

Data-for-Equity Research Brief

Child Care Affordability for Full-Time Year-Round Working Parents

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Child care is unaffordable for the majority of working parents, especially for low-income and black and Hispanic working parents

Recent studies have highlighted that child care is unaffordable for many U.S. families. This research brief goes deeper to understand child care affordability for parents with full-time, year-round jobs. These parents have a clear need for child care given their full-time work status. This brief estimates whether, within the group of full-time, year-round working parents who have children age 13 and under, particular income and racial/ethnic subgroups are more likely to face unaffordable center-based child care costs.

Equity Highlights

- Overall, parents working full time and year round would have to spend 10% of family income on child care if they chose to place their children up to age 13 in full-time center-based care.
- Low-income parents would have to spend over one-quarter of annual income to afford center-based care, compared to 8% of income for parents who are not low-income.
- Almost all (95%) of low-income parents would pay more than the child care affordability benchmark, which was established by the U.S. Department of Health and Human Services at 7% of total family income.
- Low-income parents and black and Hispanic parents working full time and year round are more likely to face unaffordable child care.
- There is variation across states in the percent of family income that working parents would have to spend to send their children to center-based care.
- Policymakers and other stakeholders considering policies to support working parents can get more information on how affordable child care is in their state by clicking the links below.
 - o [Child care price to income ratio](#) by [race/ethnicity](#), by [income](#), by [race/ethnicity and income](#)
 - o [Unaffordable child care indicator](#) by [race/ethnicity](#), by [income](#), by [race/ethnicity and income](#)

Terminology

The following terms are used throughout this brief:

“Working parent” refers to parents who work full time (35 hours or more per week) and year round (50 weeks or more per year).

“Low-income families” refers to families with total family income under 200% of the federal poverty line (FPL).

“Low-income parents” refers to parents that live in low-income families.

Over the past several decades, the demand for child care has increased substantially in the United States, due to both increased parental employment and increased awareness of the developmental benefits of quality early education. Simultaneously, the price of child care has risen dramatically. As a result, without financial assistance, low-income families are often unable to secure affordable, high-quality child care in the private market (Council of Economic Advisers, 2015; Giannarelli & Barsirmantov, 2000; Laughlin, 2013). Since black, Hispanic and immigrant families are more likely to have lower family incomes, and have fewer centers located in their immediate neighborhoods (Geronimo, Hardy, Crisan, Joshi, & Acevedo-Garcia, 2014), these families can face even more limited child care access and affordability.

Improving access enables more children to experience the developmental benefits of high-quality early care and education (Li, Farkas, Duncan, Burchinal, & Vandell, 2013; Morrissey, 2017; NICHD ECCRN, 2006; Yoshikawa et al., 2013). Additionally, research finds that reducing the cost of child care and increasing the availability of free or low-cost early childhood educational opportunities increases mothers’ labor force participation with greater impacts among families with lower income or higher care costs (Morrissey, 2017).

Given the importance of child care for family and child wellbeing, in 2016 the U.S. Department of Health and Human Services set a federal affordability benchmark (i.e., the maximum percent of income a family should spend on child care) at 7% of total annual family income (U.S. Department of Health and Human Services, 2016). The U.S. Department of Health and Human Services based the benchmark on the estimated average percent of monthly income families spend on child care which has remained roughly 7% since 1997.

Parents have various child care options and multiple factors to consider as they choose among them (i.e., price, quality, type of setting (center-based vs. home-based), and availability) (Forry, Tout, Rothenberg, Sandstrom, & Vesely, 2013; Schult & Durana, 2016). For this brief, we focus on the affordability of center-based child care. Some parents prefer home-based child care due to the limitations of center-based care (e.g., limited schedule flexibility) (Forry et al., 2013). Forthcoming analyses will focus on the affordability of home-based care.

The data in this brief provides measures of the affordability of center-based care for parents with high labor force participation if they were to purchase full-time year-round child care at market prices without subsidies.

Data

We obtained data on the annual total family income of working parents from the 2014-2017 Current Population Survey Annual Social and Economic Supplement (CPS ASEC) (Flood, King, Ruggles, & Warren, 2015).

