



Frederick County Child Care Market Study

A Focus on Young Children

March 2024





Public Policy Associates is a public policy research, development, and evaluation firm headquartered in Lansing, Michigan. We serve clients in the public, private, and nonprofit sectors at the national, state, and local levels by conducting research, analysis, and evaluation that supports informed strategic decision-making.

Solomon Evaluation has served the Washington, D.C., Maryland, and Virginia area since 2015. Led by Dr. Shira Solomon, Solomon Evaluation advances learning outcomes in schools and social services agencies.

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Prepared for

Office for Children and Families

Division of Family Services, Frederick County Government

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Authors:

Shira Solomon, Ph.D.

Rebecca Frausel, Ph.D.

Colleen Graber

Veronica Worthington



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Executive Summary

High-quality child care prior to kindergarten is critical to economic prosperity and children’s cognitive and social development. Access to child care affects families’ workforce participation, financial stability, and future earnings, and quality child care promotes success in school. High-quality, non-parental child care also plays a role in easing family stress and building thriving communities. The availability of high-quality, affordable child care for families who seek it is an issue of national and local importance.

Beginning during the tenure of County Executive Jan Gardner and continuing as a priority of current County Executive Jessica Fitzwater, the County’s Office for Children and Families (OCF) in the Division of Family Services has been taking strategic steps to identify the ways Frederick County government can help. Building on earlier efforts of the Interagency Early Childhood Committee of Frederick County, OCF engaged Public Policy Associates and Solomon Evaluation to conduct a systemic study of trends in the child care market and their impact on families, child care businesses, and the local economy.

Between February 2023 and February 2024, the Public Policy Associates – Solomon Evaluation research team examined a wide array of data from federal, state, and county agencies, in addition to hearing from over 1,600 participants in surveys, focus groups, interviews, and community input sessions. OCF staff, a Child Care Advisory Group, and a Community Advisory Board provided guidance, implementation assistance, and regular feedback on the research; meetings with specific stakeholder groups also informed the work.



Child Care Impact Pathway Logic Model

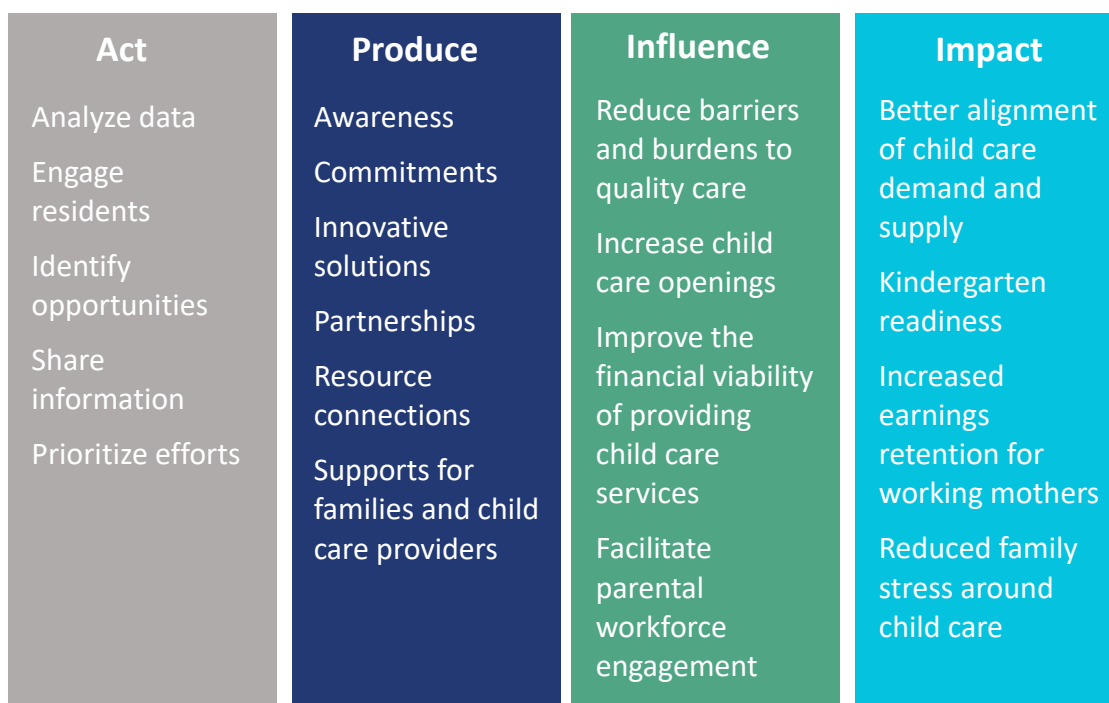


Figure 1. Logic Model for Frederick County Child Care Access Efforts

The Frederick County Child Care Market Study final report synthesizes and explains the results of research about conditions affecting the child care market (supply and demand), the ideas and experiences underlying families’ child care decisions, and the opportunities for improving the availability and affordability of quality child care.

Main Study Findings

QUESTION 1: TO WHAT EXTENT ARE FAMILIES ABLE TO ACCESS THE KINDS OF CHILD CARE THEY NEED AND WANT?

Child Care Availability and Affordability

- The availability of licensed child care slots in Frederick County has not been keeping pace with the number of children who may need care. If current trends hold, the ratio of children per licensed slot will approach crisis level in the next decade.
- The county’s Northern and Southeastern regions currently have crisis-level child care shortages.



- Home-based child care providers had more licensed capacity for infants and toddlers (children under age two) than child care centers, and home-based providers were much less expensive.
- The number of home-based providers has been declining, making it increasingly difficult for families to access affordable, licensed child care for infants and toddlers.

Child Care Use and Preferences

- Frederick County families made extensive use of nonparental child care. At least half of kindergarten students in Frederick County Public Schools had some formal child care experience before starting school.
- Employment was the primary reason that families used child care.
- Families surveyed generally preferred formal (licensed) child care to all other options, including exclusive care by a parent or guardian. Families' preference for formal care grew stronger the closer children were to kindergarten.
- Nearly half of families who took the survey said they would prefer a parent or guardian to care for their children in their first year of life.

Child Care Decision-Making and Experiences

- The cost of child care was the single most important factor in families' decisions about whether to use child care and what type of child care to use. It is also the main barrier to getting the kind of child care they wanted and a major source of stress.
- Despite a relatively high eligibility threshold for the Maryland Child Care Scholarship, less than 5% of Frederick County families used it. On the survey, 82% of families said they paid the entire cost of child care out-of-pocket.
- Competing financial concerns emerged from the family focus groups as a major theme. Many women described needing child care in order to work and needing to work to afford child care.

68% of families said cost had prevented them from using the type of care they wanted.

"A well-run preschool setting has been very beneficial for my kids socially. Ninety percent of my take home pay goes to child care, but it is worth it in part because of the social benefits we have seen." – Parent

QUESTION 2: WHAT ARE THE CHALLENGES AND SUPPORTS FOR INCREASING PROVIDER CAPACITY AND QUALITY, ESPECIALLY FAMILY CHILD CARE BUSINESSES?

Capacity to Deliver Quality Child Care

- The demand for child care is strong. Three out of four Frederick County



- providers who took the survey had a six-month waitlist.
- Despite the demand for child care services, many providers struggled to fill their licensed slots.
 - Home-based providers felt stymied by licensing regulations limiting their capacity for children under two.
 - Staffing challenges constrained the ability of both home- and center-based providers to meet the demand for their services.

Business Challenges

- The expansion of publicly funded Pre-K programs has increased competition for children ages three to five in the private child care provider market. Interviews with providers revealed a great deal of concern about remaining financially viable given this new market factor, combined with regulatory constraints affecting the profitability of infant care.
- Some providers chose to serve fewer children than their licensed capacity in order to provide higher quality care or to improve their quality of life.
- Some providers prioritized paying staff more or keeping tuition rates low, over their interest in achieving or maintaining a stable and profitable business or increasing their own wages.

