

COMPENSATION AND STAFFING CHALLENGES IN CHILD CARE: STATEWIDE EVIDENCE FROM PANDEMIC RELIEF APPLICATIONS

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Abstract

Child care teachers support young children’s learning and development and parents’ ability to work. However, they earn far less and turn over at far higher rates than K–12 teachers. COVID-19 exacerbated staffing challenges, and the child care workforce was 5.9 percent smaller in January 2023 than in January 2020. While low compensation likely drives turnover in early childhood education, there is relatively little large-scale evidence on the link between compensation and staffing challenges. We summarize the limited pre-pandemic evidence and use pandemic-era data from 90 percent of publicly funded child care centers in Louisiana to describe the relationship between sites’ compensation and staffing challenges. In October 2022, 15 percent of centers’ lead teacher positions were unfilled—nearly quadruple the 4 percent national vacancy rate for public school teachers. Of centers with any vacancies or hires in the past six months, 65 percent turned families away and 84 percent hired less-experienced or -qualified teachers than desired due to staffing challenges. Centers with higher wages were significantly less likely to report staffing challenges, turn families away, and hire less-experienced teachers, after controlling for center characteristics and region. Our findings and prior evidence suggest that wage increases are promising for stabilizing the child care workforce.

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INTRODUCTION: THE PROBLEM

High-quality early childhood education (ECE) in the years before kindergarten can positively shape children's developmental trajectories and provide care for children whose parents need to work or go to school (Heckman 2006; Duncan and Magnuson 2013; Yoshikawa et al. 2013). In the United States, most children under age 5 attend some form of center-based ECE (e.g., state prekindergarten, child care centers), and of those who do, most go to child care centers (Laughlin 2013; National Center for Education Statistics 2021).

Unfortunately, staffing challenges and high teacher turnover, which are common in child care centers, compromise the quality of care. In Louisiana, the context for this brief, pre-pandemic data show that nearly half (46 percent) of lead teachers working in publicly funded child care centers (i.e., centers that accept child care subsidies), left their centers annually (Bassok, Markowitz, et al. 2021). These patterns mirror national trends: Data from 2019 show that the average child care center in the United States had a 21 percent staff turnover rate, much higher than the 8 percent average turnover rate for school-sponsored early education programs (Grunewald, Nunn, and Palmer 2022).

The pandemic exacerbated these already pronounced staffing challenges. Nationally, the number of child care workers has declined such that in January 2023 the workforce was 5.9 percent smaller than in January 2020 (U.S. Bureau of Labor Statistics 2023). In a June 2021 National Association for the Education of Young Children (NAEYC) survey taken by more than seven thousand child care leaders, 80 percent of the respondents had at least one vacancy unfilled at their center for more than one month, and half reported turning families away (NAEYC 2021). Data from about one hundred center leaders in Louisiana showed that 64 percent struggled to find teachers during the pandemic. In centers that had experienced teacher turnover, 64 percent reported turning families away due to staffing shortages (Bassok, Smith, et al. 2021; Bassok et al. 2022).

This instability has negative repercussions for children, families, and child care providers. Teacher turnover disrupts the secure caregiver-child relationships that are at the heart of ECE quality (Cassidy et al. 2011; Yoshikawa et al. 2013; Markowitz 2019; Bratsch-Hines et al. 2020). Quality improvement efforts and professional development investments are compromised when teachers leave frequently and leaders must scramble to fill vacancies (Whitebook and Sakai 2003; Hale-Jinks, Knopf, and Knopf 2006). When centers cannot fill vacancies, they may increase the workload of existing staff, turn families away, or both.

Many policy makers view the low compensation that is common in child care as the key driver of turnover. Indeed, many pandemic relief efforts focused on increasing compensation to stabilize the field. However, there is relatively little empirical evidence on whether child care sites that pay higher wages face fewer staffing challenges, and even less on the extent to which this was true during the pandemic (Barnett 2003; Whitebook, Philipps, and Howes 2014; Totenhagen et al. 2016; NAEYC 2021). We know that child care centers vary considerably in their staffing challenges (Doromal et al. 2022) but do not yet have evidence on whether differences in compensation across sites may explain this variability.

