Care Workforce Compensation?

Low wages are common in the child care workforce. In 2020, median hourly wages were $12.24 per hour for child care workers (in all settings) and $15.35 per hour for preschool teachers (in all settings).[i] Further, child care workers serving infants and toddlers tend to have lower pay (in the second percentile of all occupations) than teachers of children ages 3 to 5 and not yet in kindergarten, and this wage penalty by age of children served persists regardless of workers' levels of educational attainment.[1,32] Low and inequitable compensation can be considered a result of a market failure wherein parents face financial constraints that force child care providers to keep costs low to remain in the market – staff compensation representing a large portion of the costs. The low and/or unpredictable wages and lack of benefits may be a contributing factor to the decline in home-based providers in recent years (between 2012 and 2019, the share of children under age 3 served in home-based care declined from 33.3% to 28.5% and the share in center-based care increased from 17.7% to 21.5%).[2,42] Low pay among the child care workforce contributes to high levels of stress, depression,

[i] Wages are from the May 2020 Occupational Employment Statistics (Bureau of Labor Statistics).

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and burnout, and the economic insecurity of these workers – some falling below the federal poverty level (FPL) and many relying on public services for economic needs.[39,51]

A variety of state policies can address the compensation of the child care workforce, although currently few are implemented. States can establish compensation standards, whether required or as guidelines, as part of state licensing, participation in public programs, or participation in quality rating and improvement systems (QRIS),[ii] and states can include salary schedules and benefits as rating components of their QRIS. A state can also increase its minimum wage, which may impact the wages paid to the child care workforce if the new minimum is higher than child care workforce wages in that state.[3,4]

Additionally, states may implement financial relief policies intended to augment annual compensation of the child care workforce. Examples of financial relief policies include: (a) stipend programs providing cash awards to teachers based on educational attainment and retention, such as the WAGE$ program;[1,5] (b) refundable tax credits providing wage supplements through the tax system to child care staff (directors and teachers) who work in facilities participating in the state QRIS, with the value of the credit scaled by educational attainment;[1] and (c) one-time bonuses to child care workers, typically offered as educational scholarship funds, bonuses for participating in and completing higher education and training in the child care field (including professional development), or bonuses for retention within a program, such as T.E.A.C.H. Early Childhood scholarships.[1,6]

The level of state subsidy reimbursement rates to providers serving low-income families, particularly home-based providers, may be important in boosting staff compensation.[7] Currently, most states rely on market rate surveys, or the price charged by providers, to set provider reimbursement rates, which often results in low and inequitable compensation for early educators. Cost estimation models are an alternative approach to setting reimbursement rates that are more representative of the true cost of providing high-quality care.[48] This can allow reimbursement to account for providing living wages to caregivers that are similar to elementary school educators with similar qualifications.

Who Is Affected by Child Care Workforce Compensation?

In the US, the child care workforce includes approximately 932,010 preschool teachers, caregivers, and preschool/child care center administrators.[8,32,iii] One in every 110 workers and one in every 55 female workers make a living in early childhood education and care.[39,iv] Workforce estimations include teachers serving students outside the birth-to-age 3 group of focus due to the lack of available data on those serving infants and toddlers. Teachers serving infants and toddlers, and teachers in home-based settings tend to have lower pay compared with teachers serving higher age groups and teachers in center-based settings, respectively. The lower pay is particularly problematic for Black staff who disproportionately work with infants and toddlers in center-based

[ii] For example, setting a wage floor/minimum compensation standard or identifying living wages, by education level and/or staff position.

[iii] Early childhood workforce is calculated here by adding the 2020 employment estimates of the US Bureau of Labor Statistics Occupation Profiles for (i) Childcare Workers, (ii) Preschool Teachers, Except Special Education, (iii) Special Education Teachers, Preschool, and (iv) Education and Childcare Administrators, Preschool and Daycare.

[iv] Statistics are from the US Department of the Treasury, and childhood education and care is defined as all nonparental care of infants to children 5 years of age.

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settings and have lower wages than other groups of child care workers by race/ethnicity, and particularly problematic for Black, Latino, and immigrant staff who disproportionately work with infants and toddlers in home-based settings.[1] To the extent that the quality of care, and by extension outcomes of children in care, are impacted by child care workforce compensation, the millions of children in nonparental care (about half of children in the US under age 3 receive nonparental care) may also be affected by policies targeting compensation of child care workers.[42]

What Are the Funding Options for Child Care Workforce Compensation Increases?