Quality Improvement

- The prospect of professional advancement through accreditation or the EXCELS quality rating system was attractive to many providers. Several providers said they were committed to pursuing these tracks or had sought the ability to participate in the mixed-delivery system for publicly funded Pre-K. However, providers also described the processes of these endeavors as difficult and uncertain, and often questioned whether they were worth the effort.
- Home-based providers, in particular, wanted families to recognize their commitment to maintaining high standards of care.

QUESTION 3: IN WHAT WAYS CAN CHILD CARE ACCESS IMPROVE ECONOMIC AND EDUCATIONAL OUTCOMES?

Economic Prosperity

- Research points to important economic benefits for families and communities from quality child care. Access helps parents, especially mothers, continue or resume employment. Parents' participation in the workforce increases tax revenue, property values, and businesses' productivity.
- When families do not have reliable access to quality child care, they are more likely to experience negative economic and psychological impacts. When

Collectively, Frederick County families miss out on almost \$1 million dollars per year in lost wages due to child care problems.



child care arrangements fall through, many families miss work and lose wages.

Child Outcomes

- Quality child care can also improve students' kindergarten readiness, improve their long-term educational attainment, and increase their future wages.

Social Return on Investment

- Child care is an important contributor to economic prosperity.
- After recouping expenses, the county is likely to see an additional \$3-\$4 in economic benefits for every dollar invested in improving families' access to quality child care.

Each \$1 invested in child care is likely to produce \$3-\$4 in economic benefits for the county.

Next Steps for the County

The study shows the dynamics of child care in Frederick County and the need to prioritize action around child care supply that meets families' needs and preferences. The County can help ensure enough quality child care for all who need it by advocating for funding and policy improvements, helping providers adapt to changing market conditions, and taking steps to bolster the child care businesses.

Equally important is the demand side of the market. To respond to families' needs, Frederick County should build awareness, connect families to resources, and facilitate innovative care options. The completion of the study is a starting point for cross-sector action. It positions the County to act through partnership, advocacy, and investment to drive long-term sustained impacts.

Frederick County plans to use the study findings in a three-step approach:

- Propose solutions and set immediate and longer-term priorities with community input.
- Develop cross-sector partnerships to act on the priorities.
- Seek funding for sustainable and locally achievable solutions.



Introduction

Frederick County government saw an urgent need to increase equitable access to high-quality early childhood care and education based on what the county executive and staff had heard from residents, including parents, child care providers, and community organizations and schools. However, they needed more comprehensive information to develop a path to local solutions.

The idea for the Frederick County Child Care Market Study developed from the Frederick County Office for Children and Families (OCF), together with the Frederick County Interagency Early Childhood Committee (IECC). Using federal funding, the County obtained external research expertise from the team of Public Policy Associates and Solomon Evaluation.

Child care is Frederick County families' second-highest household expense after housing.¹



¹ Maryland Child Care Resource Network: Child Care Demographics 2023, Frederick County Report (2023), Maryland Child Care Network, Maryland State Department of Education, Baltimore, MD: MSDE, <https://www.marylandfamilynetwork.org/sites/default/files/2023-06/Frederick.pdf>.



A market study looks at the conditions of transactions around goods or services, in this case the supply and demand for child care. This includes identifying existing capacity and any gaps in regulated care – including the types of care available (setting, quality, competition, etc.) – and the economic drivers and educational benefits of the service for the population who receives it. To understand the impact of these factors on the county’s child care market, this study used multiple sources and methods of collecting information between February 2023 and January 2024.

Spanning 664 square miles of urban, suburban, and rural communities, Frederick County is geographically and demographically diverse, and its population is growing. Between 2020 and 2035, the county’s population is projected to grow by 20% overall and by 50% among residents identifying as Black and Hispanic/Latino.² The current population of the county is 278,835 residents, 12% of whom are foreign-born.³

Frederick County Child Care Market Study Methods

- Community input and information sessions
- Family focus groups
- Family survey
- Frederick County Public Schools student data
- Literature review
- Local, state, and federal datasets and reports
- Provider interviews
- Provider survey
- Social return on investment analysis
- Stakeholder meetings
- Subject-matter expert interviews

5%
Asian

8%
Black

11%
Hispanic/Latino

68%
White

Figure 2. Frederick County Population by Race/Ethnicity, 2021⁴

Out of 14,312 Frederick County households with children under age 5 (the focus of this study), 25% are headed by single parents or guardians and 36% have low or moderate incomes (at the poverty or ALICE thresholds).⁵

² Population Projection Growth Estimates, Maryland Department of Planning, May 2023.

³ U.S. Census Bureau, American Community Survey 1-Year Estimates, Table DP05; generated by Veronica Worthington; using <https://data.census.gov/> (22 March 2023).

⁴ Ibid.

⁵ United Way developed the ALICE measure (Asset Limited, Income Constrained, Employed) as an alternative to the Federal Poverty Level, in recognition of the fact that many individuals and families are working but still unable to afford basic necessities (e.g., housing, child care, food). United Way estimates that 29% of Frederick County households are (“ALICE”) and an additional 7% are in poverty. This report uses this term to refer to families with young children who are estimated to be ALICE or in poverty.

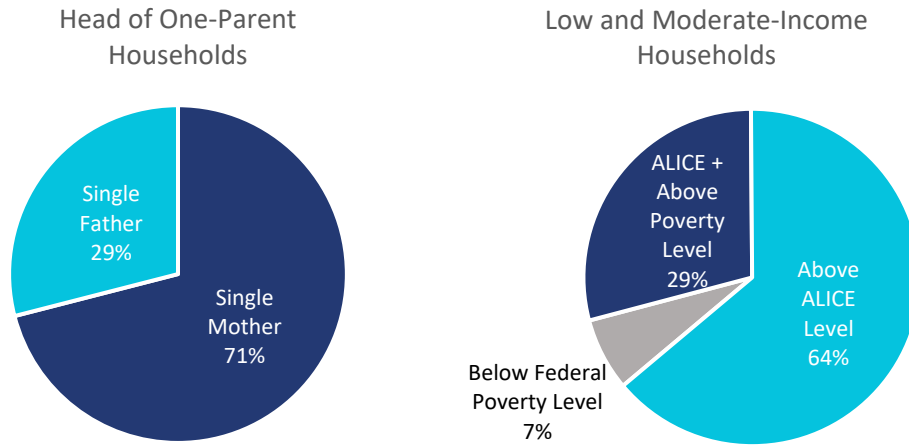


Figure 3. Frederick County Households by Type, 2021 (ACS), and Income Level, 2023 (ALICE)

To reflect this population diversity, the County sought to collect community-driven insights from a range of people. Participants included racially and ethnically diverse working parents, parents working nontraditional hours, child care providers of all types, immigrant families, businesses, organizations that work with low-income families, and others.

As shown in the project’s logic model (Figure 4), the County sees potential benefits for families, children, and the community by improving early care and education access. By acting now, it seeks to produce changes that influence outcomes in the near term and impact the county in major ways in the longer term.