We obtained state-specific child care price data from the 2014-2016 Parents and the High Cost of Child Care reports (Child Care Aware of America, 2016) and the 2017 State Child Care Facts report (Child Care Aware of America, 2017) by Child Care Aware of America.¹ These reports estimate the price of child care by state based on surveys of Child Care Resource and Referral (CCR&R) state and local offices. CCR&R offices make use of market rate surveys and internal provider databases to estimate child care prices. The center-based child care price data is reported as the annual price in each state of full-time year-round care for infants (ages 0 to 2) and for preschoolers (ages 3 to 5), and before- and after-school care during the school year for children ages 6 to 13.² Child care prices tend to be highest for infant care, less high for preschool-age care and lowest for school-age care. State-specific price data enables us to account for state variation in the price of center-based child care. The price data does not include the price of paid care for children ages 6 to 13 in the summer months. Our estimates assume that parents pay for full-time year-round center-based care and do not account for any other type of care a parent may utilize (e.g., unpaid family care).

The sample for this analysis is working parents who have four children or fewer and at least one child under age 14 (N=71,981).³ We restrict our sample to parents working full time and year round to focus on parents that would need full-time care for their children throughout the year. Most working parents in this sample (89%) have one or two children age 13 and under. Nine percent of the sample have three children and 2% of the sample have four children age 13 and under.

Analysis

The measures of child care affordability in this brief compare the price of child care in each state to the family income of working parents living in each state. Specifically, we compare the estimated price parents would pay for center-based child care in their state of residence, adjusted for the number of children they have and the ages of the children, to their total family income reported in the CPS.

We created two indicators of child care affordability for working parents at the national- and state-level:⁴

- 1. Child care price to income ratio:** This ratio measures the median percent of total family income that would be spent by working parents on child care if they chose to pay for full-time center-based care for their children age 13 and under. The numerator of the ratio is the total price a parent would pay for child care. The denominator is a parent's total family income. We present the median ratio by state as a percentage.
- 2. Unaffordable child care indicator:** This indicator measures the share of all working parents who would pay more than the federal benchmark (7% of family income) if they chose to pay for full-time center-based care for their children age 13 and under. Based on a working parent's child care price to income ratio, we categorize each parent in the sample as having either un-

affordable or affordable child care. We present the share of all working parents that have unaffordable child care by state.

Family income data, which is also available for specific subgroups of parents (by poverty status and race/ethnicity), provides more precise estimates of affordability compared to estimates of affordability based on state or regional median family income. Using child care price data instead of child care expenditure data (i.e., data measuring how much families spend on child care) enables us to estimate the price of center-based child care that working parents would pay if they chose this type of care (Mattingly, Schaefer, & Carson, 2016). Due to data limitations in both the CPS income data and the child care price data, the state-level estimates in this brief do not capture local (sub-state) variation in child care affordability.

We present the above indicators: (i) for all full-time, year-round working parents, (ii) for low-income and not low-income full-time, year-round working parents, and (iii) for full-time, year-round working parents by race/ethnicity (white, non-Hispanic; Hispanic; black, non-Hispanic; and Asian/Pacific Islander, non-Hispanic).

Five research questions guide our child care affordability analysis:

1. What share of working parents has full-time, year-round employment and therefore may need full-time child care?
2. What share of these parents may face child care affordability issues because they earn low incomes despite working full time and year round?
3. How affordable is full-time center-based care for working parents?
4. How affordable is full-time center-based care for low-income working parents?
5. Are there racial/ethnic disparities in the affordability of full-time center-based care for working parents?

Findings

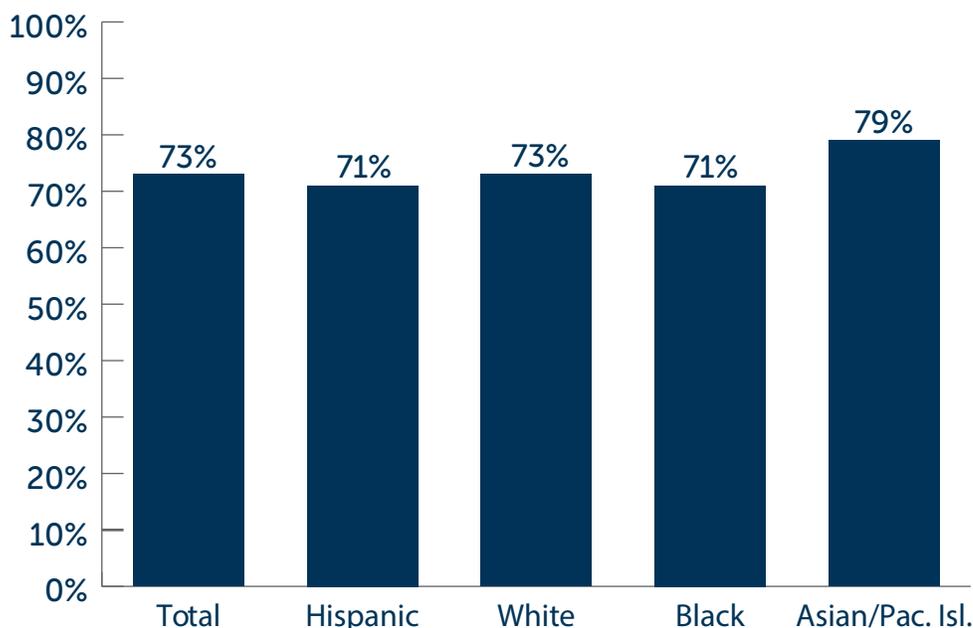
Across racial/ethnic groups over 70% of working parents have full-time, year-round employment (Exhibit 1).