This brief summarizes the limited evidence on the relationship between compensation and staffing challenges at child care centers. We then add new evidence

using large-scale, pandemic-era data from 743 centers—nearly all (90 percent) publicly funded child care centers in Louisiana. These data were collected in partnership with the Louisiana Department of Education (LDOE), and include information on vacancy rates, the prevalence of staffing challenges, and negative consequences related to these challenges (e.g., turning families away, hiring underqualified teachers). We find that during the pandemic centers with higher wages were significantly less likely to experience high vacancy rates, report staffing challenges, turn families away, and hire less experienced teachers.

DO LOW WAGES EXPLAIN STAFFING CHALLENGES?

Unlike pre-K or Head Start, child care centers are mostly private, small businesses with very thin profit margins (~1 percent profit margins are typical [Davies and Grunewald 2011; U.S. Department of the Treasury 2021]). Most centers pay low wages: Nationally, in 2019, child care teachers earned about \$14 per hour (Coffey 2022). They were nearly eight times as likely to live in poverty as their K–12 counterparts and more than half used a means-tested social safety net program such as SNAP or Medicaid (Whitebook, McLean, Austin, and Edwards 2018; Gillispie 2020; McLean et al. 2021). What's more, within the child care sector, assistant teachers tend to have lower wages and higher turnover than their lead teacher counterparts (Bassok, Hall, et al. 2021; Hall et al. 2023), whose positions typically require more education (Herbst 2023). Child care teachers who work with infants and toddlers also have lower wages and higher turnover than child care teachers who work with preschool-age children (Whitebook, McLean, Austin, and Edwards 2018; Caven et al. 2021; Sandstrom, Casas, and Lou 2023).

Child care staffing challenges in prior years were similar to those seen in other low-wage labor markets, but this evidence may be outdated. Nationally representative data from 2008 showed that low-wage workers in both the care sector (e.g., nurse aides and child care workers) and the service sector (e.g., food servers, cleaning staff, and office assistants) remain in their jobs for less than one-and-a-half years on average. Child care teachers had similar turnover rates as those of other low-wage workers in the service sector (Duffy, Baughman, and Smith 2021)—despite the importance of stable early learning experiences for young children. More recently, amid the pandemic recovery, center directors have reported struggling to compete for workers given larger wage increases in retail, hospitality, and warehouses (Peacher 2021; Peck 2022).

Although child care wages are almost universally low, wages do vary across sites, and this variation may help explain variation in staffing challenges across sites. In K–12 settings, research has shown that higher wages—both absolute and relative to other professions—are associated with lower teacher turnover (Hanushek and Rivkin 2007; Marvel et al. 2007; Falch 2011; Hendricks 2014; Loeb and Myung 2020); additionally, the relatively small research base on child care compensation suggests that higher wages may be associated with lower turnover in child care as well (Whitebook and Sakai 2003). For example, a study using nationally representative data from 2019 found that early educators paid less than \$10 had a 23 percent turnover rate, while those paid \$15 to \$19.99 had a 17 percent turnover rate. Other comparisons made within ECE sectors also found that those paid more were less likely to quit (Grunewald, Nunn, and Palmer 2022). Another study using nationally representative data from 2012 found a \$1 increase in a child care center's average hourly teacher wage was associated with a 5 percent

reduction in the likelihood of that center having a turnover rate over 20 percent (Caven et al. 2021).

These findings align with a study of 2,783 early educators in California, which found that teachers making higher wages were significantly less likely to turn over in a two-year period (Bridges et al. 2011). Similarly, a recent pre-pandemic study in Virginia found that child care teacher turnover over an eight-month period was more pronounced among teachers in the bottom quartile of wages (between \$13,650 and \$20,000 per year) (Bassok, Hall, et al. 2021).