Child Care Impact Pathway Logic Model

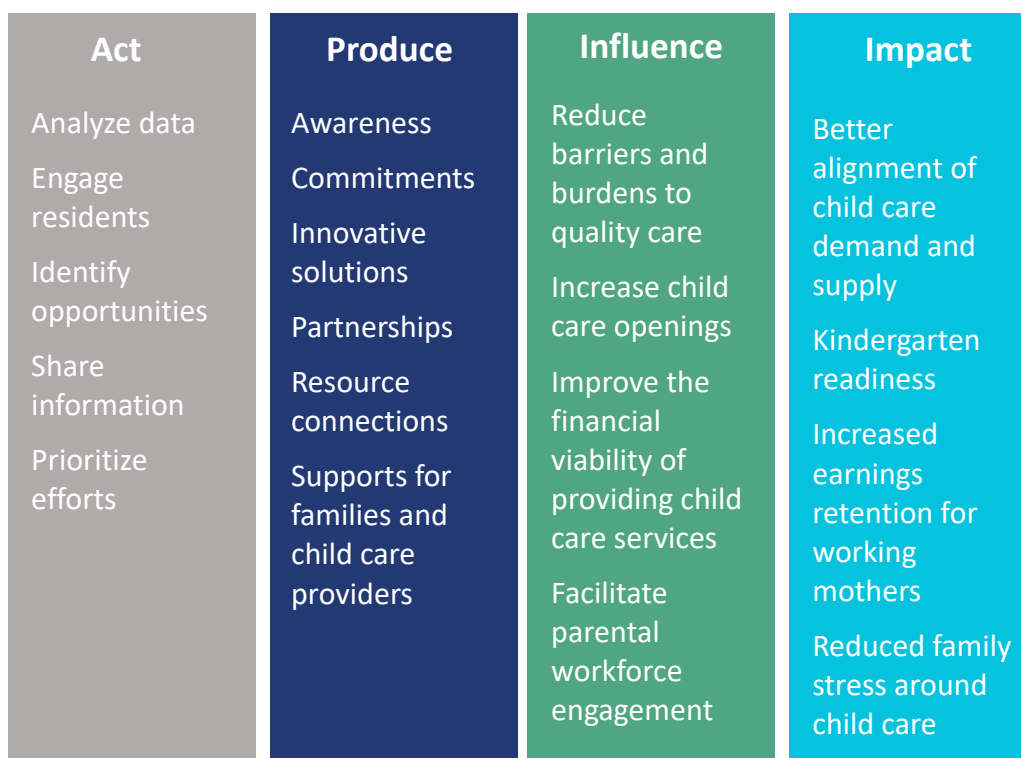


Figure 4. Logic Model for Frederick County Child Care Access Efforts

THE RESEARCH QUESTIONS

The Frederick County Child Care Market Study focused on three main questions and the impact of these questions on populations of interest, including those who are historically underserved in the county:

1. To what extent are families able to access the kinds of child care they need and want?
2. What are the challenges and supports for increasing provider capacity and quality, especially family child care businesses?
3. In what ways can child care access improve economic and educational outcomes?

Each question is addressed in this report, along with recommendations based on the study results in the concluding section.

Readers may wish to refer to the index (Appendix A) for help locating topics and populations of interest in the report.

Where applicable throughout the report, we have noted how we define key terms and pointed out where the analysis has limitations. For further details



about the data-collection and analytical approaches used, please refer to the Methodology section (Appendix B). The bibliography for the literature review that informed the study and other works cited in this report are found in Appendix C.

Appreciations

Many individuals and organizations contributed to the Frederick County Child Care Market Study. In 2023, over 1,600 people from across the county joined in the effort to learn about the child care needs and opportunities.

We appreciate the time and expertise shared by parents, child care providers, school district staff, business and nonprofit leaders, and municipal government staff, as well as the study community liaison, Damaris Ponciano-Jackson. Special thanks also go to the project's Child Care Advisory Group (of organizational partners) and Community Advisory Board (of parents, providers, and interested community members from the county).



Market Study Results

The study findings for each research question are presented thematically.

Section 1 focuses primarily on the perspectives of parents, and answers the research question: *To what extent are families able to access the kinds of child care they need and want?*

Section 2 focuses primarily on the perspectives of child care providers, and answers the research question: *What are the challenges and supports for increasing provider capacity and quality, especially family child care businesses?*

Section 3 presents findings from a literature review and social return on investment analysis to answer the question: *In what ways can child care access improve economic and educational outcomes?*

Within each section, findings are supported with evidence from primary and secondary sources.





Key Terms and Information

“ALICE” (Asset-Limited, Income-Constrained, Employed) refers to families with low- and moderate-income levels, relative to their family size and the cost of living in their county. ALICE status is approximated for family survey participants.

“Center-based providers” are licensed child care centers, including but not limited to Head Start, school-based Pre-K programs, and other preschool programs.

“Child care” refers to all nonparental formal and informal early childhood care and education.

“Formal” child care refers to licensed, home-based providers and child care centers. Formal care meets state standards for quality child care.

“Four regions” – City, Northern, Southeastern, and Southwestern – were defined by the research team with the input from the project’s Child Care Advisory Group and Community Advisory Board. These regions organize the County’s large geographical range into meaningful segments.

“Infants and toddlers” refers to children under 2, corresponding with state licensing regulations.

“Informal” child care refers to care by a grandparent or close relative, and limited other options as allowed by the state.

“Home-based providers” are child care providers with licenses for small or large family homes.

“Mixed delivery” refers to a system in which Pre-K classes are offered by private child care providers and in the public schools. The 2021 legislation, Blueprint for Maryland’s Future, describes the State’s approach to implementing a mixed-delivery system for Pre-K.

“Young children” refers to children ages 0-5, who are too young for kindergarten.

A note about identifying immigrant families:

Immigration status can be a sensitive topic, and asking about it directly might have discouraged participation. We carefully considered how to gather this information to better understand community characteristics while respecting participant privacy and boundaries. For the family survey, we offered a version in Spanish, the largest non-English language spoken in the County. We asked about the language spoken in the home, with the understanding that speaking a language other than English is a likely but not firm indicator of immigration. For two family focus groups, we reached participants through immigrant-serving organizations and asked them directly about whether they were born outside of the United States, which again does not necessarily equate to being an immigrant but is a strong indicator. In this report, we discuss results based on these indicators. In combination, we are confident that the results present a picture of immigrant preferences, needs, and experiences with child care.



Question 1: To what extent are families able to access the kinds of child care they need and want?

This section describes the availability and affordability of licensed child care in Frederick County, the ways families use child care and the ways they might prefer to use it, and families' experiences in seeking and using child care. It uses federal and state data to document population growth, regional variations in licensed child care capacity, and differences in the availability and affordability of care by the type of licensed child care provider.

Survey and focus group results explored families' use of formal child care and school-district data gave a snapshot of its prevalence prior to kindergarten. Group differences based on race/ethnicity, family composition, income, home language, and whether born outside of the United States are presented when they are notable. Together, the findings from these sources illustrate the choices, values, and experiences underlying families' satisfaction with their access to the kinds of child care they need and want.

Child Care Availability and Affordability

The number of licensed child care slots is not keeping pace with the growing number of young children in the county.

Between 2020 and 2035, Frederick County's formal child care capacity is projected to shrink by 19%, while its population of children under age 5 is projected to grow by 31%.⁶ If these patterns hold, the county could have 13,008 children without available slots by 2035, resulting in a much higher ratio of children per licensed slot. In 2020, there were 1.6 children per slot—a good ratio—but by 2035, there are projected to be 2.6 children per slot.⁷

⁶ Maryland Department of Planning.

⁷ See Appendix B, Analytical Details, Projected Number of Child Care Providers and Slots.

