

Identifying predictors of nontraditional-hour care in the Massachusetts child-care subsidy system

Kate Giapponi Schneider and Elizabeth Wong

June 2026



Table of Contents

Abstract 2

Key findings 3

Background 3

Methods 6

Results 8

Conclusion 11

About the authors 14

Acknowledgements 15

Appendix 16

References 22

The views expressed in this paper are those of the authors and do not necessarily represent those of the Federal Reserve Bank of Boston or the Federal Reserve System.

Community Development Issue Briefs

The Federal Reserve Bank of Boston, part of the U.S. central bank, works in a variety of ways to promote a strong, vibrant economy that works for all. The Boston Fed's regional and community outreach department gathers insights on the impacts of economic conditions in our New England district, conducts research to share externally, and convenes and connects interested parties. These activities contribute to fulfilling the Federal Reserve's dual mandate from Congress—price stability and maximum employment—so that people in every community have opportunities to participate, contribute, and prosper.

Our regional and community outreach publications address emerging and critical economic issues facing low- and moderate-income individuals, families, and communities. We strive to provide objective, data-backed information that is useful to those involved in community economic development, including governments, nonprofits, financial institutions, businesses, and communities themselves. Our work also seeks to demonstrate how residents from all walks of life are faring in the economy, in order to help inform our monetary policy deliberations.

Abstract

As part of the Boston Fed's mandate to support full employment, it is critical to understand employment barriers that parents may be facing. Nearly one-third of low-income workers are employed during nonstandard hours outside the typical 8 a.m. to 5 p.m., Monday through Friday workweek (Enchautegui, 2013), and many may work in industries such as healthcare, retail, and hospitality (United States Bureau of Labor Statistics, 2019). A growing body of research documents the shortage of child-care options matching these workers' schedules. Due to the limited supply of licensed child-care providers operating during nontraditional hours (NTH), these parents may encounter both availability and affordability barriers to accessing child care, creating critical barriers to work. Child-care subsidies are a crucial resource for these parents, providing financial assistance to access otherwise unaffordable child care. However, little is known about the supply of child-care providers that both offer NTH child care and serve families who receive subsidies. In this brief, we examine factors associated with whether a provider offers NTH care within the Massachusetts child-care subsidy system. In particular, we focus on the supply of early morning care (4–7 a.m.), the NTH period with the highest potential demand for care among low-income families (Crosby and Mendez, 2017). Using a combination of state survey data, administrative data, and census data, our results indicate that subsidized centers and family child-care providers (FCCs) located in communities with more workers commuting during nonstandard hours, subsidized centers with higher licensed capacities, and subsidized FCCs who have been in business for longer periods of time have greater odds of offering early morning care. We conclude with policy considerations and discuss possible incentive structures that could be targeted in high-need areas to build the supply of NTH care for low-income families.

Key findings

- Only 18% of centers and 34% of family child-care providers (FCCs) in our sample are open during nontraditional hours. Early morning hours (4–7 a.m.) are overwhelmingly the most common nontraditional-hour period offered by providers. Less than 2% of centers and FCCs are open during evening, overnight, or weekend hours, which may pose barriers to work for some parents.
- For subsidized child-care centers, having a higher licensed capacity is associated with a greater likelihood of offering early morning care to low-income families. For example, when adjusted for other explanatory factors, centers licensed to serve 155 children have a 21% average probability of offering early morning care, compared to centers licensed to serve 10 children, which have an 11% average probability of offering early morning child care.
- Among subsidized FCCs, those who have been in business for longer periods of time have a greater likelihood of offering early morning care to low-income families. Specifically, when adjusted for other explanatory factors, FCCs in their first year of business have a 25% average probability of offering early morning care, while FCCs that have been in operation for 30 years have a nearly 44% average probability of offering early morning care.
- Centers and FCCs located in communities with more workers who commute during nonstandard morning hours have greater odds of offering subsidized nontraditional-hour care to low-income families. In communities where an estimated quarter of workers commute during nonstandard hours (12:00–5:59 a.m.), centers have roughly a 33% average probability of offering early morning care, and FCCs have a nearly 50% average probability of doing so, after adjusting for other explanatory factors.

Background

In March 2024, the United States Office of Child Care issued new regulations encouraging states to take more concrete actions to address the availability of child care for the share of low-income working families needing nontraditional-hour (NTH) child care (Child Care and Development Fund, 2024). In the United States, nearly one-third of low-wage workers are employed during nonstandard-hour shifts (Enchautegui, 2013; Presser, 2003), which fall outside the typical 8 a.m. to 5 p.m., Monday through Friday workweek and frequently occur on a rotating or irregular basis (Boushey & Ansel, 2016; Harknett & Schneider, 2020; Lambert et al., 2014). Among policymakers, researchers, and advocates, there is growing concern about the child-care needs of these workers, since many are parents of young children (Schilder et al., 2021; Presser, 2003). As part of the Boston Fed’s mandate to support full employment, it is critical to understand employment barriers that parents may be facing.

Within the early care and education field, NTH care is typically split into four distinct periods: early morning, evening, overnight, and weekends. While the potential demand for NTH care among low-income families is generally greatest during the early morning or evening hours that are adjacent to traditional work hours (Crosby and Mendez, 2017), research suggests that there is a shortage of licensed child-care options during all four periods (Child Care Aware of America, 2017; DiMatteo, 2019; Dobbins et al., 2016; Sandstrom et al., 2018; Sloane et al., 2019; Stoll et al., 2006). According to the 2012 National Survey on Early Care and Education, only 8% of all centers and 34% of all family child-care providers (FCCs) offer any type of NTH care (NSECE, 2015), and it is not yet known how many of these providers specifically serve low-income families through the child-care subsidy program. Due to the limited availability of child-care options, parents with nonstandard work schedules, regardless of income level, frequently report

being unable to find providers that meet their families' needs and preferences (DiMatteo, 2019; Sandstrom et al., 2012; Schilder et al., 2022; Sloane et al., 2019). As a result, parents, particularly mothers, may reduce their work hours or forego critical work opportunities (Laughlin, 2007; Savage & Robeson, 2022).

In Massachusetts specifically, studies suggest there is a growing demand for NTH child care among all working families (Brodsky & Mills, 2014; Kochanek, 2003). In 2003, this type of care was perceived as a resource needed by only a small subset of families (Kochanek, 2003). However, in 2011, a survey of 174 Massachusetts parents found that nearly 40% had a need for NTH care (Brodsky & Mills, 2014). Within the state, the potential demand for NTH care is particularly high among low-income families, given that nearly half (46%) of young children from low-income working families have parents that work nonstandard hours (Schilder et al., 2021).