THE SHORTAGE OF COVID-ERA DATA ON STAFFING CHALLENGES

Although we know that the COVID-19 pandemic created substantial challenges for the child care sector, we have very little evidence as to whether centers that offered higher compensation faced fewer staffing challenges during the pandemic. COVID-era data linking staffing outcomes in child care to site-level compensation are almost nonexistent. This is likely because child care centers are independent businesses, making it difficult to collect data on staff wages and benefits, hiring, vacancies, and turnover at scale (Whitebook, McLean, and Austin 2018). The most comprehensive and nationally representative data come from the National Survey of Early Care and Education (NSECE), though currently data are only available through 2019 (NSECE 2022). Pandemic-era surveys like those cited above provide insight on some staffing challenges but often lack large, representative samples; high response rates; and compensation data that allows an examination of variation across sites.

NEW EMPIRICAL EVIDENCE FROM STATEWIDE DATA IN LOUISIANA

We bolster the evidence on compensation and staffing challenges during the pandemic using new data collected through our research-policy partnership with LDOE. In January 2022, our state partners invited all publicly funded child care sites in the state to apply for pandemic relief funds. Our team added a set of questions about staffing and compensation to the applications, which over seven hundred child care sites—90 percent of sites receiving public funds—submitted. We refer to “teachers” when the question did not specify lead or assistant status, “lead teachers” when the question asked specifically about lead teachers, and “assistant teachers” when the question asked specifically about assistant teachers. This data collection yielded unique statewide data on staffing during the pandemic. Our sample provides timelier, more universal data, as well as a broader range of outcomes—vacancies, hiring challenges, and implications for families—than available in prior studies.

Consistent with national data, average wages in our sample were low: \$11.21 per hour for lead teachers (table 1A) and \$9.67 per hour for assistant teachers (table A2, panel A, available in a separate online appendix that can be accessed on *Education Finance and Policy*'s website at https://doi.org/10.1162/edfp_a_00410). Centers served an average of fifty-seven children. About 64 percent primarily served children ages 0–2 years, 30 percent primarily served children ages 3–6 years, and 6 percent primarily served children enrolled in school (table 1B).

Prevalence of Staffing Challenges and Impacts

Figure 1 shows the prevalence of staffing challenges. The average center vacancy rate was 15 percent for lead teachers and 24 percent for assistant teachers (shown in

Table 1. Descriptive Statistics

Panel A: Compensation & Benefits		
	<i>N</i>	Mean (SD) or %
Mean lead teacher wage, \$/hour	743	\$11.21 (2.44)
Panel B: Controls		
	<i>N</i>	Mean (SD) or %
Mean total enrollment	743	57 (38)
Primary age group served ^a	743	64% Infants/toddlers (0 up to 36 months) 30% 3–6-year-olds not yet in Kindergarten 6% Children enrolled in school

Notes: ^a22 centers served equal proportions of infants/toddlers and 3- to 6-year-old children. These centers were designated as serving primarily infants/toddlers.