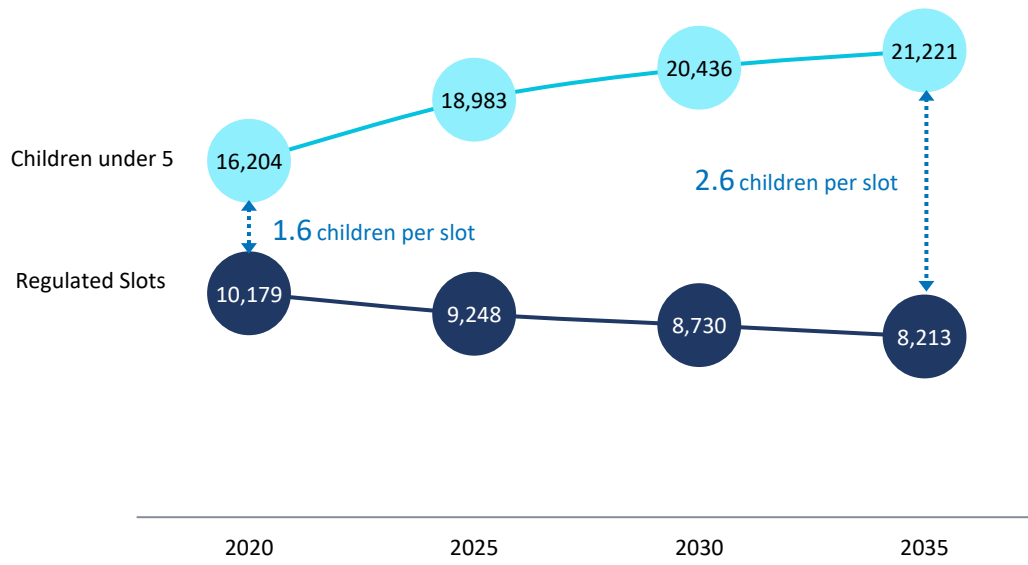


Figure 5. Projected Change in Children 0-5 and Licensed Slots in Frederick County, 2020-2035





Some Frederick County regions have too few licensed child care slots for the number of children living there.

Frederick County's population is concentrated in the City region (42%), followed by the Southeastern (25%) and Northern (22%) regions, with the smallest population living in the Southwest (11%). A ratio of three children per licensed slot (3:1) is considered a "child care desert"⁸ – a place where licensed child care is in critically short supply. At 3.3 children per slot, the county's Southeastern region is currently a child care desert, and at 2.8 children per slot, the Northern region is close to being one. Families who do not live in child care deserts may still have difficulty finding and accessing licensed care.

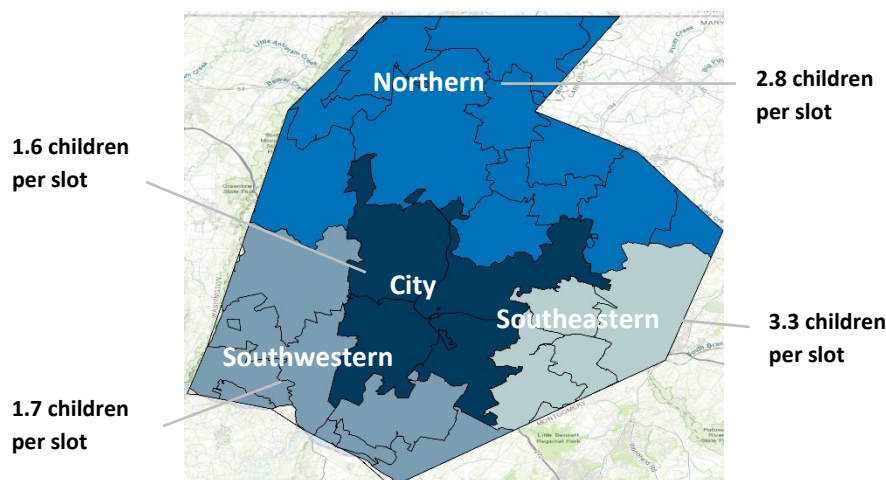


Figure 6. Number of Children Per Licensed Slot in Each Frederick County Region

More licensed slots exist for children under age two at home-based providers than at centers.

Home-based child care providers had 53% of slots for children under age two (infants and toddlers), even though they had just 23% of all licensed slots in Frederick County. Consequently, families may be more likely to find infant and toddler care more easily in regions with relatively higher proportions of slots in home-based

Home-based child care providers have 23% of all licensed slots in Frederick County and 53% of slots for children under two.

⁸ Rasheed Malik, Katie Hamm, and Maryam Adamu, Child Care Deserts: An Analysis of Child Care Centers by ZIP Code in 8 States (Washington, DC: Center for American Progress, October 27, 2016), from <https://www.americanprogress.org/article/child-care-deserts/>. The Center for American Progress defines a "child care desert" as a ZIP code with at least 30 children under the age of 5 and either no child care centers or so few centers that there are more than three times as many children under age 5 as there are licensed child care slots. It borrows the term "desert" from the frequently studied problem of food deserts, which refer to communities in which residents do not live in close proximity to affordable and healthy food retailers. A 3:1 ratio (three children for each licensed slot) is based on the understanding that not all families will choose nonparental child care for their children.



providers. For example, although the Northern region overall has 2.8 children per slot, a relatively higher percentage of these slots (30%) are offered by home-based providers. In the Southern region, with 3.3 children per slot, just 17% of total slots are offered by home-based providers. The relatively higher percentage of home-based child care slots in the Northern region (30%) may compensate, in part, for the overall demand for care in this region exceeding the available supply (2.8 children per slot). By contrast, the Southeastern region faces dual challenges: A high ratio of children to slots (3.3) along with a small portion of slots in home-based providers (17%). These dual challenges may make accessing child care for infants and toddlers even more difficult in the Southeastern region.

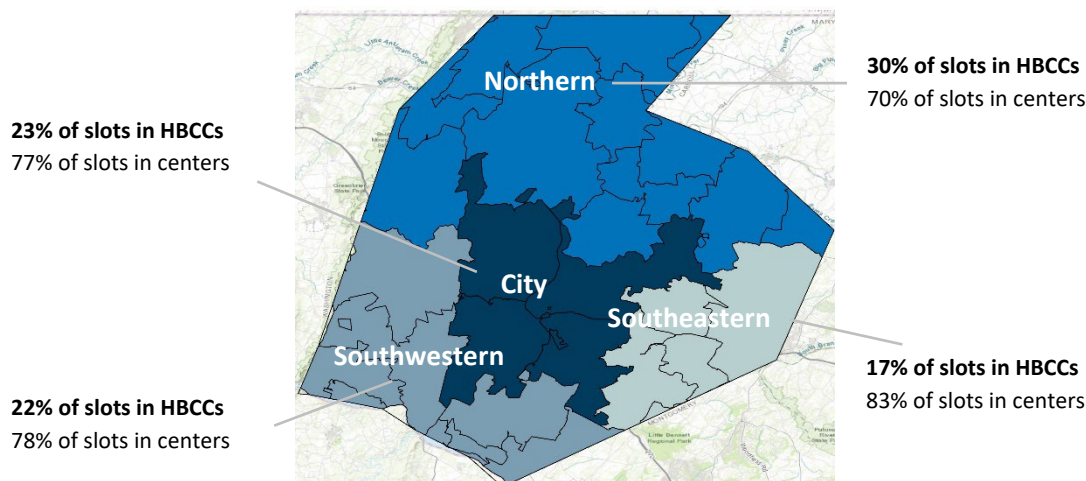


Figure 7. Regional Variation in the Distribution of Licensed Slots Between Home-Based and Center-Based Child Care Providers

The number of licensed child care slots at home-based providers has declined substantially since 2018.

Both the number of licensed slots and the number of child care providers affect families’ access to quality child care. Between 2018 and 2023, the number of licensed slots at home-based providers decreased by 19% while the number of slots in centers did not change.