While all parents working nonstandard hours may encounter barriers to accessing NTH care due to the limited availability of NTH care in many areas of the state (Child Care Aware of America, 2017), low-income parents in Massachusetts may also encounter affordability barriers. Massachusetts is ranked as one of the least affordable states for child care, where families spend, on average, \$24,005 for full-time center-based infant care annually (Table 1) (Child Care Aware of America, 2023). For a family at the federal poverty level, this equates to 97% of household income. In comparison, families in South Dakota, one of the states with more affordable child care, families at the federal poverty level would spend about 32% of their household income on infant care. Although child care for older children in Massachusetts is slightly more affordable than infant care, it can still be a significant financial burden for low-income families. Compounding this issue, studies indicate that the costs of providing NTH care are higher than the costs of providing traditional-hour care (Brodsky & Mills, 2014; Kochanek, 2003). There are a handful of reasons why NTH care may be more costly to deliver (Sandstrom et al., 2018; Sloan et al., 2019). First, providers likely need to offer higher wages to recruit and retain qualified staff and educators during less desirable working hours. Second, providers may face additional costs related to off-hours security measures, cleaning services, and utilities. To account for these additional expenses, child-care providers may need to raise prices for NTH care (Brodsky and Mills, 2014), in which case NTH care may be even less affordable for low-income parents needing such services. In a state with such a high-priced child-care market, like Massachusetts, subsidies are a critical resource to help low-income families access any care, including more costly NTH child care.

Table 1: Average annual price of full-time child care in 2023, by provider type and child age

	Massachusetts		South Dakota	
	Average price	Price as % of poverty level	Average price	Price as % of poverty level
Center				
Infant	\$24,005	97%	\$7,862	32%
Toddler	\$22,463	90%	\$7,862	32%
4-year-old	\$18,760	76%	\$7,218	29%
Family child care				
Infant	\$15,129	61%	\$5,824	23%
Toddler	\$14,074	57%	\$5,824	23%
4-year-old	\$14,074	57%	\$5,658	23%

Source: Child Care Aware of America, 2023.

The Child Care and Development Fund (CCDF) is the primary federal funding stream for child-care subsidies for low-income families. Structured as a block grant, CCDF distributes federal funds to states, who have the flexibility to design subsidy programs with fewer federal regulations compared to entitlement programs. However, due to the fixed nature of CCDF funds, in Massachusetts, the demand for subsidies exceeds the state’s budget, resulting in a wait list of approximately 20,957 children (Massachusetts Department of Early Education and Care, 2024a). For families with nonstandard-hour work schedules that can access subsidies, finding a provider that both meets their scheduling needs and accepts subsidies can be a challenge given that only half of all licensed providers in the state participate in the subsidy system (Giapponi Schneider et al., 2017).

In Massachusetts, the two primary types of providers that participate in the subsidy system are licensed centers, including both small and large center-based facilities with licensed capacities ranging from 6 to 734 children, and FCCs, which are smaller, home-based programs with licensed capacities ranging from 3 to 10 children (Vital Village, 2020). Licensed centers can be multi-center organizations or smaller independent centers, and similarly, FCCs can operate independently or be members of FCC systems

(organizations that offer administrative assistance with subsidies). Both provider size and access to administrative support may play a role in whether a provider can manage the higher costs associated with NTH care (Brodsky & Mills, 2014; Kochanek, 2003) and the additional administrative work associated with coordinating NTH care and complying with licensing regulations (e.g., maintaining staff-to-child ratios or ensuring that educators do not exceed maximum work hours within a 24-hour period).

For both centers and FCCs, there may also be a financial component to providers' decisions to offer NTH care. Providers participating in the Massachusetts subsidy system receive payment from the state for each subsidy-receiving child they serve, as well as a family copayment for those families with incomes above 100% of the federal poverty level. The subsidy reimbursement rates (state payment in addition to the family copayment) in Massachusetts have historically been less than market prices (the tuition that a provider would charge a private-paying family). In 2022, the state was only able to offer subsidy reimbursement rates between the 7th and 65th percentile of market prices¹ (Center for Early Learning Funding Equity, 2022), indicating that in many communities, providers take a significant loss in potential revenue by serving subsidy-receiving families. Research has shown that this financial gap between a provider's private tuition rate and the subsidy reimbursement rate can impact provider participation in accepting subsidies (Giapponi, 2017). For providers in the subsidy system, the financial gap may also determine whether a provider is able to afford to offer NTH care, which can be more costly to provide. Further, the state only reimburses for up to 10 hours of care per day per child (Massachusetts Department of Early Education and Care, 2022). If children requiring NTH care need more than 10 hours (e.g., overnight care), the provider may experience additional financial losses.

Although less studied, other potential program factors that may influence whether a provider offers subsidized NTH care include the number of years they've been in business (e.g., experience to understand how to offer NTH care within licensing regulations), whether the program has made financial investments in accreditation (which could signal a greater focus on early learning in a more traditional daytime school setting), centers' staffing capacity and turnover (the program's ability to maintain consistent staff, especially during less desirable work hours), and whether an FCC owns or rents their home (where homeownership may offer greater financial and program stability to offer NTH care). To better understand the supply of NTH child care within the Massachusetts' child-care subsidy system, this exploratory brief aims to identify program and market factors that are associated with whether a subsidized provider offers NTH care. In particular, we focus on the factors associated with offering early morning care (4–7 a.m.), which is the NTH period with the highest potential demand for care among low-income families (Crosby and Mendez, 2017).

Methods

We use data from a statewide survey of licensed child-care providers who participate in Massachusetts's subsidy system. Between July and November 2022, data were collected from 1,867 providers (58% response rate). The survey, administered in English and Spanish, included detailed questions about providers' operational hours, including the days of the week worked and the start and end time each day. Using these data, we created variables for four dependent measures of NTH child care frequently used in research (Lee & Henly, 2024): early morning (4–7 a.m.), evening (6–9 p.m.), overnight (9 p.m.–3:59 a.m.), and weekend (any hours on Saturday or Sunday). Due to the small sample of providers offering evening,

¹ This indicates that, for example, in some communities, the private tuition price of care for roughly 93% of licensed seats is higher than the subsidy reimbursement rate.

overnight, and weekend care, we focused our analysis on early morning care, which is also the period with the highest potential demand among low-income families (Crosby and Mendez, 2017). We categorized a provider as offering early morning care if they were open at any time between 4 a.m. and 7 a.m. The survey also collected data on program characteristics, including educator turnover in centers and FCC owners' race/ethnicity, educational attainment, and whether they own or rent their home.