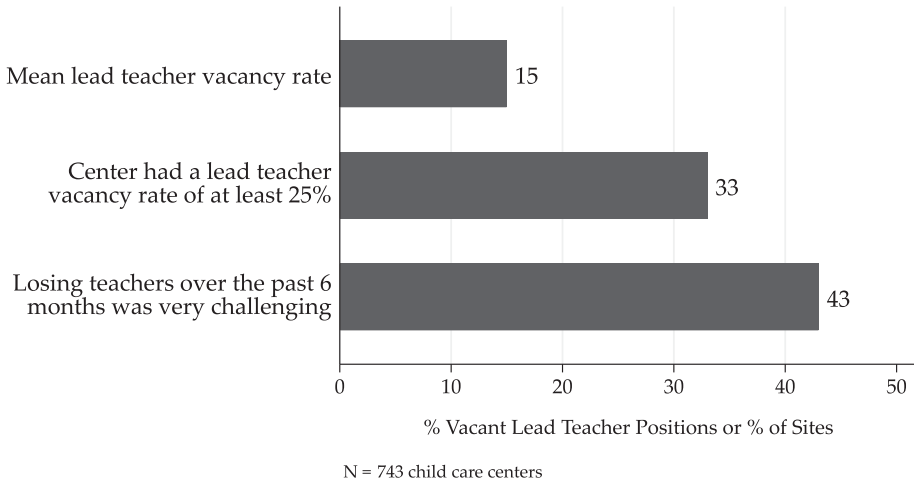


Figure 1. Child Care Center Staffing Challenges in Louisiana (January 2022)

online appendix figure A1). One in three sites had lead teacher vacancy rates over 25 percent. We report both the continuous vacancy rate and rates above 25 percent to balance the strengths of each measure; the continuous rate avoids an arbitrary threshold while exceeding 25 percent might better approximate staffing challenges severe enough to have negative consequences for sites and leaders. More than four in ten center leaders (43 percent) reported that losing teachers in the past six months was very challenging.

Overall, 95 percent of the leaders in our sample either had a current vacancy or hired a teacher in the past six months. Figure 2 shows the percentage of these leaders who faced hiring challenges and the percentage who reported that difficulties finding new teachers in the past six months led to specific negative impacts. Of leaders who had a current vacancy or hired a teacher in the past six months, 90 percent indicated they asked current staff to work more hours or take on additional roles; 84 percent said they hired less experienced or qualified teachers than desired; 68 percent reported that

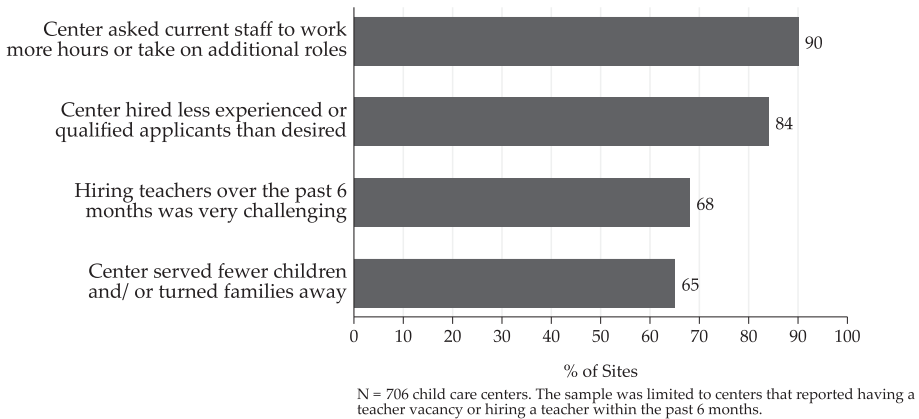


Figure 2. Child Care Center Staffing Challenges and Leader-Reported Impacts in Louisiana (January 2022)

hiring over the past six months was very difficult; and 65 percent reported they served fewer children or turned families away.

Compensation and Staffing Challenges

We used regression to assess the relationship between compensation and staffing challenges while controlling for center enrollment, the age of children primarily served, and geographic region. More details on methodology are available in the online appendix.

Centers with higher lead teacher wages were significantly less likely to experience high vacancy rates and staffing challenges. Table 2A shows that a \$1 increase in average lead teacher wages (a 9 percent increase from the average of \$11.21) was associated with a 0.75 percentage point decrease in the vacancy rate. A \$1 increase in average lead teacher wages was associated with a 2.5 percentage point decrease in the probability of having a vacancy rate of at least 25 percent; a 3.0 percentage point decrease in the probability of reporting that losing teachers over the past six months was “very challenging” as opposed to “not at all,” “a little,” or “moderately challenging”; and a 2.0-percentage point decrease in the probability of reporting that hiring teachers in the past six months was “very difficult” as opposed to “not at all,” “a little,” or “moderately difficult” (table 2B). The findings for assistant teachers were similar, though the associations were smaller in magnitude (see online appendix table A3).