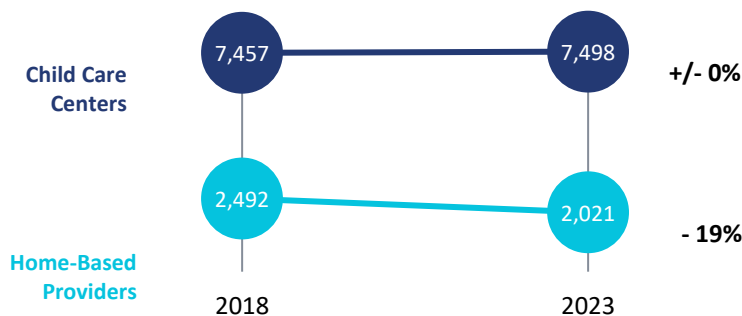


Figure 8. Change in the Number of Licensed Slots, 2018-2023



Since 2018, home-based child care providers have been closing their doors at an average rate of one provider per month. If this trend continues, Frederick County will have lost 92 home-based child care providers by 2035—a 29% reduction in the number of home-based providers over a 15-year period.

Home-based providers generally offer lower-cost care.

The reduction in the number of home-based providers may increase overall child care costs for families. Home-based providers generally charge lower tuition rates than child care centers, especially for children under age two. According to the Maryland Family Network, in 2022, full-time care tuition for children under two was \$19,054 per year for center-based care and \$12,009 per year for licensed home-based care. The cost of care for children under two was 59% higher at centers than at home-based providers, and the cost of care for two- to five-year-olds was 18% higher at centers than at home-based providers.

In 2022, annual tuition for children under two years old was \$7,045 less per year at home-based providers than at child care centers.

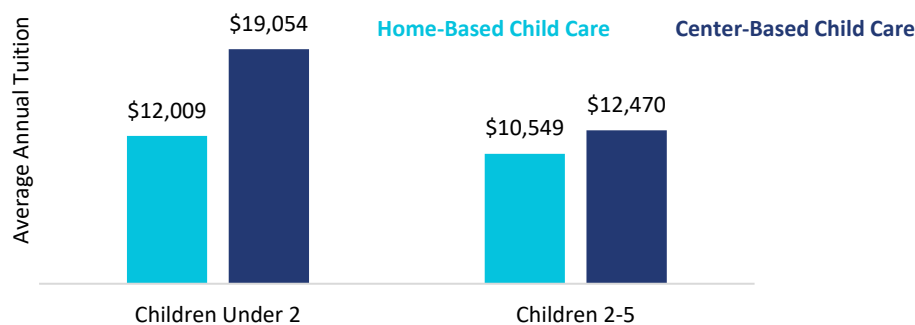


Figure 9. Average Annual Tuition for Children Under 2 and Children 2-5 at Home-and Center-Based Providers, 2022 (Source: Maryland Family Network, LOCATE: Child Care, June 2022)

Child Care Use and Preferences

Child care experience prior to kindergarten was common.

In 2021, over half of Frederick County Public Schools' 3,235 kindergarten students (56%) had some type of formal child care experience in the previous year.⁹ The percentage of kindergarteners with formal child care experience was slightly higher among Black and white student groups (59% and 58%, respectively) and slightly lower among Hispanic/Latino students (52%) and English learners (49%). Students with disabilities had the highest percentage of formal child care participation prior to kindergarten (83%). The impact of these formal care experiences on students' kindergarten readiness is discussed later in this report (page 42).

⁹ Frederick County Public Schools kindergarten registration data, Fall 2021.



The family survey reflects these same patterns of use, with 55% of parents reporting they used formal care and an additional 21% reporting they used non-parental informal care. In total, three out of four survey participants (76%) used some form of non-parental child care regularly (at least five hours per week), though participation was lower among households that speak a language other than English at home (55%) and Hispanic/Latino families (61%).

Among families using non-parental care, seven out of 10 (73%) who responded to the survey used at least one type of formal care, and 20% used both formal and informal care. Families may have combined different types of care for one child (such as a child attending preschool part-time and being cared for by a grandparent part-time, or exclusive types of care for multiple children in the family). Figure 10 shows the percentage of families who used each type of formal or informal care. Informal care was most often provided by grandparents or other relatives.

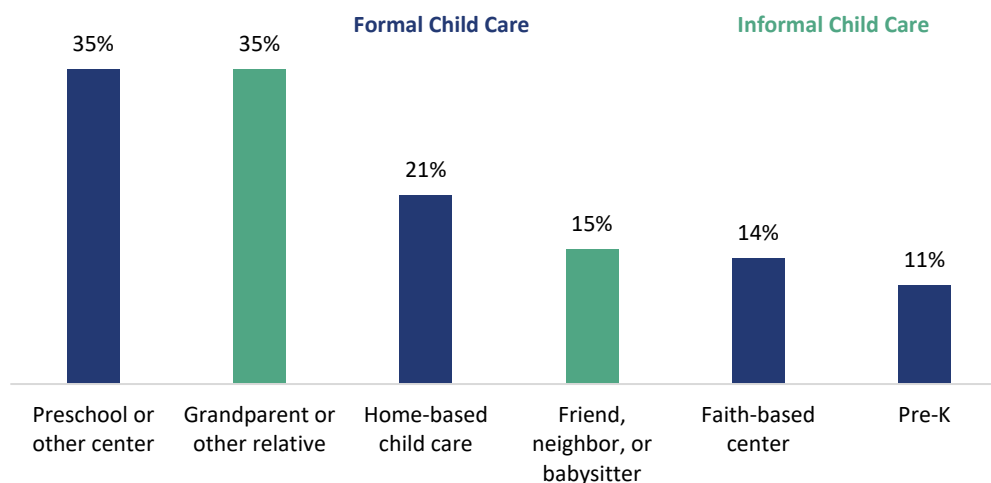


Figure 10. Percentage of Families Using Various Types of Informal Care and Formal Care at Least 5 Hours Per Week (Note: Percentages total more than 100% because the survey question asked participants to select all types of child care they currently use at least 5 hours per week. Individual responses may capture one or multiple children in a household.))

Families mainly used licensed providers for full-time child care.

According to the family survey, families used formal and informal child care in different ways. For full-time care (at least 30 hours per week), families overall used formal child care (80%) more frequently than informal care (20%). As shown in Figure 11, many families (74%) turned to home-based providers for full-time care.

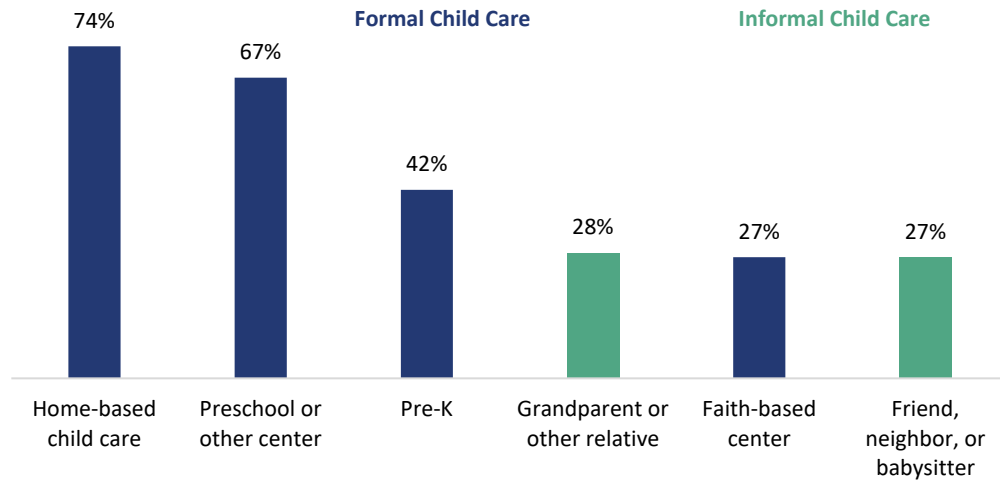


Figure 11. Percentage of Families Using Formal and Informal Providers for 30 or More Hours Per Week (Note: Families reported different mixes of care settings for their children, so the percentages do not total 100%.)