We merged survey data with data from three main secondary sources to create additional program and child-care market measures:

1. From the state's licensing database, we created variables for the number of years a provider has been in business, total licensed capacity, accreditation status, membership in a multi-center organization or an FCC system, and a proxy measure of local market competition, calculated as the number of providers (both centers and FCCs) per square mile within a provider's zip code tabulation area (ZCTA).² Using licensing and subsidy payment processing data, we also created a variable to measure a provider's degree of subsidy participation, defined as the number of children receiving subsidies as a percentage of a provider's total licensed capacity.
2. Using private pay price data from the 2022 market rate survey, supplemented by price data from the state's licensing database,³ we calculated the gap between a providers' private pay price and the region's subsidy reimbursement rate. A larger gap indicates that a provider may experience a greater financial loss from serving subsidy-receiving families compared to private pay families. For each provider, we calculated the dollar difference for each age group served and then averaged the differences.
3. We used 5-year estimates from the 2022 American Community Survey to create three variables that may be positively correlated with the potential demand for subsidized NTH care within a child-care market. First, to estimate a proxy for the potential demand for child care, we used the number of children under age 6 with their single parent or both parents working as a percentage of the total number of children under age 6 by ZCTA. Second, to estimate the prevalence of nonstandard-hour workers, we calculated the percentage of commuting workers aged 16 and older who commute to work between the hours of 12:00 a.m. and 5:59 a.m. by ZCTA. Third, we estimate the percentage of all families in a ZCTA below the federal poverty level. The final analytic sample includes 513 centers and 846 FCCs that participate in Massachusetts' child-care subsidy system and have non-missing data for all program and market measures. See the Appendix tables for a description of the analytic sample.

We ran logistic regression models to estimate the odds of a provider offering NTH care based on program and market measures. To account for differences in the business models between centers and FCCs, models were run separately for each provider type. For significant predictors, we use average adjusted predictions at representative values to translate odds into the predicted probability of providers offering early morning care under specific conditions. Sensitivity analyses using cluster robust standard errors and

² The boundaries of a child-care markets are difficult to define (Grobe et al., 2008). This study uses a ZCTA as a proxy for a child-care market, which has been used in prior studies (Emlen and Associates, 1992; Giapponi Schneider et al., 2017; Giapponi Schneider et al., 2021). However, there are limitations with this approach, given that families likely travel beyond zip code boundaries to access child care (Davis et al., 2019).

³ We used December 2023 price data from the state's licensing database to supplement any missing price data from the market rate survey for providers in our sample.

random effects found minimal evidence of clustering within licensing regions. Therefore, we present results from the single-level model.

Results

The survey data suggest there are a limited number of subsidized programs providing NTH care in Massachusetts. Among the sample of surveyed subsidized providers, only 18% of centers and 34% of FCCs were open during any NTH period (Table 2). This is primarily driven by providers that are open for early morning hours (between 4 a.m. and 7 a.m.), during which 16% of centers and 33% of FCCs operate. In contrast, less than 3% of centers and FCCs are open during evening or overnight hours or on weekends.

Table 2: Nontraditional-hour child care in sample of subsidized Massachusetts providers		
	Center (n=513)	Family child care (n=846)
	n (%)	
Traditional hours only	421 (82%)	561 (66%)
Any nontraditional hours	92 (18%)	285 (34%)
Early morning (4–7 a.m.)	83 (16%)	278 (33%)
Evening (6–8:59 p.m.)	6 (1%)	10 (1%)
Overnight (9 p.m. – 3:59 a.m.)	5 (1%)	7 (0.8%)
Weekend	1 (0.2%)	21 (3%)

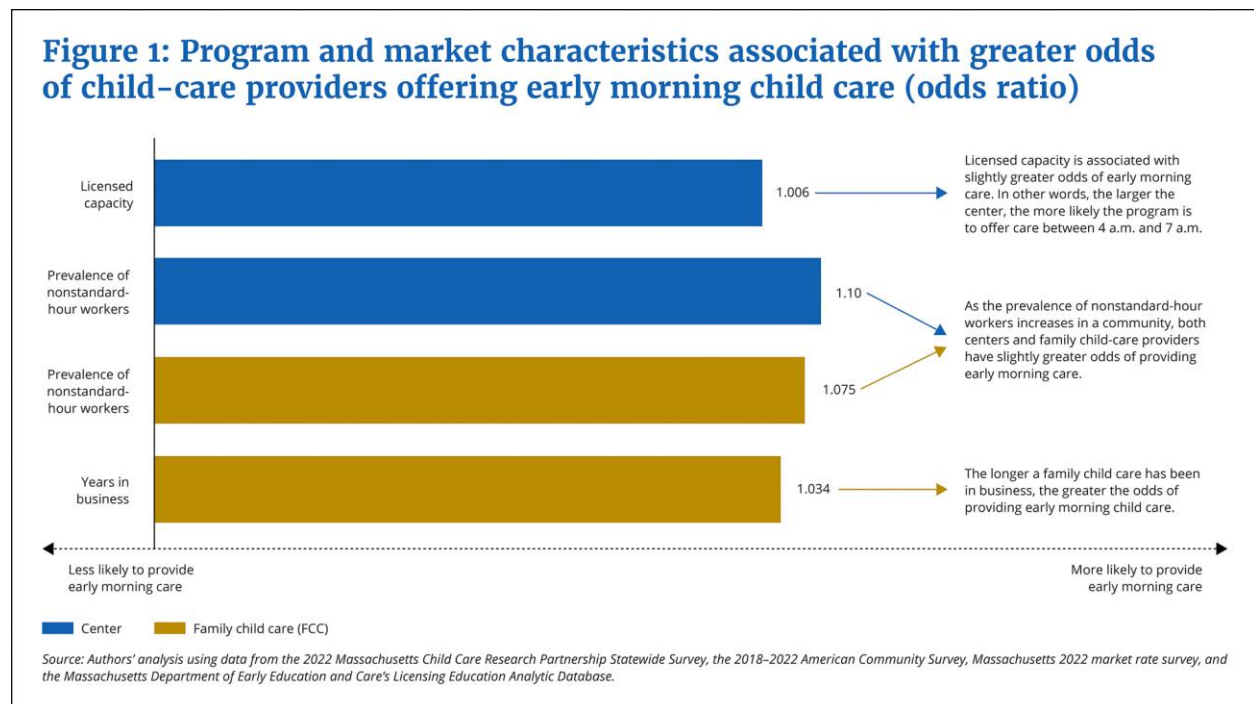
Source: 2022 Massachusetts Child Care Research Partnership Statewide Survey.
Notes: Rows disaggregating types of nontraditional hours are not mutually exclusive. For example, a provider can operate during both early morning and evening hours.