Potential Consequences for Access and Quality

Among sites with at least one vacancy or those who hired at least one teacher in the past six months (95 percent of the sample), leader-reported impacts of staffing challenges were less likely at sites with higher lead teacher wages. A \$1 increase in average lead teacher wages was associated with a 2.4 percentage point decrease in the probability of serving fewer children and/or turning families away and a 2.1 percentage point decrease in the probability of hiring less experienced or qualified teachers than desired (table 3). Higher assistant teacher wages were associated with a lower likelihood of asking staff

Table 2. Compensation and Changes in Staffing Challenges

Panel A: Compensation and Continuous Staffing Challenges			
	Lead Teacher Vacancy Rate		
Average lead teacher wage at center, \$/hour			-0.495* (0.202)
Total center enrollment			-0.0589* (0.0234)
Center primarily served 3–6-year-old children not yet in Kindergarten			-1.06 (1.27)
Center primarily served children enrolled in school			4.47 (3.25)
Regional Labor Market Area fixed effects			Yes
Observations			743
Panel B: Compensation and Changes in the Predicted Probability of Staffing Challenges			
	At Least 25% of Lead Teacher Positions at Center Were Vacant	Losing Teachers over the Past 6 Months Was Very Challenging	Hiring Teachers Over the Past 6 Months Was Very Difficult
Average lead teacher wage at center, \$/hour	-0.0183** (0.00657)	-0.0257*** (0.00405)	-0.0198*** (0.00523)
Total center enrollment	-0.00345*** (0.000700)	0.00210* (0.000937)	0.00114 (0.000904)
Center primarily served 3–6-year-old children not yet in Kindergarten	-0.0302 (0.0381)	-0.0831 (0.0519)	-0.0488 (0.0542)
Center primarily served children enrolled in school	0.185* (0.0834)	-0.0417 (0.0431)	-0.0305 (0.101)
Regional Labor Market Area fixed effects	Yes	Yes	Yes
Observations	743	743	706 ^a

Notes: Panel A presents results of the model $LeadTeacherVacancyRate_{ij} = \beta_0 + \beta_1 AverageWage_{ij} + \Gamma X + \alpha_j + \epsilon_{ij}$, where X represents the center covariates (i.e., total center enrollment, primary age group served) and α_j represents Regional Labor Market Area (RLMA) fixed effects. Panel B presents results, converted to changes in predicted probability, for three outcomes using the model $\ln\left(\frac{P(Y_{ij}=1)}{1-P(Y_{ij}=1)}\right) = \beta_0 + \beta_1 AverageWage_{ij} + \Gamma X + \alpha_j + \epsilon_{ij}$, where X represents the center covariates and α_j represents RLMA fixed effects. Changes in predicted probability were calculated with all other predictors at their mean value. Standard errors, shown in parentheses, were clustered at the RLMA level. For primary age group served, the omitted group is centers that primarily served infants/toddlers (0 up to 36 months). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

^aThe sample was limited to centers that reported having a teacher vacancy or hiring a teacher within the past 6 months.

to work more hours or take on additional roles, but not other staffing challenges (online appendix table A4).

DISCUSSION

Our findings highlight the ongoing severity of child care staffing challenges (Bassok, Markowitz, et al. 2021; Caven et al. 2021; Grunewald, Nunn, and Palmer 2022), and we do so statewide, with pandemic-era data and novel staffing-related outcomes. We found an average center lead teacher vacancy rate of 15 percent—nearly quadruple the 4 percent national vacancy rate for public school teachers in October 2022 (National Center for Education Statistics 2022). Most centers reported turning families away and hiring less-experienced or -qualified staff than desired. We also found that lead and assistant teacher wages were each associated with staffing challenges, though in sometimes different ways that warrant future research.