Funding for financial relief policies can come from both public and private sources, including Child Care and Development Fund quality funds, state general funds, state pre-K funds, state funds from tobacco taxes or lotteries, local government funds, foundations, nonprofits, and corporations.[5,6,9]

Effective March 11, 2021, the American Rescue Plan (Public Law 117-2) provided an unprecedented $39 billion (for FFY 2021) federal investment in child care and recommendations to use funds to increase child care workforce compensation.[35,36] Funding included $24 billion for child care stabilization grants to providers and $15 billion for the Child Care and Development Block Grant (CCDBG), however funding is time constrained.[35,36] Guidance provided by the US Department of Health & Human Services Office of Child Care (OCC) outlines increasing compensation for child care workers as central to stabilizing the industry, and strongly encourages use of funds to increase wages and benefits (i.e., retention and recruitment allowances, and resources for staff to assist with health insurance premiums).[37,38,44,49,50]

Federal Preschool Development Grant Birth Through Five (PDG-5) awards may also be used by states to assess and address child care workforce compensation issues. Established in 2015, PDG B-5 provides competitive grants to states and territories to strengthen collaboration and co-ordination among existing early care systems and improve transitions from early care programs into elementary school. Funding can come in the form of (a) initial grants which support states in comprehensive statewide birth through five needs assessments and strategic planning, and (b) renewal grants which support states in carrying out strategic plans.[10]

Why Should Higher Child Care Workforce Compensation Be Expected to Impact the Prenatal-to-3 Period?

Child care quality is typically defined by elements of both the structure of child care programs themselves and the experiences of the children within the programs. Workforce compensation is considered to be one important element of the structure of child care programs – one of a collection of "necessary inputs that enable programs and caregivers to offer children the safe, sensitive, and appropriate caregiving that characterizes high-quality classroom environments" (p. 476),[11,12] which promotes healthy early brain development.[13] The rationale behind compensation policies targeting the child care workforce is generally to promote recruitment of staff with higher education and qualification levels, and improve retention within child care programs and the broader child care field.[14]

Higher child care workforce wages and benefits may help recruit staff with higher levels of qualifications (e.g., teachers with a bachelor's degree or specialized training in early childhood

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education and/or development), as low pay can discourage highly qualified workers from entering the field due to better paying alternatives.[47] In turn, this may improve classroom quality and teacher-child interactions.[15,v]

Higher teacher compensation may reduce teacher turnover, in part because of increased teacher job satisfaction and wellbeing.[16,17,18] Reducing turnover is important, as a significant portion of early childcare staff leave their job each year (approximately 15-25% nationally).[40] Increased stability in the teaching staff of child care providers is linked to the quality of care a child receives, including a child's ability to form a stable connection with caregivers.[20,15] Better teacher-child interactions and classroom quality may lead to improved child cognitive and social-emotional outcomes.[14,15]

Workforce compensation policies may also help to reduce disparities in workforce and child outcomes, if policies can (a) raise the wages of Black child care staff working with infants and toddlers, who are paid less per hour than White peers[1], (b) raise the wages of assistants and staff working with infants and toddlers, who are more likely to be Black,[1] and (c) raise the wages in child care programs serving low-income or other at-risk children.

Decades of research in the field of child development have made clear the conditions necessary for young children and their families to thrive.[19] These conditions are represented by our eight policy goals, shown in Table 1. The goals theoretically aligned with child care workforce compensation are indicated in the table.

Table 1: Policy Goals Theoretically Aligned With Child Care Workforce Compensation

Aligned	Policy Goal
	Access to Needed Services
	Parents' Ability to Work
	Sufficient Household Resources
	Healthy and Equitable Births
	Parental Health and Emotional Wellbeing
	Nurturing and Responsive Child-Parent Relationships
●	Nurturing and Responsive Child Care in Safe Settings
●	Optimal Child Health and Development

[v] Positive teacher-child interactions are typically measured by observed interactions demonstrating warmth, sensitivity, and responsiveness, among other factors. Classroom quality is typically defined by observed classroom experiences and includes teacher behaviors, positive climates, and facilitation of learning and development.