Factors associated with offering early morning care in the subsidy system

We find there are significant differences between subsidized providers that offer early morning care and those that do not (Tables A1 and A2). Among subsidized centers, providers that offer early morning care have experienced significantly more educator turnover ($p=0.024$) and are, on average, larger ($p=0.005$)

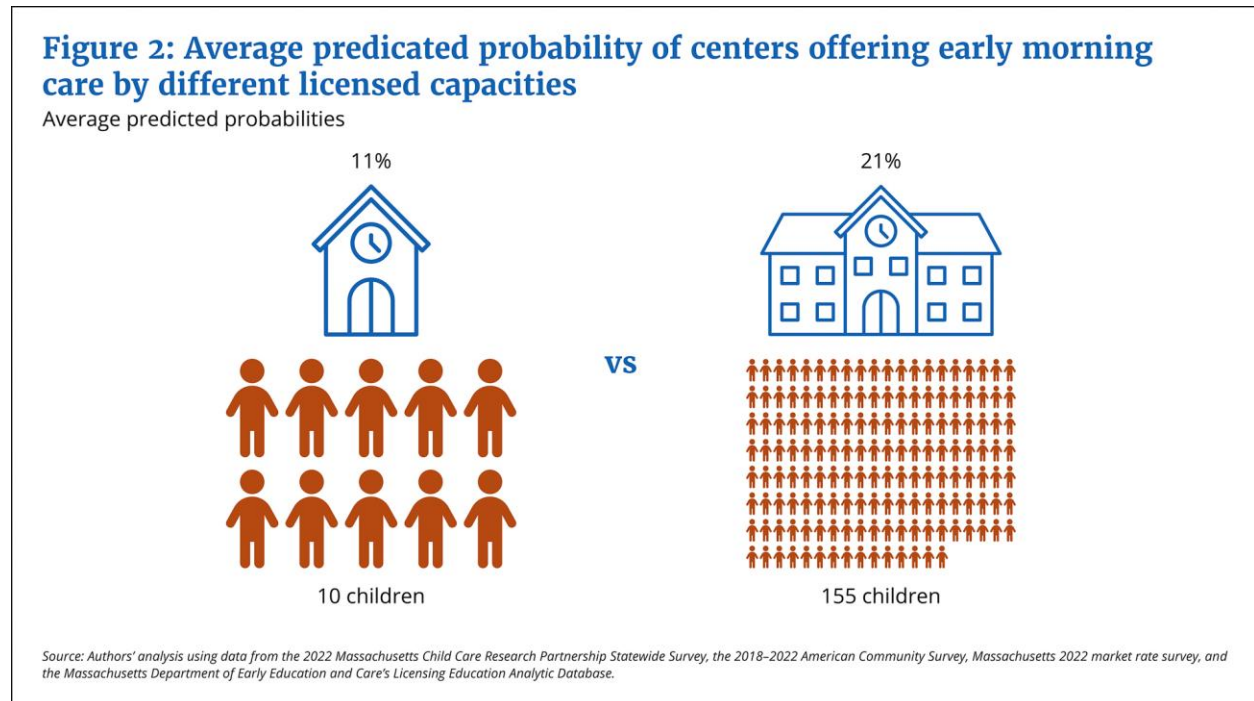
compared to providers that do not offer early morning care. Additionally, a significantly higher portion of subsidized centers offering early morning care are members of multi-center organizations ($p=0.027$). Compared to subsidized FCCs that do not offer early morning care, FCCs that do have been in business, on average, for longer periods of time ($p=0.025$) and also serve a smaller portion of subsidy-receiving children ($p=0.002$). FCCs offering early morning care also have, on average, a significantly smaller gap between their private pay prices and the subsidy reimbursement rates ($p=0.018$). While FCCs offering early morning care have an average gap of \$7 per child per day, FCCs without early morning care have an average gap of \$15 per child per day. Further, FCCs that offer early morning care generally experience more competition within their local market ($p=0.004$). Among both centers and FCCs, providers that offer early morning care are located in communities with a significantly higher prevalence of workers commuting during nonstandard hours (between 12:00 a.m. and 5:59 a.m.) ($p<0.001$).

Results from the logistic regression models, which control for all covariates, indicate that only a few of these program and market factors are significantly associated with whether a provider participating in the Massachusetts subsidy system offers early morning child care (see Appendix for full regression results). For both centers and FCCs, the higher the prevalence of nonstandard-hour commuters within a providers' community, the greater the odds that the provider will be open during early morning hours (see Figure 1). Specifically, for every additional percent increase in the concentration of nonstandard-hour commuters within a provider's community, the odds of offering NTH care increases by 10.0% for centers and 7.5% for FCCs. For example, in communities where close to a quarter (25%) of workers commute during nonstandard hours, centers have roughly a 33% average probability of offering early morning care, and FCCs have a nearly 50% average probability of doing so, after adjusting for other covariates.⁴



⁴ This suggests that while centers may be more responsive to changes in community demand, FCCs may maintain a higher overall likelihood of offering nontraditional hour care.

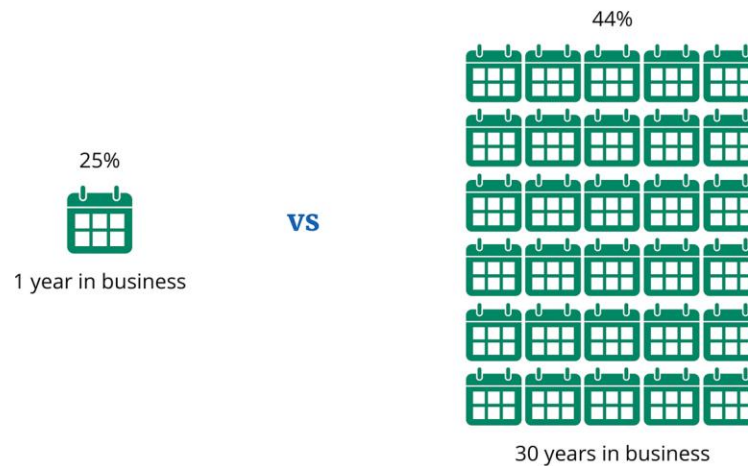
For centers, licensed capacity is significantly and positively associated with offering early morning care, indicating that programs with higher licensed capacities have greater odds of offering early morning care. For each additional licensed seat, the odds of a center offering NTH care increases by 0.6%. Translated into probability terms, child-care centers licensed for 155 children, for example, have a 21% average probability of offering early morning care, while centers licensed for 10 children have only an 11% average probability of offering early morning child care, adjusting for all other covariates (Figure 2).



For FCCs, the number of years in business is significantly associated with increased odds of providing early morning child care; there is a 3.4% increase in the odds of offering early morning care for every additional year a provider is in business. For example, when adjusted for all other covariates, FCCs in their first year of business have a 25% average probability of offering early morning care. In comparison, FCCs that have been in business for 30 years have a nearly 44% average probability of offering early morning care (Figure 3).

Figure 3: Average predicated probability of family child-care providers offering early morning care by number of years in business

Average predicted probabilities



Source: Authors' analysis using data from the 2022 Massachusetts Child Care Research Partnership Statewide Survey, the 2018–2022 American Community Survey, Massachusetts 2022 market rate survey, and the Massachusetts Department of Early Education and Care's Licensing Education Analytic Database.

Notably, for both centers and FCCs, we find that the size of the gap between providers' private pay prices and the subsidy reimbursement rate is not associated with NTH care. In other words, the size of the financial loss experienced by providers participating in the subsidy system does not seem to be related to whether or not they offer NTH care.