Table 3. Compensation and Changes in the Predicted Probability of Hiring Difficulty Impacts

	Center Served Fewer Children and/or Turned Families Away	Center Asked Current Staff to Work More Hours or Take on Additional Roles	Center Hired Less-Experienced or -Qualified Applicants than Desired
Average lead teacher wage at center, \$/hour	-0.0197* (0.00944)	-0.00343 (0.00348)	-0.0184* (0.00755)
Total center enrollment	0.00165** (0.000613)	0.00178** (0.000544)	0.00141** (0.000438)
Center primarily served 3–6-year-old children not yet in kindergarten	0.0575 (0.0414)	-0.0353 (0.0218)	-0.0474** (0.0165)
Center primarily served children enrolled in school	-0.0368 (0.102)	-0.0473 (0.0883)	-0.0381 (0.0718)
Regional Labor Market Area fixed effects	Yes	Yes	Yes
Observations	706 ^a	706 ^a	706 ^a

Notes: Table 3 presents results, converted to changes in predicted probability, for three outcomes using the model $\ln\left(\frac{P(Y_{ij}=1)}{1-P(Y_{ij}=1)}\right) = \beta_0 + \beta_1 \text{AverageWage}_{ij} + \Gamma X + \alpha_j + \epsilon_{ij}$, where X represents the center covariates (i.e., total center enrollment, primary age group served) and α_j represents Regional Labor Market Area (RLMA) fixed effects. Changes in predicted probability were calculated with all other predictors at their mean value. Standard errors, shown in parentheses, were clustered at the RLMA level. For primary age group served, the omitted group is centers that primarily served infants/toddlers (0 up to 36 months). * $p < 0.05$, ** $p < 0.01$.

^aThe sample was limited to centers that reported having a teacher vacancy or hiring a teacher within the past six months.

In prior research and in the Louisiana data, wages were consistently and negatively associated with staffing challenges. These findings suggest that low pay presents a major obstacle to hiring and retention, and that difficulty hiring bodes poorly for both children’s access to care and care quality (Roberts et al. 2018; NAEYC 2021). Our findings suggest that raising wages may be a promising approach to addressing staffing challenges. Of course, the current analysis is correlational, so more work is needed to better understand which sites offer higher pay and how they are able to do this. Understanding this can help shape policy and assess whether it is the wages themselves, or other related factors, that drive the lower turnover rates. That said, recent experimental evidence highlights that pay increases can stabilize the child care workforce: a \$1,500 incentive paid to teachers in Virginia cut turnover in half over an eight-month period (Bassok, Doromal, et al. 2021).

Although our study is the first we know of to use nearly statewide data on teacher wages and staffing challenges in child care centers, our analysis has three key limitations. First, it is correlational, and more research on the impact of compensation is needed. Second, it examines wages only. Future research should examine total compensation, including nonwage benefits. Third, our data were collected at the center level, which limits our understanding of nuances of staffing challenges at the teacher level. For example, infant and toddler teachers experience higher turnover and lower wages (Whitebook, McLean, Austin, and Edwards 2018; Caven et al. 2021; Sandstrom, Casas, and Lou 2023), but our data only include the child age breakdown at the center level. We were unable to test whether the association between wages and staffing challenges differ for infant and toddler teachers relative to preschool age teachers. More granular data collection on compensation and staffing challenges at the teacher level are needed.

Policy Alternatives to Addressing Staffing Challenges in Child Care

Addressing low compensation will be difficult without public funding: Currently, child care centers cannot afford to pay teachers more without increasing tuition rates for

families (Davies and Grunewald 2011), yet the median family already spends 11 percent of its income on child care (Herbst 2018), and cannot afford to spend more. While there are large gaps between current public funding and what is likely needed to stabilize and fairly compensate the ECE workforce, the potential high returns and far-reaching economic and societal benefits make this a worthwhile investment (Heckman 2006; Duncan and Magnuson 2013; Yoshikawa et al. 2013).