Informal providers and home-based providers were families’ main choices for their children under two.

Although informal care was usually a part-time option, families used it more frequently for children under two years old. About two-thirds (64%) of families who used a friend, neighbor, or babysitter entrusted that person with the care of their infant or toddler. Similarly, 55% of families with children in the care of a grandparent or relative were doing so for a child under age two. Fifty-eight percent of families using home-based providers had a child under two.

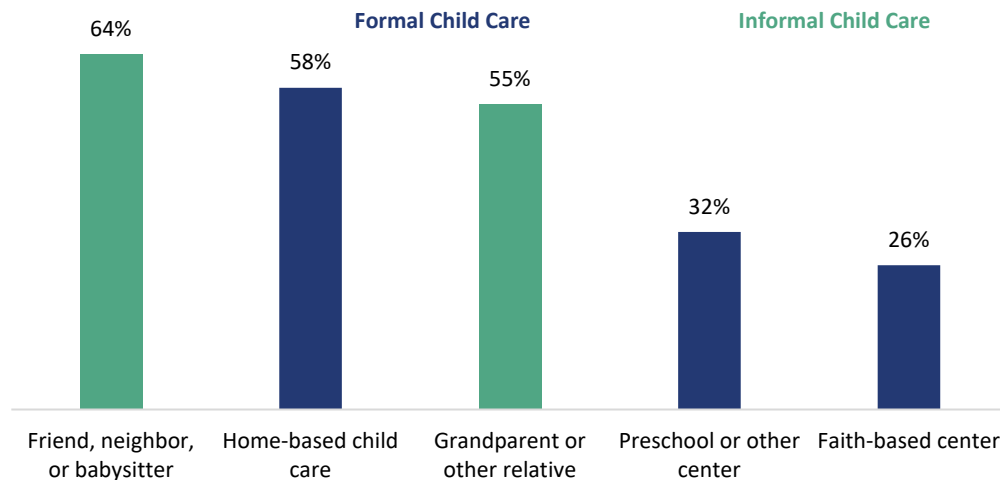


Figure 12. Percentage of Families Using Different Types of Informal and Formal Child Care for Children Under Two Years



Families preferred formal child care after a child's first birthday.

Six out of 10 survey participants (63%) preferred formal care for their children at some point prior to kindergarten. This preference was most pronounced for children who were close to starting kindergarten: 78% preferred formal care in the 4- to 5-year-old age bracket, compared to only 38% who preferred it for children in their first year of life.

Five out of 10 families (47%) would prefer to use parental care only until 12 months, if they were able to do so, and three out of 10 (30%) preferred parental care only for their child's second year. In every child age bracket, more families preferred parental care to informal care by a grandparent, relative, friend, neighbor, or babysitter.

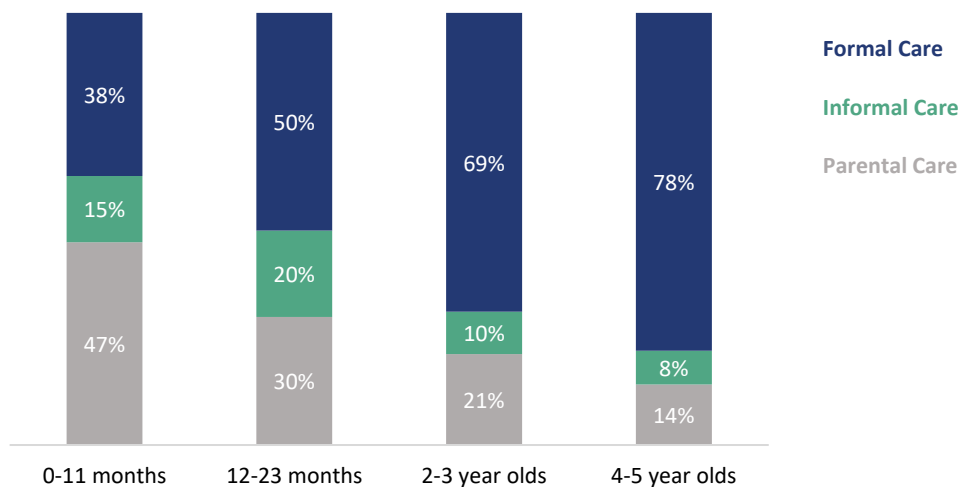


Figure 13. Family Preferences for Formal and Informal Care by Child Age

Child Care Decision-Making and Experiences

Cost and convenience were central to families' child care decisions.

Nearly half (45%) of family survey participants said cost was one of the primary reasons for their choice of child care, and 34% said the time it took to get a child to and from child care was one of their main reasons. Single mothers and Black families said that cost was a primary reason for their choices more frequently than survey participants overall (57% and 56%, respectively).

Out-of-pocket costs and time out-of-the-way were the most important reasons behind families' choice of their current child care arrangements.

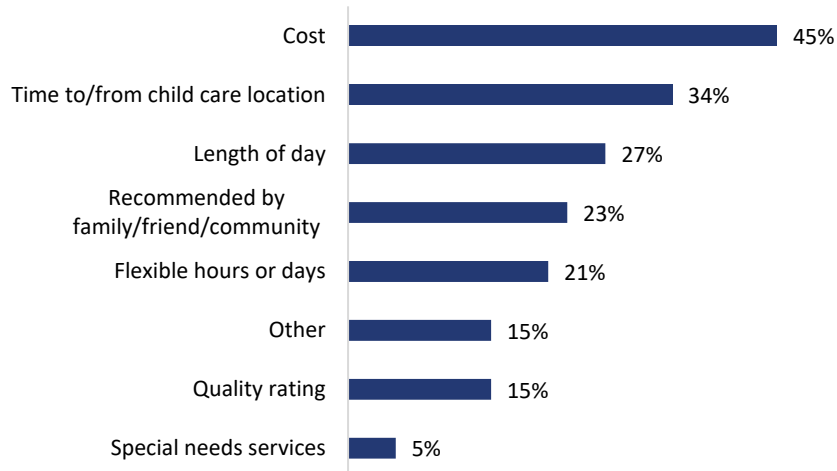


Figure 14. Families' Top Reasons for Their Child Care Selections

Schedule considerations, such as how many hours per day a child care provider is open (27%) and whether part-time options are available (21%) were also important to many families. Several focus group participants who worked nontraditional shifts (nights, weekends, or extended hours per shift with fewer than five shifts per week), spoke of the availability of part-time care as a key reason for their choice of child care arrangements. For example, one participant, whose husband also worked nontraditional shifts, only needed child care on Mondays. Since she could not find a home-based provider or center willing to enroll her child for only one day per week, her family had to forego formal care and rely on a grandparent for that day.

Most families paid the cost of child care out-of-pocket.

Eight out of 10 (82%) survey respondents said they did not receive any kind of financial assistance for the cost of child care. The most common forms of assistance reported were discounts or scholarships obtained directly from families' child care providers, followed by subsidized tuition through participation in the Maryland Child Care Scholarship program.