Conclusion

Without access to NTH child care, low-income parents working nonstandard hours face child-care constraints that place them at risk of losing their employment or foregoing financially advantageous work opportunities that could lift their families out of poverty (Laughlin, 2007; Savage & Robeson, 2022). Acknowledging the growing demand for NTH care, new federal regulations require that states receiving CCDF funding 1) make children needing NTH child care a priority population, 2) identify shortages in NTH care, and 3) pursue strategies to increase the supply of NTH care for low-income families (Child Care and Development Fund, 2024). While this analysis is focused on early morning care, which is only one form of NTH care, the findings offer preliminary insights into factors that may generally affect the supply of NTH care. Based on these findings, policymakers interested in increasing the supply of NTH child care may consider the following.

Family, friend, and neighbor care

We find there are few licensed child-care providers in Massachusetts offering NTH child care in the subsidy system to meet the needs of families. Specifically, we find that only 18% of centers and 34% of FCCs offer any NTH care. The overwhelming majority of these providers are only open during early morning hours, suggesting there are few options available to parents who work in retail, food service, hospitality, or healthcare industries, which often require evening, overnight, and weekend shifts (Enchautegui, 2013; Presser, 2003). The limited supply of providers during these periods may be driven,

in part, by parental preferences for different forms of care during different hours. For example, research suggests that parents needing NTH child care during evening and overnight hours may prefer unlicensed options, such as family, friends, or neighbors (FFN), who can care for a child in the child’s home (Lee & Henly, 2024).

Currently, over three-fourths of states allow FFN providers to participate in the subsidy system and serve subsidy-receiving families; however, these providers may still encounter barriers or deterrents to actually participating in the subsidy system (Prenatal-to-Three Capacity Building Hub, 2023; Schulman & Crawford, 2018). In Massachusetts, for example, FFN providers in the subsidy system are reimbursed less than licensed centers and FCCs; for FY 2024, daily per child reimbursement rates for centers, FCCs, and FFN providers (who provide care in the child’s home) in Boston for infant care are \$119.52, \$87.66, and \$17.16⁵, respectively (Table 3). Policies that incorporate or better support paid FFN child-care options within the subsidy system could expand the supply of NTH care for low-income families.

Table 3: Child-care subsidy reimbursement rates for Massachusetts in FY24							
	<u>Center</u>			<u>Family child care</u>		<u>Family, friend, and neighbor care</u>	
	Infant	Toddler	Preschool	Under 2	2+	Child’s home	Outside child’s home
Region							
Western, Central, & Southeast	\$97.18	\$75.48	\$57.23	\$58.45	\$48.90		
Northeast	\$102.07	\$84.70	\$57.99	\$58.45	\$46.50	\$17.16	\$24.33
Metro & Boston Metro	\$119.52	\$108.46	\$80.13	\$87.66	\$54.33		

Source: Massachusetts Department of Early Education and Care, 2024b.

Subsidy contracts and differential reimbursement rates

Our findings suggest that subsidized providers offering early morning child care may be responding to the demand for NTH care within their local market. This is consistent with research on provider participation in the subsidy program, where providers in lower-income communities are more likely to participate in the

⁵ For full-time care (defined by the Massachusetts Department of Early Education and Care as 6 or more hours per day), this equates to a maximum wage of \$2.86 per hour.

subsidy system (Giapponi Schneider et al., 2017), thereby responding to community needs. States like Massachusetts could capitalize on this by targeting policy initiatives that further incentivize providers to offer early morning care, as well as other forms of NTH care, in these high-demand markets. For example, as suggested under the 2024 CCDF Final Rule, states may consider contracting directly with providers in these areas for NTH subsidized slots that can only be filled with subsidy-receiving children to better ensure access to NTH care. Research indicates that subsidy contracts are attractive to providers because they offer greater financial stability than portable vouchers (Dorn, 2020; Giapponi, 2017; Matthews & Ewen, 2008). Further, states could work with employers with high percentages of parents working NTH to identify new providers to contract with or develop new opportunities for cost-sharing models between the state, employers, and parents.

To further incentivize providers to offer subsidized NTH care, the state could offer contracts at a higher reimbursement rate, which could be used to offset the higher costs associated with NTH care. As of 2021, 16 states reimbursed subsidized providers at a higher rate for NTH care (Schilder et al., 2021). While Massachusetts does not offer differential reimbursement rates for NTH care, prior studies have advocated for higher reimbursement rates up to 130% of the state's base rate (Brodsky & Mills, 2014; Kochanek, 2003). However, given that our results suggest that decisions to offer NTH child care to subsidy-receiving families may not be driven by the magnitude of the financial loss experienced by participating in the subsidy system, additional research should be conducted to determine whether and how differential reimbursement rates would affect providers' NTH-care decision-making before pursuing this policy initiative.⁶

Licensing requirements and subsidy policies

We find that subsidized centers with higher licensed capacities have greater odds of offering early morning child care. Larger centers may have the administrative capacity to manage the complexities of the subsidy system (Giapponi Schneider et al., 2017), as well as those of offering NTH care, including scheduling staff while complying with different licensing requirements (Henly & Adams, 2018; Sandstrom et al., 2018; Sloane et al., 2019). This suggests that smaller centers with potentially less staffing and administrative capacity may face barriers to offering NTH care. To provide subsidy-receiving families with a variety of child-care options that meet their needs and preferences (i.e., type of care), states may consider conducting a formal review of licensing requirements and subsidy policies to identify any barriers for providers, including smaller centers, seeking to offer NTH care. For example, Massachusetts state regulations stipulate that educators can work a maximum of 12 hours per day. While this regulation is in place for safety standards, acknowledging that it may act as a barrier to offering NTH care—in particular for smaller providers—is important to consider in developing any policy changes aimed at increasing NTH care.

Support for new providers

We find that the number of years in business is associated with greater odds of offering early morning child care for FCCs in the subsidy system. Literature suggests that relationships play a large role in determining whether FCCs will offer NTH child care (DiMatteo, 2019; Sandstrom et al., 2018). Compared to new FCCs, providers that have been in business for years may have more established relationships with both families and employers in the community and feel a stronger obligation to meet those families'

⁶ See forthcoming research: https://www.acf.hhs.gov/sites/default/files/documents/opre/abstracts_together_final.pdf

needs. Alternatively, given the relatively small number of providers that offer NTH care, providers that have offered NTH may have experienced financial success due to less competition, which in turn could contribute to the longevity of the program. This may also suggest that newer providers are unaware of the potential demand for NTH care within their community or unaware of the opportunity to offer NTH care within the subsidy program. States may consider informing newly licensed providers and/or providers newly serving subsidy recipients about the potential demand for NTH child care in their area. Additionally, start-up funding for new or existing providers who wish to start offering NTH care may assist with initial investments in equipment, supplies, or home infrastructure.

Opportunities for future research

There is opportunity for future research, both in Massachusetts and other states, to expand on our work. First, our results may not be representative of the statewide population of providers participating in the subsidy system, given that we use survey data that reflect only a sample of the entire population. More comprehensive statewide data on providers' hours of operation are needed to produce more precise results. In Massachusetts, evidence on the demand for NTH care is dated. Because the COVID-19 pandemic starkly altered employment patterns and the child-care landscape, updated research is needed to understand the current demand for NTH child care in the subsidy system, including parental preferences for different periods of NTH care and whether the current supply of subsidized NTH child care is meeting that demand. Supplementing quantitative research with qualitative research is also important to uncover more nuanced decision-making processes related to NTH care. For example, in-depth interviews with child-care providers may identify additional factors that influence providers' decisions to offer NTH care. Lastly, quasi-experimental methods can be useful to evaluate whether new policies would, in practice, affect the supply of NTH child care.