A first step in exploring the affordability of child care is determining whether parents need it. Seventy-three percent of employed parents that have at least one child under age 14 work full time and year round. The proportion is similar across racial/ethnic groups. Importantly, this indicates that parents are highly attached to the labor force and will likely need some form of child care during their working hours.

Twenty-one percent of parents working full time and year round are low income; Hispanic parents working full time and year round are the most likely to be low income (Exhibit 2).

The fact that many parents are highly attached to the labor force does not ensure that their families are financially secure. While only 13% of white working parents are low income, two-fifths (40%) of Hispanic and one-third (32%) of black working parents are low income. Despite having similar attachment to the labor force, Hispanic and black working parents are more than twice as likely to be low income than white and Asian/Pacific Islander working parents. Therefore, a higher proportion of Hispanic and black working parents are vulnerable to child care affordability challenges.

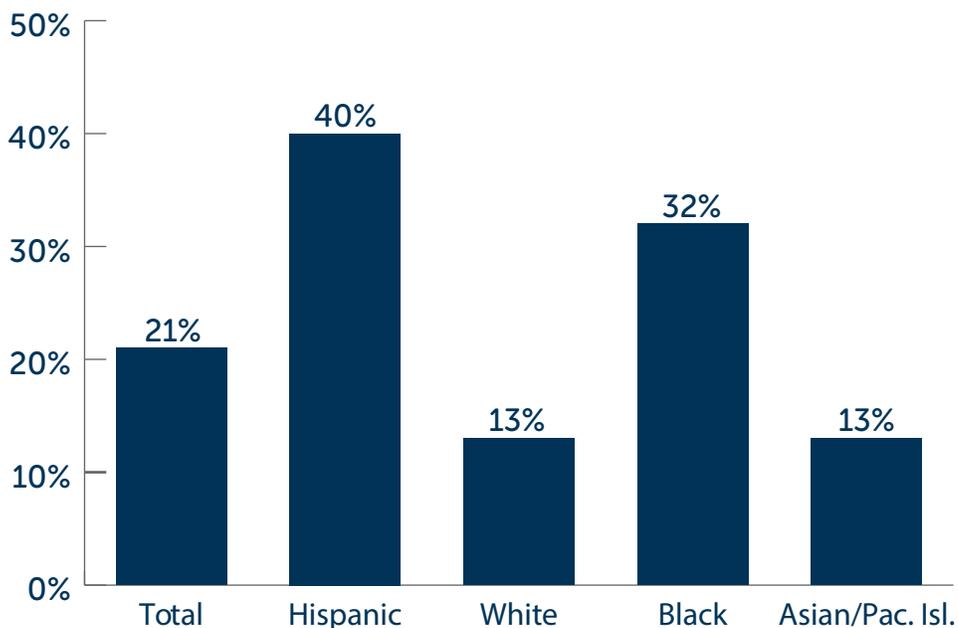
Exhibit 1. Percent of working parents that work full time and year round⁵



Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.

Notes: The sample is working parents with four or fewer children and at least one child under age 14 (N=98,884).

Exhibit 2. Percent of full-time year-round working parents that are low income



Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.

Notes: The sample is parents working full time and year round with four or fewer children and at least one child under age 14 (N=71,981).

Overall, parents working full time and year round would spend 10% of family income to send their children to full-time center-based child care; low-income parents working full time and year round would spend 28% (Exhibit 3).