During the pandemic, large federal investments allowed states to begin experimenting with and implementing strategies to improve compensation in the short term. For example, Minnesota, New Hampshire, and Nevada required centers to use a portion of their American Rescue Plan Act Child Care stabilization grants on teacher compensation, and Illinois funneled teacher bonuses through centers (Administration for Children and Families 2021). These innovations highlight the potential for states to leverage public dollars to increase payment for these educators, but are not sustainable without long-term investments. Child care leaders in particular have called out their inability to pay a living wage without stable public funding (Bassok et al. 2022).

Recent policy initiatives in New Mexico and Washington, DC, may provide a roadmap for finding stable funding for teacher compensation. In New Mexico, a recent ballot initiative amended the constitution to earmark 0.75 percent of additional distributions from its permanent land grant fund (more than \$100 million in 2023) for early childhood education (Wilkes 2022). In Washington, DC, policy makers earmarked local funding from personal income taxes from individuals making over \$250,000 to significantly raise child care teacher wages. States have also leveraged taxes from marijuana, online sports betting, and digital advertising to help fund ECE (Liles 2022).

With a secure funding source as the foundation, states and localities can pursue or expand promising policies to improve wages and workforce stability. One approach would be to provide bonuses or wage supplements, a strategy that a few states such as North Carolina and Wisconsin implemented even prior to the pandemic (Dade and McLean 2022). A second promising approach is to increase subsidy reimbursement rates, allowing centers that accept child care subsidies to pay teachers more. Historically, subsidy reimbursement rates paid to child care centers were determined based on the market rates of local programs—rates that are currently too low to provide livable wages for teachers and high-quality care for children (Bipartisan Policy Center 2020). To address this discrepancy, multiple states including Virginia and New Mexico have increased their subsidy reimbursement rates to account for higher pay and benefits for teachers (Office of Governor Michelle Lujan Grisham 2021; Harrison 2022; Sentel 2022). Although there is not yet evidence about the impact of these new cost models, they may provide a mechanism to increase teacher compensation without raising families' costs.

In a third approach, states could issue noncompetitive grants to centers to increase baseline pay for the child care workforce. Illinois and Massachusetts have both designed programs to raise teacher compensation for all licensed child care providers (Massachusetts Department of Early Education and Care n.d.; Smylie 2023). The award amount per center is determined using inputs such as the total capacity at a site (regardless of whether the slots are filled or not) and staff size, making it a responsive and reliable funding source for increasing teacher compensation. While all centers can receive funds regardless of whether they enroll children using state

subsidies, those that serve more vulnerable children are eligible for additional funds. As part of the agreement, centers must use the grant funds to support teacher compensation and are required to regularly report on staffing and enrollment.

Policy and Practice: Addressing Data and Wages Together

This study has two clear implications. First, increasing public funds to improve child care teacher wages specifically is a promising approach to stabilizing the child care workforce. Our findings mirror prior evidence that low wages predict greater staffing challenges (Caven et al. 2021).

Second, efforts to address compensation and staffing challenges should be coupled with more extensive data collection and rigorous evaluation. The observed variability in vacancies and staffing challenges in our data, paired with the high variability in child care turnover found in prior studies, suggests that effectively targeting resources and tracking progress will be difficult if we cannot thoroughly understand the problem (Doromal et al. 2022). Instead, real-time, actionable data are needed to best support workforce stability and access for families, particularly given the evolving implications of COVID-19. To facilitate this, policy makers can partner with researchers to embed data collection into far-reaching processes like the relief applications discussed in this brief. Coupling efforts to bring child care teacher compensation to a living standard with real-time data collection could allow policy makers to both solve a long-standing social problem, and invest meaningfully in children's futures.

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