About the authors



Kate Giapponi Schneider, PhD, MBA

Kate Giapponi Schneider is a research scientist at the Institute for Equity in Child Opportunity and Healthy Development at Boston University School of Social Work. With more than 20 years of experience in early care and education and public assistance research, Dr. Giapponi Schneider specializes in translating rigorous research into actionable insights for program and policy audiences at the state and federal levels. Her current work includes a partnership with the Massachusetts Department of Early Education and Care to examine the impact of child-care subsidy reimbursement rate increases on provider participation in the subsidy system, as well as the effects of newly designed subsidy contracts on children's access to high-quality care. Dr. Giapponi Schneider holds a Ph.D. and M.A. in Social Policy from Brandeis University, an M.B.A. from Clark University, and a B.A. in Economics from the College of the Holy Cross.

kategs@bu.edu



Elizabeth Wong, PhD, MPH

Elizabeth Wong is a research scientist at the Institute for Equity in Child Opportunity & Healthy Development at Boston University School of Social Work. Her research examines work-family and social safety net policies, with a focus on advancing equitable and inclusive child care, paid leave, and other supports for low-income working families.

Elizabeth holds a Master of Public Health from UCLA and a Ph.D. in Social Policy from Brandeis University.

eawong@bu.edu

Acknowledgements

The survey data used in this research brief was collected through a project supported by the Child Care Policy Research Partnership Grant (Grant #90YE0215), funded by the Administration for Children and Families (ACF) of the United States (U.S.) Department of Health and Human Services (HHS) and conducted in partnership with the Massachusetts Department of Early Education and Care (EEC). The contents of this research brief are those of the authors and do not necessarily represent the official views of, nor an endorsement, by OPRE/ACF/HHS, the U.S. Government or EEC. For more information, please visit the ACF website, [Administrative and National Policy Requirements](#). The analysis conducted for this brief was funded by the Federal Reserve Bank of Boston through our participation in their Visiting Fellows program. The authors would like to thank staff at the Federal Reserve Bank of Boston for their thoughtful review, feedback, copyediting and communications support for this brief.

Appendix

Table A1: Description of center-based sample				
	Provider offers early morning care			p-value
	No (n=430)	Yes (n=83)	Total (n=513)	
n (%) or mean (sd)				
Program characteristics				
Years in business	21 (12)	22 (13)	22 (12)	0.307
Educator turnover in last 12 months	4 (3)	5 (3)	4 (3)	0.024
Licensed capacity	82 (54)	101 (72)	85 (58)	0.005
Percent of children with child-care subsidy	4% (12%)	3% (12%)	4% (12%)	0.649
NAEYC accredited	161 (37%)	38 (46%)	199 (39%)	0.153
Member of multi-center organization	223 (52%)	54 (65%)	277 (54%)	0.027
Private pay-reimbursement rate gap	\$8 (\$21)	\$9 (\$26)	\$9 (\$22)	0.674
Community characteristics				
Percent of children under the age of 6 with working parents	74% (13%)	76% (11%)	74% (13%)	0.366
Percent of workers with nonstandard commute times	11% (5%)	14% (4%)	12% (5%)	< 0.001
Percent of families in poverty	8% (8%)	7% (5%)	8% (7%)	0.208
Number of providers per square mile in zip code	10 (15)	7 (17)	10 (15)	0.086

Child-care licensing region				
Central	75 (17%)	13 (16%)	88 (17%)	< 0.001
Metro Boston	95 (22%)	2 (2%)	97 (19%)	
Northeast	97 (23%)	16 (19%)	113 (22%)	
Southeast and Cape	76 (18%)	36 (43%)	112 (22%)	
Western	87 (20%)	16 (19%)	103 (20%)	
<p><i>Source: Authors' analysis of data from the 2022 Massachusetts Child Care Research Partnership Statewide Survey, the 2018–2022 American Community Survey, Massachusetts 2022 market rate survey, and the Massachusetts Department of Early Education and Care's Licensing Education Analytic Database.</i></p>				

Table A2: Description of family child-care provider (FCC) sample				
	Provider offers early morning care			p-value
	No	Yes	Total	
	(n=568)	(n=278)	(n=846)	
n (%) or mean (sd)				
Provider characteristics				
Owns home	403 (71%)	204 (73%)	607 (72%)	0.461
Race/ethnicity				0.156
Non-Hispanic White	120 (21%)	58 (21%)	178 (21%)	
Non-Hispanic Black	57 (10%)	17 (6%)	74 (9%)	
Hispanic	357 (63%)	191 (69%)	548 (65%)	
Other race/ethnicity or prefer not to say	34 (6%)	12 (4%)	46 (5%)	
Bachelor's degree or higher	118 (21%)	44 (16%)	162 (19%)	0.086
Program characteristics				

Years in business	13 (8)	15 (8)	14 (8)	0.025
Licensed capacity	9 (1)	9 (1)	9 (1)	0.792
Percent of children with child-care subsidy	7% (23%)	2% (12%)	6% (20%)	0.002
NAFCC accredited	32 (6%)	23 (8%)	55 (7%)	0.144
Member of FCC System	489 (86%)	252 (91%)	741 (88%)	0.059
Private pay-reimbursement rate gap	\$15 (\$55)	\$7 (\$36)	\$13 (\$50)	0.018
Community characteristics				
Percent of children under the age of 6 with working parents	74% (10%)	74% (9%)	74% (10%)	0.546
Percent of workers with nonstandard commute times	14% (4%)	15% (4%)	14% (4%)	< 0.001
Percent of families in poverty	12% (6%)	12% (5%)	12% (6%)	0.312
Number of providers per square mile in zip code	22 (24)	28 (36)	24% (29)	0.004
Child-care licensing region				
Central	102 (18%)	74 (27%)	176 (21%)	< 0.001
Metro Boston	164 (29%)	28 (10%)	192 (23%)	
Northeast	132 (23%)	110 (40%)	242 (29%)	
Southeast and Cape	72 (13%)	21 (8%)	93 (11%)	
Western	98 (17%)	45 (16%)	143 (17%)	
<p><i>Source: Authors' analysis of data from the 2022 Massachusetts Child Care Research Partnership Statewide Survey, the 2018–2022 American Community Survey, Massachusetts 2022 market rate survey, and the Massachusetts Department of Early Education and Care's Licensing Education Analytic Database.</i></p>				

Table A3: Regression results predicting the probability of a child-care center offering early morning child care