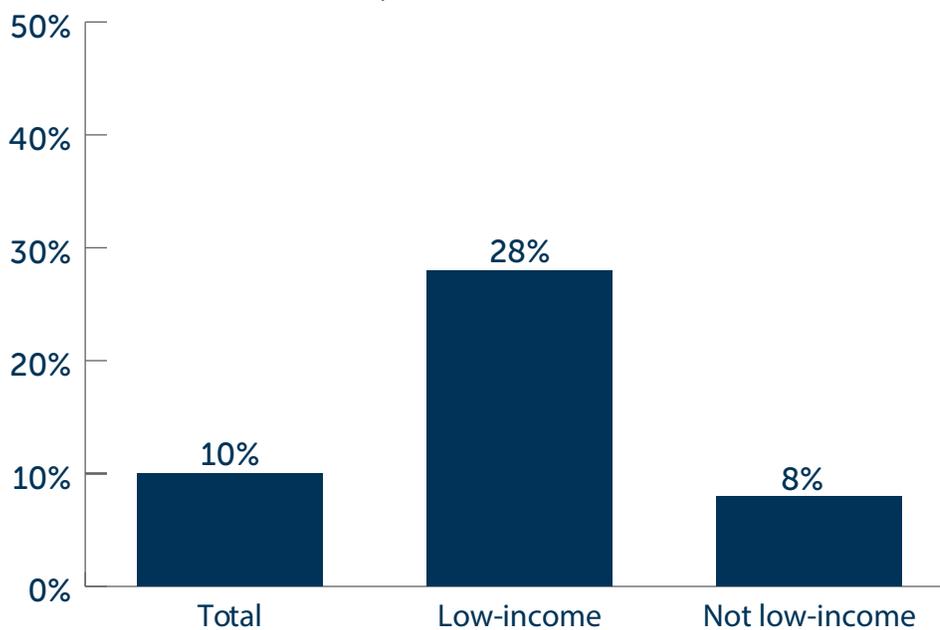
This 10% child care price to income ratio exceeds 7%, the Department of Health and Human Services' benchmark for affordability. However, the proportion of income that a working parent would spend on child care varies greatly by family income level. Low-income working parents would spend 28%, whereas families that are not low income would pay 8% of their family income towards child care.

Almost all low-income parents working full time and year round would have to spend more than the federal affordability benchmark of 7% to send their children to full-time center-based child care (Exhibit 4).

Nearly two-thirds of all working parents would pay more than the benchmark for center-based care. Ninety-five percent of low-income working parents would spend more than the federal affordability benchmark, as would 55% of working parents with higher family incomes.

Exhibit 3. Child care price to income ratio for working parents, by family income level

(Ratio of parents' estimated child care price to their annual income)

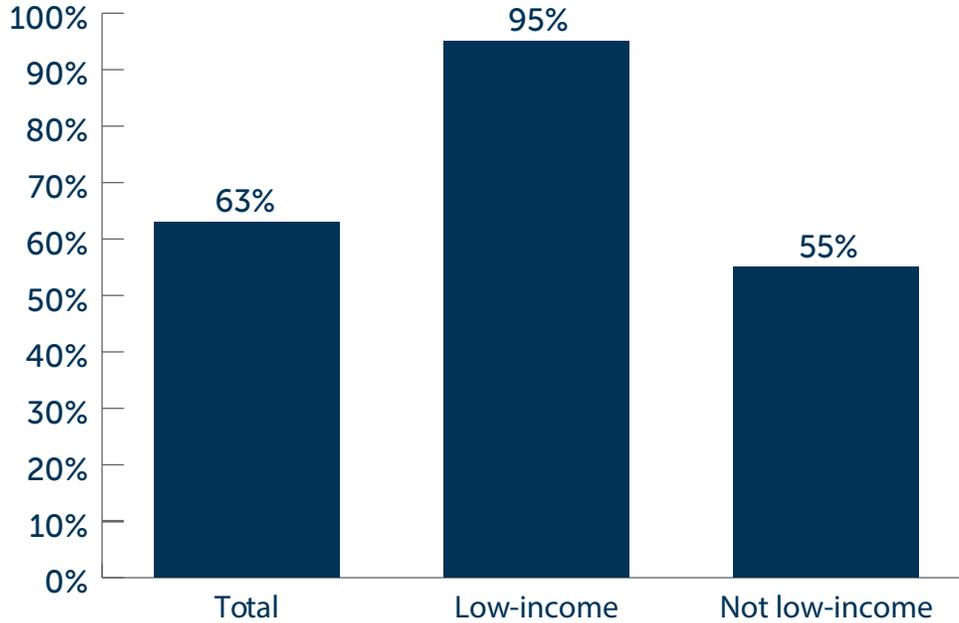


Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.

Notes: Estimates are presented as medians. The sample is parents working full time and year round with four or fewer children and at least one child under age 14 (N=71,981).