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What Impact Does Higher Child Care Workforce Compensation Have, and for Whom?

Very limited rigorous research has evaluated the impact of child care workforce compensation on outcomes in the birth-to-age 3 period. The majority of the evidence base for child care compensation comes from observational studies, often using small sample sizes, which should be considered carefully, as they employ study designs that are not sufficient to draw causal conclusions. The review below summarizes the limited existing knowledge from the casual literature on policies and programs to address child care workforce compensation, also discussing findings from relevant observational studies. Further research is needed to draw a causal link between workforce compensation in the child care sector and relevant outcomes in the birth-to-age 3 period.

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

Of the two causal studies included in this review, neither examined how outcomes differed by race or ethnicity (beyond simply presenting summary statistics or controlling for race/ethnicity). Where available, this review presents the analyses' causal findings for subgroups. 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 Child Care Workforce Compensation by Policy Goal

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Nurturing and Responsive Child Care in Safe Settings	Teaching Staff Retention	B	A		Mixed

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

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Nurturing and Responsive Child Care in Safe Settings

Two strong causal studies have examined the impact of compensation for child care workers on child care outcomes, and the findings were mixed. One study used Missouri's Workforce INcentive Project (WIN) to evaluate the impact of center-based child care biannual cash incentives on teacher turnover rates.[A] For teaching staff with more than a high-school diploma and staff at certain hourly wage levels, the study found significantly lower turnover rates for those who received the cash incentive in comparison to those that did not receive the incentive.[A,vii] However, subgroup analyses found mainly null results and overall teaching staff results indicated only marginally lower turnover with the cash incentive and were not significant.[A] Another study, which focused on the effects of quality rating and improvement systems (QRIS) on families and children, also examined the impact of wage compensation programs, in comparison to and conjunction with QRIS. The study compared states that had implemented QRIS only, QRIS and a wage supplement program, and a wage supplement program alone, to states that had neither program.[B] Results showed that states with a wage supplement program alone had lower job separation[viii] and turnover rates[ix] compared to states with neither a wage supplement or QRIS in place. States with both QRIS and wage supplement programs had improved turnover rates but showed no significant impact on job separation rates when compared to states with neither program. This study also found that wage supplement programs can augment the beneficial impacts of QRIS implementation on child care workforce outcomes. States with both policies (wage supplement programs and QRIS) in place had significantly stronger outcomes compared to states that had implemented QRIS alone.

Results from a forthcoming University of Virginia study suggest increasing compensation will significantly reduce teacher turnover, however the study is not yet included in this review as a causal study meeting our standards of evidence because a full report of study methodology and findings is not yet available. In a randomized controlled trial (RCT), supplementary payments to early educators had a positive effect on reducing teacher turnover. At publicly-funded early care sites in Fairfax, Virginia, some early educators working with children ages 0-5 were selected (through a lottery) to receive a recognition payment, "up to three payments of $500, totaling $1,500 over an eight-month period" (p. 2).[40] Eight months later, those who received the payment were 11 percentage points less likely to have left their position compared to those who did not receive the payment (cutting turnover approximately in half). The payments had even larger effects among teachers working in child care centers (compared to school-based settings) and assistant teachers (compared to lead teachers), at 14 and 23 percentage points less likely to leave, respectively.[40]

The bulk of the current evidence base for the link between child care workforce compensation and staff retention lacks the ability to establish causal connections. The majority of often-cited observational studies on child care workforce compensation generally found either a positive link between higher wages and greater retention and workers' intention to stay in their jobs[21,16,15,17,41] or

[vii] Results were particularly robust for teaching staff with more than a high-school diploma and more than 5 years of experience ($p < 0.01$). Significantly lower turnover rates were found for teaching staff earning between $7.20 and $9.60 per hour who received the biannual cash incentive in comparison to teaching staff that did not receive the incentive. No statistically significant results were found comparing teaching staff earning ≤ $7.20 per hour or > $9.60 per hour.

[viii] Job separation is defined here as the "total number of workers employed at a given firm in the reference quarter who were not employed there in any of the previous four quarters" (p. 180).[A]

[ix] Turnover rates refer to the percentage of employees who leave a given firm and are replaced by new employees.