Variables	
Years in business	1.009 (0.985 - 1.034)
Teacher turnover during past 12 months	1.036 (0.953 - 1.126)
Licensed capacity	1.006* (1.001 - 1.010)
Percent of children with child-care subsidy	0.992 (0.968 - 1.017)
NAEYC accredited	1.055 (0.563 - 1.977)
Member of multi-center organization	1.547 (0.858 - 2.789)
Private pay-reimbursement rate gap	1.006 (0.993 - 1.018)
Percent of children under the age of 6 with working parents	1.002 (0.982 - 1.024)
Percent of workers with nonstandard work hours	1.101*** (1.042 - 1.163)
Percent of families in poverty	0.969 (0.923 - 1.018)
Number of providers per square mile in zip code	1.008 (0.987 - 1.030)
EEC licensing region (ref= Boston Metro)	
Central	6.587* (1.338 - 32.435)
Northeast	4.774* (1.017 - 22.402)
Southeast and Cape	17.546*** (3.696 - 83.310)
Western	8.908** (1.821 - 43.573)

Constant	0.002*** (0.000 - 0.026)
Observations	513

Source: Authors' analysis of data from the 2022 Massachusetts Child Care Research Partnership Statewide Survey, the 2018–2022 American Community Survey, Massachusetts 2022 market rate survey, and the Massachusetts Department of Early Education and Care's Licensing Education Analytic Database.
 *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table A4: Regression results predicting the probability of a family child-care provider (FCC) offering early morning child care

Variables	
Provider owns home	1.021 (0.701 - 1.488)
Race/ethnicity (ref= Non-Hispanic White)	
Non-Hispanic Black	1.120 (0.556 - 2.258)
Hispanic	1.231 (0.773 - 1.960)
Other race/ethnicity or prefer not to say	1.152 (0.514 - 2.581)
Bachelor's degree or higher	0.756 (0.501 - 1.140)
Years in business	1.034** (1.012 - 1.057)
Licensed capacity	1.002 (0.896 - 1.122)
Percent of children with child-care subsidy	0.996 (0.985 - 1.006)
NAFCC accredited	1.548 (0.846 - 2.832)

Member of FCC system	1.114 (0.663 - 1.870)
Private pay-reimbursement rate gap	0.997 (0.993 - 1.001)
Percent of children under the age of 6 with working parents	1.014 (0.996 - 1.032)
Percent of workers with nonstandard work hours	1.075** (1.026 - 1.126)
Percent of families in poverty	1.031 (0.996 - 1.067)
Number of providers per square mile in zip code	1.000 (0.993 - 1.008)
EEC licensing region (ref= Boston Metro)	
Central	4.073*** (2.253 - 7.363)
Northeast	3.811*** (2.112 - 6.874)
Southeast and Cape	1.731 (0.842 - 3.561)
Western	2.839** (1.522 - 5.296)
Constant	0.008*** (0.001 - 0.063)
Observations	846
<p><i>Source: Authors' analysis data from the 2022 Massachusetts Child Care Research Partnership Statewide Survey, the 2018–2022 American Community Survey, Massachusetts 2022 market rate survey, and the Massachusetts Department of Early Education and Care's Licensing Education Analytic Database.</i></p> <p>*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$</p>	

References

- Boushey, H. & Ansel, B. (2016). Working by the hour: The economic consequences of unpredictable scheduling practices. *Washington Center for Equitable Growth*. <https://equitablegrowth.org/wp-content/uploads/2016/09/090716-unpred-sched-practices.pdf>
- Brodsky, A. & Mills, L. (2014). *Non-Traditional Hours (Nth) Child Care in Massachusetts*.
- Center for Early Learning Funding Equity. (2022). Massachusetts 2022 Market Rate Survey and Narrow Cost Analysis Final Report. *Northern Illinois University*. <https://www.mass.gov/doc/massachusetts-2022-market-rate-survey-and-narrow-cost-analysis-final-report/download>
- Child Care and Development Fund. (2024). 45 C.F.R. Part 98. <https://www.ecfr.gov/current/title-45/subtitle-A/subchapter-A/part-98>
- Child Care Aware of America. (2017). *Mapping the Gap: Exploring Child Care Supply & Demand in Massachusetts*. https://www.childcareaware.org/wp-content/uploads/2017/10/MassachusettsMaps_FINAL.pdf
- Child Care Aware of America. (2023). *Price of Care: 2023*. https://info.childcareaware.org/hubfs/2023_Affordability_Analysis.pdf
- Crosby, D.A. & Mendez, J. (2017). How Common Are Nonstandard Work Schedules Among Low- Income Hispanic Parents of Young Children? *National Research Center on Hispanic Children & Families*. <https://www.hispanicresearchcenter.org/research-resources/how-common-are-nonstandard-work-schedules-among-low-income-hispanic-parents-of-young-children/>
- Davis, E.E., Lee, W.F., & Sojourner, A. (2019). Family-centered measures of access to early care and education. *Early Childhood Research Quarterly*, 47, 472–486. <https://doi.org/10.1016/j.ecresq.2018.08.001>
- DiMatteo, G. (2019). Nontraditional Hours and Child Care: An Exploratory Study on the Needs of Families and Child Care Providers in California. *California Child Care Resource & Referral Network*. <https://rrnetwork.org/assets/general-files/FINAL-NTH-Report-10.25-V2.1.pdf>
- Dobbins, D., Tercha, J., McCready, M., & Liu, A. (2016). Child Care Deserts: Developing Solutions to Child Care Supply and Demand. *Child Care Aware of America*. <https://info.childcareaware.org/hubfs/Child-Care-Deserts-report-FINAL2.pdf>
- Dorn, C. (2020). Infant and Toddler Contracted Slots Pilot Evaluation: Interim Report. *Pennsylvania Office of Child Development and Early Learning*. <https://www.pakeys.org/wp-content/uploads/2020/05/IT-Evaluation-Final.pdf>
- Emlen, A. & Associates, Inc. (1992). The 1992 Oregon Child-Care Rates. *Regional Research Institute for Human Services, Portland State University*. https://health.oregonstate.edu/sites/health.oregonstate.edu/files/early-learners/pdf/research/1992_oregon_child_care_rates.pdf
- Enchautegui, M.E. (2013). Nonstandard Work Schedules and the Well-Being of Low-Income Families. *Urban Institute*. <https://www.urban.org/sites/default/files/publication/32696/412877-Nonstandard-Work-Schedules-and-the-Well-being-of-Low-Income-Families.PDF>
- Giapponi, K. (2017). *Insights into the Black Box of Child Care Supply: An Examination of Provider Participation in the Child Care Subsidy System* [Doctoral dissertation]. Brandeis University.