Exhibit 4. Unaffordable care indicator for working parents, by family income level

(Estimated percent of parents facing child care prices above the federal affordability benchmark of 7%)

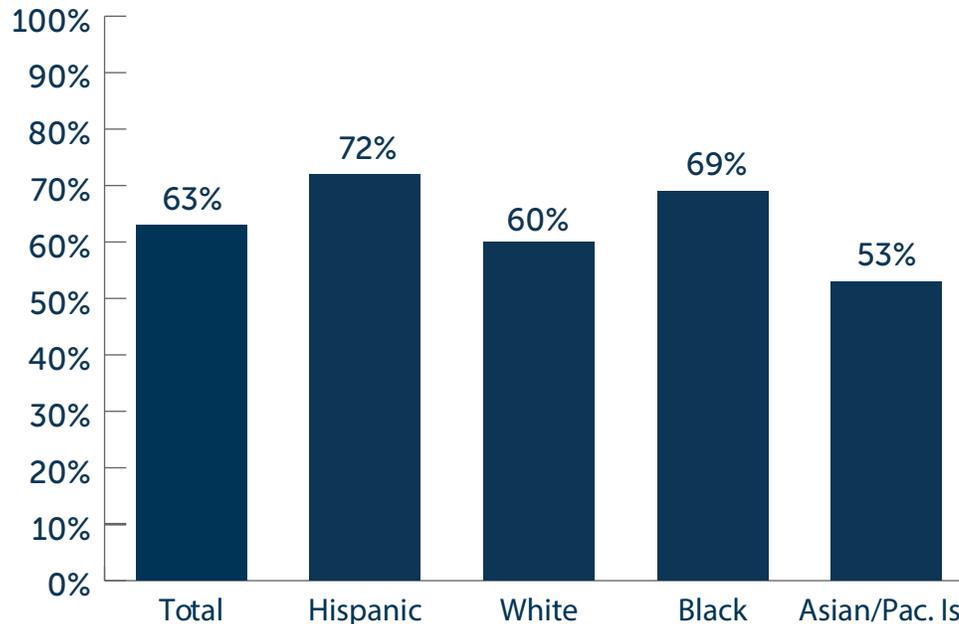


Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.

Notes: The sample is parents working full time and year round with four or fewer children and at least one child under age 14 (N=71,981).

Exhibit 5. Unaffordable care indicator for working parents, by race/ethnicity

(Estimated percent of parents facing child care prices above the federal affordability benchmark of 7%)



Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.

Notes: The sample is parents working full time and year round with four or fewer children and at least one child under age 14 (N=71,981).

Due to differences in family income, a greater percentage of black and Hispanic full-time year-round working parents would experience child care prices above the federal affordability benchmark (Exhibit 5).

Sixty-nine percent of black and 72% of Hispanic working parents would face unaffordable child care, compared to 60% of white and 53% of Asian/Pacific Islander working parents.

There is variation across states in the child care price to income ratio experienced by low-income full-time year-round working parents (Exhibit 6).

Low-income working parents in the five states/district with the highest child care price to income ratio (District of Columbia, New York, Hawaii, Wisconsin, and Pennsylvania) would spend between 38% and 44% of family income on center-based child care. In the five states with the lowest child care price to income ratio (Mississippi, South Carolina, Louisiana, Tennessee and California) parents would spend between 16% and 21% of family income on center-based child care.

Exhibit 6. States with the highest and lowest child care price to income ratio for working parents

Low-income parents				White parents			
Highest	Percent	Lowest	Percent	Highest	Percent	Lowest	Percent
DC	44.0	Mississippi	15.9	New York	13.9	Louisiana	4.7
New York	42.4	South Carolina	18.7	Wisconsin	13.8	Mississippi	4.8
Hawaii	40.1	Louisiana	19.2	Hawaii	13.2	California	5.6
Wisconsin	39.5	Tennessee	20.9	Montana	12.7	South Carolina	5.7
Pennsylvania	37.9	California	21.4	Vermont	12.3	New Jersey	6.3

Asian/Pacific Islander parents				Black parents			
Highest	Percent	Lowest	Percent	Highest	Percent	Lowest	Percent
New York	16.1	Tennessee	5.0	Wisconsin	28.5	Tennessee	6.5
Wisconsin	15.6	California	5.4	Alaska	24.6	Louisiana	7.1
Rhode Island	14.2	Texas	5.9	New York	20.5	Mississippi	7.5
Colorado	13.7	Florida	6.0	DC	20.0	South Carolina	7.7
Alaska	13.1	Georgia	6.1	Nevada	19.5	California	7.8