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null effects.[21,22,23] However, the findings of these studies should be interpreted with caution, as they are limited by study designs and sample sizes. Although researchers suggest that compensation is important to the recruitment of a skilled child care workforce, current research does not explore these connections.[17,15] Often-cited observational studies have suggested a positive link between higher wages and job satisfaction, however, no strong causal studies evaluate this pathway and observational studies are limited by the methodological challenges described above.[20,16,18]

Limited research has explored the impacts of specific compensation-related policy levers. Existing observational evidence[14,24] has suggested mixed associations between compensation and retention incentive program participation,[x] and outcomes for retention were limited in geographic scope to findings from two states. In the quasi-experimental study in Missouri, overall results were not significant and indicated only marginally lower turnover with participation in the retention incentive program (and receipt of a biannual cash incentive) and subgroup analyses found mainly null results.[A,xi]

The evidence for the association between compensation and child care quality[xii] comes primarily from observational, point-in-time studies, frequently limited by small sample sizes. No evidence exists on the causal effects of the level of child care wages on quality,[25] and the mechanisms by which pay affects quality remain unclear. Often-cited observational research has suggested that higher teacher compensation is associated with higher ratings on measures of classroom quality,[xiii] and this association is generally, but not always, true for infant and toddler classrooms specifically.[11,12,23] The observational evidence linking wages to teacher behavior[xiv] beyond broad quality measures is mixed; two studies found a positive association,[26,12] and one study found no significant association.[23] However, the link between compensation and quality is, at best, complex and indirect,[27] and the current evidence base lacks the rigor necessary to establish causal connections. Additional and rigorous research is needed to determine the effects of child care wages on quality of care.

[x] Compensation and retention incentive programs are wage supplement/stipend programs providing semi-annual cash payments to workers. Payment amounts vary based on workers' qualifications (e.g., educational attainment), typically require staff to remain employed in a position or in the child care field (intended to reduce turnover), and may include additional requirements (e.g., related to ongoing professional development). Payments are higher for workers with higher levels of educational attainment, which is intended to incentivize higher education.

[xi] Subgroup results should be interpreted with caution due to a very small sample size ($n \leq 20$ at baseline).[A]

[xii] Child care quality is typically defined as the quality of what happens inside the child care classroom or program, generally focused on positive, nurturing interactions between teachers and children; activities children are engaged in (e.g., curriculum, activities to promote social and academic learning); and a safe, enriching physical classroom environment.

[xiii] Classroom quality is operationalized using an observed measure of quality, most frequently overall scores on the Infant/Toddler Environment Rating Scale (ITERS) or the Early Childhood Environment Rating Scale (ECERS) or their relevant subscales (e.g., developmentally appropriate activities).

[xiv] Teacher behavior is typically operationalized using measures of the quality of a teacher's interaction with children, such as measures of restrictive, responsive, and sensitive caregiving behaviors. Instruments used to measure these behaviors typically include the Arnett Caregiver Interaction Scale and Teacher Involvement Scale.

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Is There Evidence That Higher Child Care Workforce Compensation Reduces Disparities?

No strong causal research explores the impact of child care workforce compensation on reducing disparities, or disparate outcomes for children or for the child care workforce. However, there is evidence of labor market discrimination against women and Black, Indigenous, and people of color, who represent the majority of child care staff and are historically underpaid in the US labor market. Over 90 percent of child care workers are women and more than a third are Black.[39] Early care provider demographics, in terms of race and ethnicity, often nearly match those of the children they serve, which is a positive in the field and unique to ages 0-5. Research has shown that having teachers who look like their Black, Indigenous, and students of color benefits all students academically, socially, and emotionally.[46] Despite this benefit to children, Black child care workers are especially harmed by low wages – those who work with infants and toddlers, are paid, on average, $0.77 less per hour than White peers.[1,xv] Policies aimed at increasing funding for child care workforce compensation can raise wages, and improve benefits for historically underpaid staff and groups that have been marginalized.

Additionally, there are often barriers in access to government support that fall disproportionately on Black, Indigenous, and people of color, and under-resourced communities. Data collection protocols on financial relief programs to support the early child care workforce (e.g. scholarships, tax credits, bonuses, or stipends) are needed to examine impact and identify any disparities specific to the access of these programs.[1,44]

Has the Return on Investment for Child Care Workforce Compensation Been Studied?