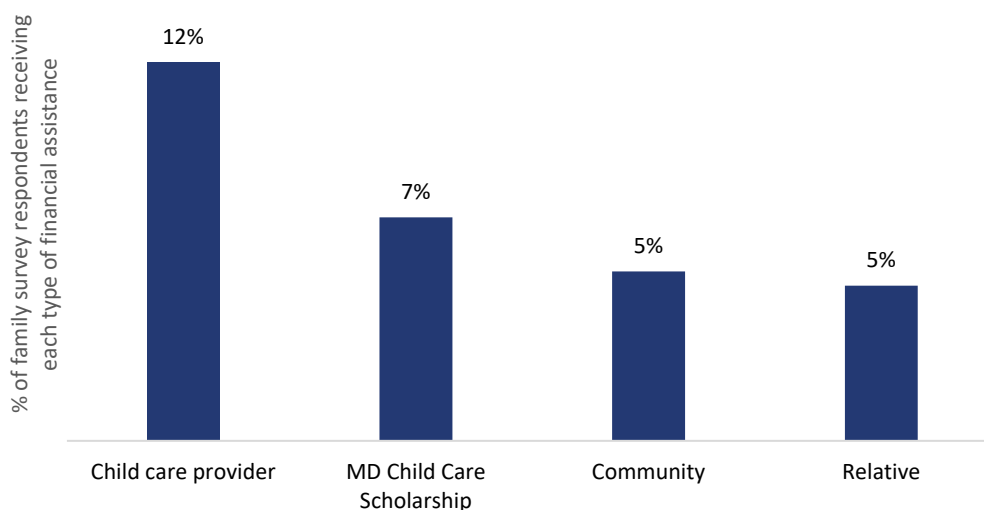


Figure 15. Families Receiving Different Types of Financial Assistance for the Cost of Child Care

Most families and providers did not participate in the Maryland Child Care Scholarship program.

Although the Maryland Child Care Scholarship program has a relatively high income eligibility threshold (\$90,033 for a family of four compared to the federal poverty level of \$30,000),¹⁰ only 3.6% of the county’s children received subsidized tuition through the program. In contrast, 33.6% of students in Frederick County Public Schools participated in the Free and Reduced-Price Meal (FARM) program in the 2022-23 school year, which limited eligibility to \$55,500 for a family of four.¹¹

According to provider records from the Maryland Family Network, 19% of Frederick County home-based care providers and 41% of child care centers participated in the Maryland Child Care Scholarship.

Additionally, families living in the Northern, Southeastern, and Southwestern regions of Frederick County may have lower access to providers who participate in the Maryland Child Care Scholarship program than those in the City region. Three out of 10 providers in the City region (32%) said they participated in the Scholarship program, compared to less than 20% of providers in each of the other three regions.

¹⁰ “Child Care Scholarship Program,” Maryland State Department of Education Division of Early Childhood, accessed August 28, 2023, <https://earlychildhood.marylandpublicschools.org/child-care-providers/child-care-scholarship-program>.

¹¹ Maryland State Department of Education, Office of School and Community Nutrition Programs. Free and Reduced-Price Meals Data, SY2022-2023, <https://marylandpublicschools.org/programs/SchoolandCommunityNutrition/Documents/Free%20and%20Reduced%20Data/FARMSSY2022-2023.pdf>; Federal Register/Vol. 88, No. 27/Thursday, February 9, 2023/Notices. “Income Eligibility Guidelines” table, <https://www.govinfo.gov/content/pkg/FR-2023-02-09/pdf/2023-02739.pdf>.



Total out-of-pocket costs for multiple children affected families’ child care decisions.

Nearly half of family survey respondents (45%) spent \$300 or more per week on child care, inclusive of families with one child or multiple children in nonparental care.

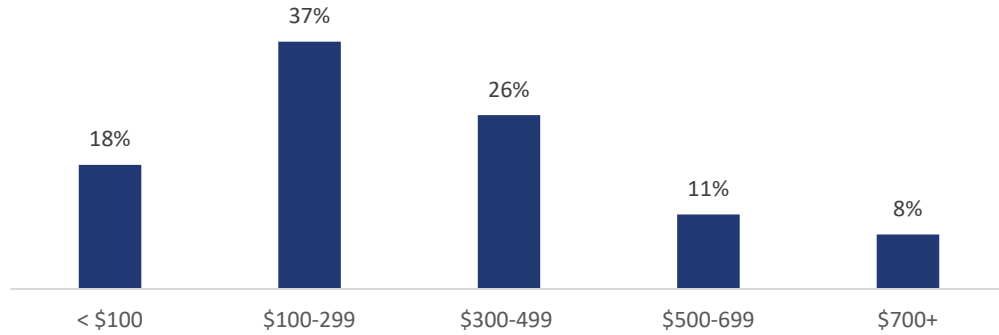


Figure 16. Total Out-of-Pocket Child Care Costs Per Week for Any Number of Children

When families had multiple children in child care, the percentage of families spending \$300 or more per week was approximately 20 points higher: 57% of families with two or more children in care had out-of-pocket costs of at least \$300 per week, compared to 38% of families with only one child in care. This child care spending differential for multiple children was the same for ALICE families as well as families who were not ALICE.

43% of ALICE families who used child care for more than one child had out-of-pocket costs of at least \$300 per week.

Families Spending \$300+ Weekly on Child Care for One Child

Families Spending \$300+ Weekly on Child Care for 2+ Children

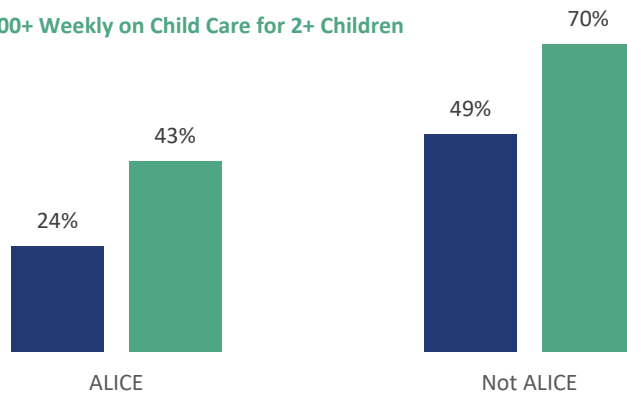


Figure 17. Total Out-of-Pocket Child Care Costs Per Week for One Child or Multiple Children

The total child care cost for multiple children was a factor in some families’ decision not to use child care for one or all of their children. The experiences



shared by some families and providers bore this out. One focus group participant said his wife stayed home with their infant twins and could not resume her professional employment because of the high cost of child care. A home-based provider said one of her clients stayed home with her youngest child because she could not afford to enroll both children.

Traveling to and from child care added 30 minutes or more to many families' day.

Overall, three out of 10 families (31%) spent at least 30 minutes per day getting their child(ren) to and from child care. The percentage of families who spent a half-hour or more per day transporting their child to and from care was slightly greater for families who used center-based providers (39% compared to 34% for both home-based providers and informal providers). Four out of 10 families in the Northern region (38%) said they went at least a half hour out-of-the-way, compared to 32% of families in the Southwestern region and 29% in the Southeastern and City regions.

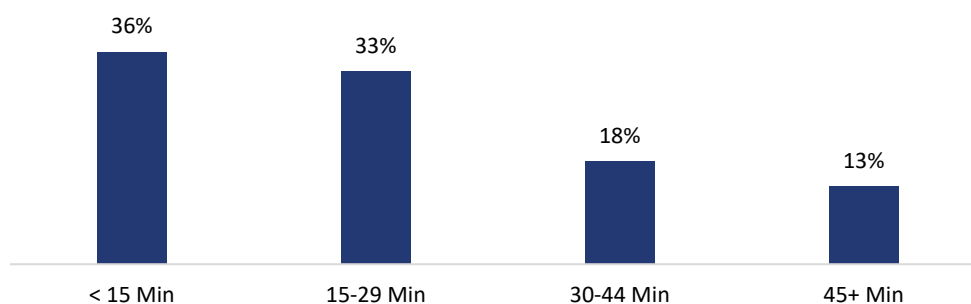


Figure 18. Daily Time Out-of-the-Way to Transport Children to and From Child Care

The cost of child care was the major barrier and stressor for families.