Hispanic parents			
Highest	Percent	Lowest	Percent
Wisconsin	26.6	South Carolina	10.0
Michigan	24.7	California	10.6
New York	22.0	Florida/New Mexico*	10.8
Pennsylvania	21.7		
Washington	20.5	Missouri/Texas*	11.2

* Tied percents.
 Source: Current Population Survey, 2014-2017 March Annual Social and Economic Supplement, Public Use Microdata Files, IPUMS-CPS, University of Minnesota, www.ipums.org.
 Notes: Estimates are presented as medians. The sample is parents working full time and year round with four or fewer children and at least one child under age 14 (N=71,981).

Discussion

Even for families with a parent working a full-time year-round job, full-time center-based child care for young children and care during the school year for school-age children is largely unaffordable. Importantly, the parents included in this analysis are those with a clear need for child care.

This analysis has three key findings about the affordability of center-based care for working parents. First, market-price full-time center-based care would be difficult to afford for a majority of U.S. working parents. Second, center-based child care presents an even greater financial burden for low-income working parents – virtually all (95%) low-income full-time year-round working parents face unaffordable child care costs. Finally, because larger proportions of working black and Hispanic parents earn low incomes than working white and Asian/Pacific Islander parents, child care affordability issues disproportionately affect black and Hispanic working families. This disproportionate burden has the potential to exacerbate racial/ethnic disparities in both family economic security and child wellbeing.

Policy Context

Concern about the price of child care is growing and several policy solutions have been either proposed or implemented to address affordability. During the 2016 presidential campaign, both major party nominees addressed child care affordability. Then Republican candidate, Donald Trump, proposed three new tax benefits related to child care including a tax credit, a tax deduction, and a savings account (Batchelder, Maag, Huang, & Horton, Forthcoming). Then Democratic candidate, Hillary Clinton, made affordable child care part of her campaign platform with a proposal to invest in early child care education so that no family would have to spend more than 10% of income on child care (Office of Hillary Rodham Clinton, 2017).

The Child Care for Working Families Act, introduced in Congress in September 2017, presents a comprehensive approach to addressing the growing price of child care ("Child Care for Working Families Act," 2017). The Act would guarantee child care assistance to families earning up to 150% of their state's median income and would limit their child care expenses to 7% of family income. There would be additional investment to ensure living and fair wages for child care workers and investments in underserved areas to build the supply of child care (Chaudry & Hamm, 2017). The bill does not specify a funding mechanism.

The 2018 Omnibus Bill provided for the single largest increase in funding for the child care subsidy program (called the Child Care Development Block Grant (CCDBG)) in the program's history. The child care subsidy program is a federally funded program that addresses the affordability of child care for lower-income working parents, parents enrolled in a job training or educational program, parents receiving public assistance, and vulnerable children experiencing homelessness or who are in the child welfare system. While child care subsidies are a crucial support for low-income working families, across all eligible children ages 0-12 only 15% receive child care subsidies (Chien, 2015). The increase in funding could therefore assist CCDBG in serving more children that are eligible for the program.

Using Equity Data in Your Community

State and federal policymakers, government officials, advocates, providers, the press and others can use the data in this brief in a variety of ways:

To inform conversations about publicly-funded child care policies and programs

As policymakers consider pending federal legislation (i.e., the Child Care for Working Families Act) and the potential expansion of current public child care programs, the data in this brief underscores that affordability is a barrier to accessing child care on the private market. The data in this brief should be considered in tandem with other research that finds that publicly-funded child care programs (i.e., child care subsidies (funded through CCDBG and TANF), Head Start, and state- and city-level pre-kindergarten programs) do not serve all eligible children. As noted above, child care subsidies serve 15% of eligible children ages 0-12 (Chien, 2015), while Head Start serves less than half of eligible preschool-age children (Johnson-Staub, 2017; Joshi, Geronimo, Romano, & Acevedo-Garcia, 2014). Nationally, only 5% of 3-year-old children and 32% of 4-year-old children are in state-funded pre-kindergarten programs (Johnson-Staub, 2017). The data in this brief can help child care providers, advocacy organizations, parents and lawmakers understand the price of child care on the private market, thereby informing comments on pending legislation and the implementation of current child care policies and programs.