No strong causal evaluations have examined the return on investment for increased child care workforce compensation, but some observational studies suggest this may be a cost-effective strategy. For example, observational studies that examine the relationship between child care worker wages and turnover suggested that investment in increased wages may increase retention, which can result in savings in the long run.[1,17,23] A more comprehensive analysis of the return on investment is forthcoming.

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

Overall, causal evidence finds that increasing child care workforce compensation has mixed impacts on nurturing and responsive child care in safe settings, and more research is needed. The current evidence base on child care workforce compensation is unable to make a causal connection between compensation and child outcomes via staff retention and child care quality. Current evidence is insufficient to reach conclusions on specific state policy levers or on the potential for higher child care workforce compensation to impact nurturing child care in safe settings, and child wellbeing and development.

[xv] Black and Latina women have attained college degrees at a lower rate than their White counterparts; reinforcing need for support (e.g., tuition assistance) that may increase levels of educational attainment in the early care workforce, and improve the quality of care infants and toddlers receive.[45]

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The evidence on state child care workforce compensation policies has several limitations that can be addressed by future research. First, existing research is subject to methodological challenges related to study designs or analytic methods. Experimental or quasi-experimental research can help clarify causal links between child care workforce compensation and outcomes of interest, as well as clarify the compensation level required to improve outcomes and address inequities. For example, states can carry-out a randomized controlled trial (RCT), similar to a University of Virginia study where some early educators at publicly-funded care sites in Fairfax, Virginia were randomly selected to receive supplementary payments.[40]

Second, strong causal research disaggregating infant and toddler teachers and classrooms from preschool teachers and classrooms is needed to improve the evidence base specifically for the birth-to-age 3 population. Though research on the child care field more generally can be useful to understand the impact of child care workforce compensation on children under age 3, the unique challenges and needs of infant and toddler classrooms mean that broader outcomes may not be directly relevant. Building the evidence base on this population specifically will help allow for stronger conclusions.

Third, limited research examines the effects of specific state-level child care workforce compensation policies. A closer examination of existing state policies, including child care specific compensation programs and broader minimum wage policies, will allow for a better understanding of the effectiveness of various approaches for addressing low child care workforce compensation, and provide guidance to states on what the optimal policy approach is to improving compensation for the child care workforce.

Fourth, existing research (causal or otherwise) does not explore direct or indirect pathways (e.g., via child care quality) from compensation to child outcomes. Further research should directly assess the effect of child care compensation on child outcomes.

Finally, the COVID-19 pandemic resulted in increased safety risks for child care workers (many of which do not have health benefits[43,xvi]), job losses, and program closures (because of increased costs to meet safety protocols and lower levels of enrollment) that exacerbated the economic insecurity of these workers. In the "first eight months of the pandemic, 166,000 jobs in the child care industry were lost" and, as of October 2020, the industry was 83 percent as large as it was in February 2020 (p. 16).[1] A portion of the program closures and job losses are anticipated to be permanent.[1] Moreover, Black, Indigenous, and people of color (who represent more than a third of child care staff) were hardest hit by the pandemic. Only a few states provided additional funding to child care workers early in the pandemic: North Carolina and New Mexico offered staff bonus payments ranging from $350 to $950 per month, Kentucky offered a one-time payment of $1,500, Wisconsin relaxed existing stipend (REWARD initiative) eligibility requirements, and Vermont provided funding to child care programs that were required to close during April and May 2020.[1] Research is needed to understand the effects of early-pandemic and American Rescue Plan funding.

[xvi] This is most often the case in states without expanded Medicaid.[43]

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Is Increasing Child Care Workforce Compensation an Effective Policy for Improving Prenatal-to-3 Outcomes?

Existing evidence is too limited to draw a conclusion on the effectiveness of increasing workforce compensation as a strategy to improve outcomes in the birth-to-age 3 period. To date, no studies have examined the impact of workforce compensation policies for the birth-to-3 age group specifically – both strong causal studies reviewed here included teachers of other age groups.[A,B] Further, strong causal evidence on the impact of child care workforce compensation, even inclusive of older children, is limited and mixed. Though observational studies suggest that higher compensation for child care workers may improve recruitment and retention, which in turn may improve classroom quality and child outcomes, more research is needed to draw a conclusion about causality. Additionally, research to date has only examined the impacts of wage supplement programs, and these programs have not been studied at a statewide level; further evidence on other state compensation policies, such as compensation guidelines or relief through tax credits, is needed.