Giapponi Schneider, K., Warfield, M.E., Joshi, P., Ha, Y., & Hodgkin, D. (2017). Insights into the black box of child care supply: Predictors of provider participation in the Massachusetts child care subsidy system. *Children and Youth Services Review*, 79, 148–159. <https://doi.org/10.1016/j.childyouth.2017.06.014>

Giapponi Schneider, K., Joshi, P., & Ha, Y. (2021). An examination of child care provider participation in state subsidy contract systems. *Children and Youth Services Review*, 127, 106099. <https://doi.org/10.1016/j.childyouth.2021.106099>

Grobe, D., Weber, R.B., Davis, E.E., Kreader, J.L., & Pratt, C.C. (2008). Study of Market Prices: Validating Child Care Market Rate Surveys. *Oregon State University Family Policy Program*. https://health.oregonstate.edu/sites/health.oregonstate.edu/files/early-learners/pdf/research/study_of_market_prices_-_validating_child_care_market_rate_surveys.pdf

Harknett, K. & Schneider, D. (2020). Precarious Work Schedules and Population Health. *Health Affairs*. <https://doi.org/10.1377/hpb20200206.806111>

Henly, J.R. & Adams, G. (2018). Insights on Access to Quality Child Care for Families with Nontraditional Work Schedules. *Urban Institute*. https://www.urban.org/sites/default/files/publication/99148/insights_on_access_to_quality_child_care_for_families_with_nontraditional_work_schedules_0.pdf

Kochanek, T.T. (2003). *Examining the Feasibility, Desirability, and Cost of Providing Non-Traditional Hours Child Care: Program and Policy Implications*.

Lambert, S.J., Fugiel, P.J., & Henly, J.R. (2014). Precarious Work Schedules among Early-Career Employees in the US: A National Snapshot. *The Employment Instability, Family Well-Being, and Social Policy Network at the University of Chicago*. https://populardemocracy.org/sites/default/files/publications/Lambert.Fugiel.Henly_.Precarious_Work_Schedules.August2014.pdf

Laughlin, L.L. (2007). *Child Care Constraints among America's Families* (#SEHSD-WP2007-05). United States Census Bureau. <https://www.census.gov/library/working-papers/2007/demo/SEHSD-WP2007-05.html>

Lee, S.K. & Henly, J.R. (2024). Nontraditional-Hour Child Care in the United States: What Is Known About Supply and Demand. *Illinois Nontraditional-Hour Child Care Study (INCCS)*. <https://www.erikson.edu/wp-content/uploads/2024/07/NTH-Scoping-Review-final.pdf>

Massachusetts Department of Early Education and Care. (2022). *Financial Assistance Policy Guide*. <https://www.mass.gov/doc/eecs-financial-assistance-policy-guide-february-1-2022/download>

Massachusetts Department of Early Education and Care. (2024a). *Board of Early Education and Care Meeting – Wednesday, March 13, 2024*. <https://www.mass.gov/event/board-of-early-education-and-care-meeting-wednesday-march-13-2024-2024-03-13t130000-0400-2024-03-13t160000-0400>

Massachusetts Department of Early Education and Care. (2024b). *Fiscal Year 2024 Child Care Financial Assistance Daily Reimbursement Rates*. <https://www.mass.gov/doc/fiscal-year-2024-child-care-financial-assistance-daily-reimbursement-rates/download>

Matthews, H., & Ewen, D. (2008). Child Care Assistance in 2006: Insufficient Investments. *Center for Law and Social Policy*. <https://www.policyarchive.org/handle/10207/13761>

National Survey of Early Care & Education (NSECE). (2015). *Provision of Early Care and Education During Non-Standard Hours* (Fact sheet; OPRE Report No. 2015-44).

https://www.acf.hhs.gov/sites/default/files/documents/opre/factsheet_nonstandard_hours_provision_of_ee_toopre_041715_508.pdf

Prenatal-to-Three Capacity Building Hub. (2023). State Scan of Family, Friend, and Neighbor (FFN) Policies and Supports. *The Build Initiative*. <https://buildinitiative.org/wp-content/uploads/2023/02/FFN-Policies-and-Supports-0217.pdf>

Presser, H.B. (2003). *Working in a 24/7 Economy: Challenges for American Families*. Russell Sage Foundation.

Sandstrom, H., Giesen, L., & Chaudry, A. (2012). How Contextual Constraints Affect Low-Income Working Parents' Child Care Choices. *Urban Institute*. <https://www.urban.org/sites/default/files/publication/32726/412511-How-Contextual-Constraints-Affect-Low-Income-Working-Parents-Child-Care-Choices.PDF>

Sandstrom, H., Greenberg, E., Derrick-Mills, T., Lou, C., Adelstein, S., Runes, C., Hong, A., Genua, D., Reginal, T., & Marotta, J. (2018). Nontraditional-Hour Child Care in the District of Columbia. *Urban Institute*. https://www.urban.org/sites/default/files/publication/99768/nontraditional-hour_child_care_in_the_district_of_columbia.pdf

Savage, S.A. & Robeson, W. (2022). Child care tradeoffs among Massachusetts mothers. *Federal Reserve Bank of Boston*. <https://www.bostonfed.org/publications/community-development-issue-briefs/2022/child-care-tradeoffs-among-massachusetts-mothers.aspx>

Schilder, D., Adams, G., Wagner, L., Lou, C., & Willenborg, P. (2022). What Child Care Arrangements Do Parents Want during Nontraditional Hours? *Urban Institute*. https://www.urban.org/sites/default/files/2022-03/What%20Child%20Care%20Arrangements%20Do%20Parents%20Want%20during%20Nontraditional%20Hours_0.pdf

Schilder, D., Willenborg, P., Lou, C., Knowles, S., & Jaramillo, J. (2021). Comparing Potential Demand for Nontraditional-Hour Child Care and Planned Policies across States. *Urban Institute*. <https://www.urban.org/sites/default/files/publication/104601/comparing-potential-demand-for-nontraditional-hour-child-care-and-planned-policies-across-states.pdf>

Schulman, K. & Crawford, D. (2018). Helping Family, Friend, and Neighbor Care Providers Meet New Requirements under the Child Care and Development Block Grant Reauthorization Law. *National Women's Law Center*. <https://nwlc.org/wp-content/uploads/2018/10/Helping-FFN-meet-CCDBG.pdf>

Sloane, K., Fontana, J., Shaw-Amoah, A., Lapp, D., & Turner, A.M. (2019). Making It Work: Examining the Status of Non-Traditional Child Care in Pennsylvania. *Research for Action*. <https://www.researchforaction.org/wp-content/uploads/2021/07/RFA-Making-It-Work-June-2019.pdf>

Stoll, M., Alexander, D., & Sugimura, N. (2006). Working Later in Illinois: Work Schedules, Incomes and Parents' Access to Child Care. *Illinois Action for Children*. <https://search.issuelab.org/resources/325/325.pdf>

United States Bureau of Labor Statistics (2019). Table 7. Workers by shift usually worked and selected characteristics, averages for the period 2017-2018. *Economic News Release*. <https://www.bls.gov/news.release/flex2.t07.htm>

Vital Village. (2020). *Licensed Early Education and Care Providers by Program Type and Capacity in MA*. <https://www.vitalvillage.org/data-dashboard/customize/eec-capacity-statewide>