To guide state and local discussions about child care affordability among vulnerable groups

Understanding the economic burden experienced by working parents in accessing center-based care is relevant as state officials and policymakers consider how to spend the additional discretionary funding provided to CCDBG for fiscal year 2018. The child care subsidy program is funded by a block grant. Therefore, states have latitude regarding how they make use of the funding, including the proportion of grant funds spent on providing subsidies for children. The data in this brief can provide state leaders with a baseline understanding of the affordability of child care for parents, particularly low-income parents with high labor force attachment. This data can be used to foster conversations between parents, care providers, and state agencies about the greater child care affordability challenges facing particular subgroups of parents.

To guide state-level conversations on how child care subsidy policy can further address affordability through co-payments

States may be re-evaluating their child care subsidy co-payment schedules given the new federal guidance setting the federal affordability benchmark at 7% (U.S. Department of Health and Human Services, 2016). Co-payments are the amount of money a parent with a subsidy pays towards subsidized child care. States can compare their co-payment requirements to how much low-income and higher income working parents would have to pay toward center-based child care in the absence of subsidies. By comparing the percent of income that subsidy families would pay through co-payments to the percent of income that low-income parents would spend on child care, states can get a sense of how much they are helping low-income families by offering subsidies. Comparing the percent of income that subsidy families would pay through co-payments with the percent of income that higher-income families would spend on care would allow states to evaluate whether the subsidy system is equalizing the percent of income that subsidized families and higher-income families pay for care.

To inform employers about the needs of working parents

Helping employees meet their work-life needs, including child care needs, is beneficial for employees and employers (Van Deusen, Ladge, James, & Harrington, 2008). While some employers do provide child care support to employees, this benefit is primarily provided to higher-income workers. According to the National Compensation Survey, only 2% of low-wage workers had child care benefits (defined as “a workplace program that provides for either the full or partial cost of caring for an employee’s children”), compared to 10% of high-wage earners (U.S. Bureau of Labor Statistics, 2017). The data in this brief could help employers understand the importance of supporting child care for the low-income labor force.

References

- Batchelder, L. L., Maag, E., Huang, C., & Horton, E. (Forthcoming). Assessing President Trump’s child care proposals. *National Tax Journal*.
- Chaudry, A., & Hamm, K. (2017). *The Child Care for Working Families Act will boost employment and create jobs*. Retrieved from Washington, DC: <https://www.americanprogress.org/issues/early-childhood/reports/2017/12/07/443783/child-care-working-families-act-will-boost-employment-create-jobs/>
- Chien, N. (2015). *Estimates of child care eligibility and receipt for fiscal year 2012*. Retrieved from Washington, DC: <https://aspe.hhs.gov/pdf-report/estimates-child-care-eligibility-and-receipt-fiscal-year-2012>
- Child Care Aware of America. (2016). *Parents and the high cost of child care*. Retrieved from Washington, DC: <http://usa.childcareaware.org/advocacy-public-policy/resources/research/costofcare/>
- Child Care Aware of America. (2017). *2017 state fact sheets*. Retrieved from Washington, DC: <https://usa.childcareaware.org/advocacy-public-policy/resources/research/statefactsheets/>
- Child Care for Working Families Act, S. 1806, 115th Congress (2017).
- Council of Economic Advisers. (2015). *The economics of early childhood investments*. Retrieved from Washington, DC: https://obamawhitehouse.archives.gov/sites/default/files/docs/early_childhood_report_update_final_non-embargo.pdf
- Flood, S., King, M., Ruggles, S., & Warren, J. R. (2015). *Integrated public use microdata series, Current Population Survey: Version 4.0*.
- Forry, N., Tout, K., Rothenberg, L., Sandstrom, H., & Vesely, C. (2013). *Child care decision-making literature review*. Retrieved from Washington, DC: https://www.acf.hhs.gov/sites/default/files/opre/child_care_decision_making_literature_review_pdf_version_v2.pdf
- Geronimo, K., Hardy, E., Crisan, U., Joshi, P., & Acevedo-Garcia, D. (2014). *Understanding patterns of local access to early childhood education for children of diverse racial/ethnic, nativity and language groups: A new interactive web-based analysis tool and emerging evidence*. Paper presented at the Head Start’s 12th National Research Conference on Early Childhood, Washington, DC.
- Giannarelli, L., & Barsimantov, J. (2000). *Child care expenses of America’s families*. Retrieved from Washington, DC: http://www.urban.org/UploadedPDF/310028_occa40.pdf
- Johnson-Staub, C. (2017). *Equity starts early: Addressing racial inequalities in child care and early education policy*. Retrieved from Washington, DC: <https://www.clasp.org/publications/report/brief/equity-starts-early-addressing-racial-inequities-child-care-and-early>