How Does Child Care Workforce Compensation Vary Across the States?

As of 2020, only California, Illinois, North Carolina, Oregon, Rhode Island, Vermont, Washington, and the District of Columbia have compensation guidelines for the child care workforce outside of public pre-K, and no states have required compensation standards; however, 12 additional states have plans to establish guidelines in the future (see Table 3 below for details).[1] Only 16 states[xvii] include salary scales and/or benefit options as a rating component in their QRIS for center-based providers, and 8 states include these scales in their QRIS for home-based providers.[1]

Child care workforce compensation has received some attention in federal programs, providing funding to states and localities through program guidelines or funding evaluation criteria, but usually with limited specificity. For example, the American Rescue Plan strongly encourages use of funds to increase wages and benefits.[49,50] Prior to the COVID-19 pandemic, the Preschool Development Grants in 2014 included pay parity with K-12 instructional salaries as a component defining high-quality care, but the newer Preschool Development Grants Birth Through Five do not specifically mention compensation;[28,29] the Race to the Top-Early Learning Challenge included compensation as an example of a policy states may address in their proposals to support the child care workforce to improve education and skills;[30] and compensation is not mentioned within Head Start Performance Standards that apply to Early Head Start.[31]

To the extent that states have policies addressing child care compensation issues, policies almost always focus on providing financial relief.[1] As of 2020, only 11 states had statewide stipend programs,[1,xviii] and only Louisiana and Nebraska had refundable tax credits.[1] Nebraska is the only state that has both a stipend (WAGE$) and a tax credit.[1] The amount awarded for both stipends and tax credits varies by state but is generally limited: In 2020, the median minimum annual award

[xvii] State counts include the District of Columbia.
[xviii] Note, other states had state programs that may allow stipends statewide, but local or regional authorities have the ability to decide whether or not local programs include stipends. One example of a statewide initiative with local autonomy is California's AB212 Child Care Retention Program.

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across existing stipends and tax credits was $300, and the median maximum annual award was $3,500.[1, xix,xx] As of 2020, 32 states offered bonus programs statewide, often either T.E.A.C.H. programs or programs linking awards to education and training.[1] State and local increases to the minimum wage may also increase child care workforce compensation, but only to the extent that increases are higher than typical child care workforce wages, although potential effects on the child care field are not fully understood.[32,34] For example, observational evidence estimating the effect among child care providers of Seattle raising the minimum wage to $15 concluded that the majority of providers would be significantly impacted and may increase the price of child care services or reduce hours or employees in response, making further study necessary to understand the effect of minimum wage increases on the child care field.[34]

Over the past several years, a national collaborative led by child care professionals developed a unifying framework to provide recommendations to the child care field on how to define the early childhood education profession. The final result of the Power to the Profession collaboration was a set of recommendations, which focused on unified pathways, preparation, responsibilities, and competencies for child care professionals and included as a recommendation improved professional compensation for early childhood educators.[33] That document, endorsed by 15 national organizations in the field, represents momentum toward increased compensation among the child care workforce across the country.

Table 3: State Variation in Child Care Workforce Compensation

State	Required Compensation Standards for ECE Settings Outside of Public Pre-K	Guidelines or Plan for Early Educator Payment/ Benefits	Policy to Provide Tax Credit or Stipend to Supplement Early Educator Pay	Policy Providing Bonus to Supplement Early Educator Pay	Funds Scholarships That Support Higher Education for Early Educators
Alabama	No	Yes	No	Yes	Yes
Alaska	No	Yes	No	No	Yes
Arizona	No	No	No	Yes	Yes
Arkansas	No	No	No	Yes	Yes
California	No	Yes	No	No	Yes[xxi]
Colorado	No	Yes	No	Yes	No
Connecticut	No	Yes	No	Yes	Yes
Delaware	No	No	Yes	Yes	Yes

[xix] Median minimum and median maximum were calculated by the author using data from *McLean, C., Austin, L. J. E., Whitebook, M., & Olson, K. (2021). Early Childhood Workforce Index - 2020. Center for the Study of Child Care Employment, University of California, Berkeley.* https://cscce.berkeley.edu/workforce-index-2020/ (p. 245-247).