- Joshi, P., Geronimo, K., Romano, B., & Acevedo-Garcia, D. (2014). *Head Start policy equity assessment*. Retrieved from Waltham, MA: <http://www.diversitydatakids.org/data/policy/1/head-start>
- Laughlin, L. (2013). *Who's minding the kids? Child care arrangements: Spring 2011*. Retrieved from Washington, DC: <https://www.census.gov/prod/2013pubs/p70-135.pdf>
- Li, W., Farkas, G., Duncan, G. J., Burchinal, M. R., & Vandell, D. L. (2013). Timing of high-quality child care and cognitive, language, and preacademic development. *Developmental Psychology*, 49(8), 1440-1451.
- Mattingly, B., Schaefer, A., & Carson, J. (2016). *Child care costs exceed 10 percent of family income for one in four families*. Retrieved from Durham, NH: <https://scholars.unh.edu/carsey/288/>
- Morrissey, T. W. (2017). Child care and parent labor force participation: A review of the research literature. *Review of Economics of the Household*, 15, 1-24.
- NICHD ECCRN. (2006). Child care effect sizes for the NICHD study of early child care and youth development. *American Psychologist*, 61, 99-116.
- Office of Hillary Rodham Clinton. (2017). *Early childhood education*. Retrieved from <https://www.hillaryclinton.com/issues/early-childhood-education/>
- Schult, B., & Durana, A. (2016). *The new America care report*. Retrieved from Washington, DC: <https://www.newamerica.org/in-depth/care-report/>
- U.S. Bureau of Labor Statistics. (2017). *National Compensation Survey: Employee benefits in the United States March 2017* [Dataset]. Retrieved from: <https://www.bls.gov/ncs/>
- U.S. Department of Health and Human Services. (2016). *2016 CCDF final rule*. Retrieved from Washington, DC: <https://www.acf.hhs.gov/occ/resource/ccdf-final-regulations>
- Van Deusen, F., Ladge, J., James, J., & Harrington, B. (2008). *Building the business case for work-life programs*. Retrieved from Boston, MA: https://www.bc.edu/content/dam/files/centers/cwf/research/publications3/executivebriefingseries-2/Executive%20Briefing_Building%20the%20Business%20Case%20for%20Work-Life%20Programs.pdf
- Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M. R., Espinosa, L. M., Gormley, W. T., . . . Zaslow, M. J. (2013). *Investing in our future: The evidence base on preschool education*. Retrieved from Washington, DC: http://www.srcd.org/sites/default/files/documents/washington/mb_2013_10_16_investing_in_children.pdf

Endnotes

1. The Child Care Aware 2014-2017 reports present annual child care prices for the years 2013-2016 (in 2013 dollars, 2014 dollars, 2015 dollars, and 2016 dollars, respectively). These years of data align with the 2014-2017 CPS.
2. The school-age child care prices measure before- and after-school care prices for a typical 9-month school year.
3. We exclude a small number of parents with more than four children from the sample to minimize the assumptions we make in the analysis. We also exclude a small number of parents that have an estimated child care price of over 100% of annual family income. Estimates for Minnesota and North Dakota are not available due to missing child care price data.
4. To create the indicators we first calculate the total expected child care price for a parent if he/she was to place his/her own children under 13 in full-time center-based care. The CPS reports the age of a parent's youngest child and oldest child. For the 11% of working parents in the sample with more than two children, we conservatively estimate the price(s) of the middle child(ren)'s care

by assigning the middle child(ren) the lowest logical care price option based on the ages of the oldest and youngest siblings. For example, consider a three-child family living in Massachusetts in which the youngest child is an infant and the oldest child is preschool age. The middle child could theoretically be an infant or preschool age. Therefore, based on the price of each type of child care in Massachusetts, we assign the middle child an annual care price equal to either the price of infant or preschool care, whichever is less expensive. After estimating a working parent's total price of center-based care for children up to age 13, we compare this amount to each parent's total family income.

5. The following notes apply to all exhibits: Estimates are weighted with replicate weights. Observations from Minnesota and North Dakota are not included in the analysis due to missing child care price data. A parent is an adult age 16 and older who reported having at least one of their own children (including biological, adopted, or step-children) between the ages of 0 and 17 living in their household. Full-time work is defined as 35 hours or more per week and year-round work is defined as 50 weeks or more per year. Low-income parents are parents living in families with total family income below 200% of the federal poverty line. Not low-income parents are parents living in families with total family income at or above 200% of the federal poverty line. We assume that a parent places all children up to age 13 into full-time center-based care.