[xx] The median minimum and median maximum stipends are calculated because stipends are often awarded within states at varying amounts, typically based on educational attainment.

[xxi] California has a program for FY 2020-21 that allows local agencies to apply for grants from the Department of Education that may be used for bonuses or scholarships.[1]

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Table 3: State Variation in Child Care Workforce Compensation (Continued)

State	Required Compensation Standards for ECE Settings Outside of Public Pre-K	Guidelines or Plan for Early Educator Payment/ Benefits	Policy to Provide Tax Credit or Stipend to Supplement Early Educator Pay	Policy Providing Bonus to Supplement Early Educator Pay	Funds Scholarships That Support Higher Education for Early Educators
District of Columbia	No	Yes	Yes	Yes	Yes
Florida	No	No	No	Yes	Yes
Georgia	No	No	Yes	Yes	Yes
Hawaii	No	No	No	No	Yes
Idaho	No	No	No	Yes	Yes
Illinois	No	Yes	Yes	No	Yes
Indiana	No	No	No	Yes	Yes
Iowa	No	No	No	Yes	Yes
Kansas	No	No	No	No	Yes
Kentucky	No	No	No	No	Yes
Louisiana	No	No	Yes	No	Yes
Maine	No	No	No	Yes	Yes
Maryland	No	No	Yes	No	Yes
Massachusetts	No	No	No	No	Yes
Michigan	No	No	No	Yes	Yes
Minnesota	No	Yes	Yes	Yes	Yes
Mississippi	No	No	No	No	No
Missouri	No	No	No	Yes	Yes
Montana	No	No	No	Yes	Yes
Nebraska	No	Yes	Yes	Yes	Yes
Nevada	No	Yes	No	Yes	Yes
New Hampshire	No	No	No	No	Yes
New Jersey	No	Yes	No	No	Yes
New Mexico	No	No	Yes	No	Yes
New York	No	No	No	No	Yes
North Carolina	No	Yes	Yes	Yes	Yes
North Dakota	No	No	No	No	Yes
Ohio	No	Yes	No	Yes	Yes
Oklahoma	No	Yes	No	Yes	Yes

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Table 3: State Variation in Child Care Workforce Compensation (Continued)

State	Required Compensation Standards for ECE Settings Outside of Public Pre-K	Guidelines or Plan for Early Educator Payment/ Benefits	Policy to Provide Tax Credit or Stipend to Supplement Early Educator Pay	Policy Providing Bonus to Supplement Early Educator Pay	Funds Scholarships That Support Higher Education for Early Educators
Oregon	No	Yes	No	Yes	Yes
Pennsylvania	No	No	No	Yes	Yes
Rhode Island	No	Yes	No	Yes	Yes
South Carolina	No	No	No	Yes	Yes
South Dakota	No	No	No	No	No
Tennessee	No	No	Yes	No	Yes
Texas	No	Yes	No	Yes	Yes
Utah	No	No	No	Yes	Yes
Vermont	No	Yes	No	Yes	Yes
Virginia	No	Yes	No	No	Yes
Washington	No	Yes	No	Yes	Yes
West Virginia	No	No	No	Yes	Yes
Wisconsin	No	No	Yes	Yes	Yes
Wyoming	No	No	No	No	Yes
State Count	0	20	12	32	48

Source: McLean, C., Austin, L. J. E., Whitebook, M., & Olson, K. (2021). Early Childhood Workforce Index - 2020. Center for the Study of Child Care Employment, University of California, Berkeley. https://cscce.berkeley.edu/workforce-index-2020/

How Did We Reach Our Conclusions?

Method of Review

This evidence review began with a broad search of all literature related to the policy and its impacts on child and family wellbeing during the prenatal-to-3 period. First, we identified and collected relevant peer-reviewed academic studies as well as research briefs, government reports, and working papers, using predefined search parameters, keywords, and trusted search engines. From this large body of work, we then singled out for more careful review those studies that endeavored to identify causal links between the policy and our outcomes of interest, taking into consideration characteristics such as the research designs put in place, the analytic methods used, and the relevance of the populations and outcomes studied. We then subjected this literature to an in-depth critique and chose only the most methodologically rigorous research to inform our conclusions about policy effectiveness. All studies considered to date for this review were released on or before November 12, 2021.

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Standards of Strong Causal Evidence

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

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

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

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