The cost of child care was the greatest barrier to accessing the type of child care parents wanted, as well as the greatest source of stress associated with the child care they currently use. Seven out of 10 families (69%), including families who were only using parental child care, had experienced barriers to getting the type of care they preferred. The cost of child care was by far the most prevalent barrier to families' access to their preferred type of care (47%). About one-third of families (35%) said they could not find the kind of care they wanted, regardless of cost.

47% of families said cost had prevented them from using the type of care they wanted.

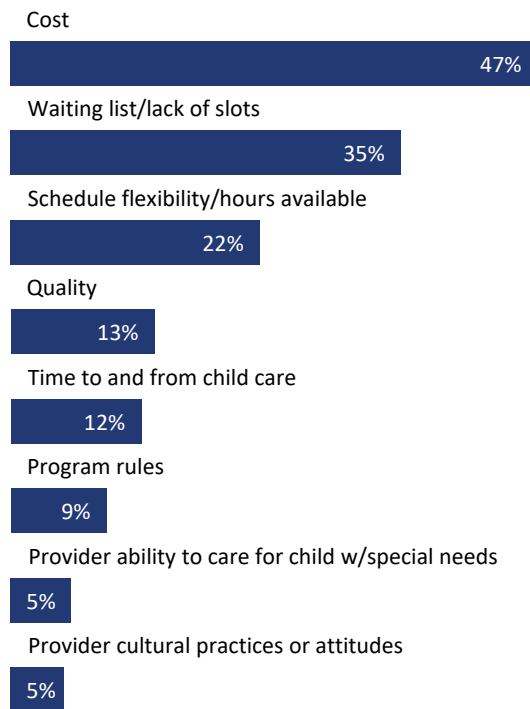
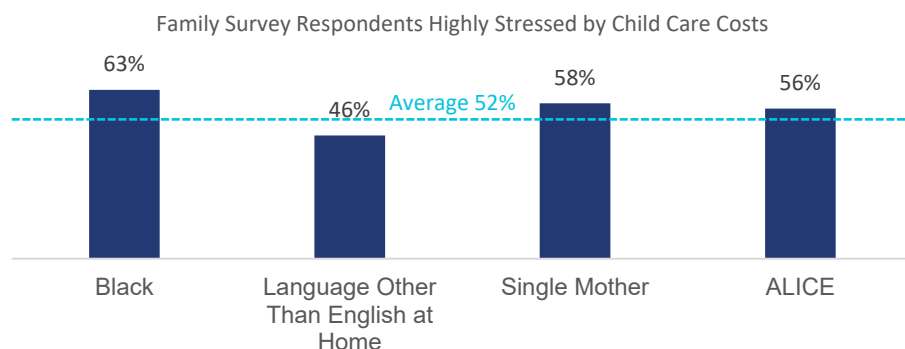


Figure 19. Barriers to Using Preferred Type of Care

Cost, quality, and flexibility barriers were experienced more by Black families and single mothers.

Black families and single mothers reported greater stressors associated with child care compared to the family survey participants overall. Six out of 10 Black families (63%) said the cost of care caused them significant stress, compared to 52% of families overall. Child care quality was particularly stressful to Black families; 35% said that child care quality, in general, was a source of stress (as opposed to specific stressors, such as quality concerns related to the care of children with special needs). Single mothers had a notably higher-than-average percentage of stress associated with schedule flexibility (31% compared to 22% overall), as well as slightly higher percentages of stress associated with child care cost and finding backup child care.



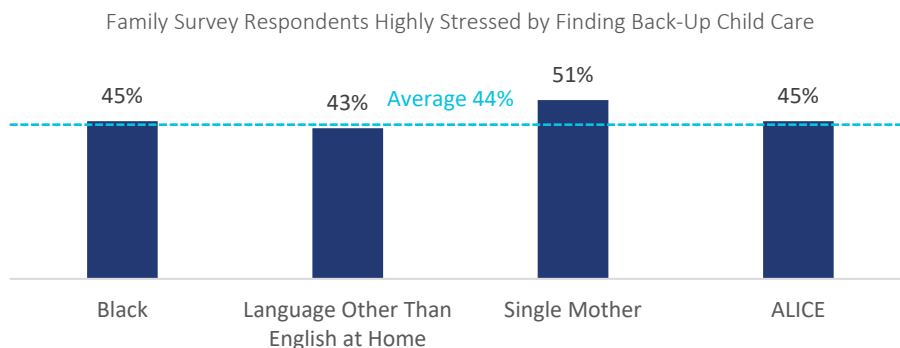


Figure 20. Percentage of Populations of Special Interest Who Are Highly Stressed by Child Care Cost and Finding Backup Care

Reasons for Seeking Child Care

Families said earning a living was their primary reason for needing child care.

Families' decisions to use or not to use nonparental child care generally stemmed from practical considerations, according to their survey responses. Three out of four families who used child care regularly said employment was the most important reason for their decision to use child care. For 18% of families, the principal reasons for using nonparental child care were to promote children's socialization and academic preparation, and an additional 7% said they used child care to fulfill other practical needs such as continuing their education, searching for a job, or caring for a relative.

Women made hard choices between family income needs and their career development priorities.

Focus groups with parents highlighted the trade-offs families commonly made around child care and employment. For many families, having both parents participate in the workforce was not immediately financially advantageous: *"By the time you pay for a week's worth of child care, one of our paychecks is almost gone, so we would be better off having one of us quit our job to care for our child full time."* Other families pointed to long-term financial considerations, such as the importance of continuous employment for professional advancement: *"I'd be starting over if I took a break."*

Career development was also a focus for some women who had not yet established themselves professionally. As an immigrant-community focus group participant explained, *"If [child care] was affordable and reliable, I could explore furthering my career. Right now, I cannot. We don't have a village to help here or a family here. We have to stop our lives for five years [, but] I want to explore more."*

It was common for mothers to describe feeling trapped in a cycle of using child care to enable employment and needing employment to pay for child care. One participant explicitly wished she had the financial freedom to choose parental care: *"I would love to be able to raise my kids myself, but unfortunately, we have to work to have benefits and to survive. So, my children must go to daycare."* Another



participant--a single parent--expressed frustration at working hard but only earning enough for family subsistence: *“My children – ages 3 months, 4 years, and 6 years – go to three different types/locations of child care so that I can be at work at 7 a.m. to work a job that barely covers our needs.”*

Conversations with immigrant families and community members (with a mix of home countries around the globe) emphasized mothers’ financial and caretaking responsibilities in families and how child care decisions reflected those values. Many participants pointed to a simple equation: mothers’ outside employment needed to make a financial contribution to the family plus fully cover the cost of child care. As put by one participant, *“If there is nothing left, I should stay home.”* Husbands’ income could be used for household expenses, but it was not expected to contribute to nonparental child care. Nor did women expect their financial contributions to offset their caretaking responsibilities at home: *“If we work, it is double work.”*

For some focus group participants, the benefits of formal care for child development made child care worth the cost. A number of families who relied on relatives or parental care expressed concerns about their children’s lack of opportunities for socialization. For example, a participant who expressed appreciation for her child’s care by a grandmother, also worried that the informal care setting had a negative impact on her child, who “struggles with socialization.” She explained: *“You know that they’re in good hands, and you’ll take care of them. But being away from other kids is just a step back for them.”* As noted by another participant, *“A well-run preschool setting has been very beneficial for my kids socially. Ninety percent of my take-home pay goes to child care, but it is worth it in part because of the social benefits we have seen.”*

Satisfaction with Child Care Arrangements

Families were generally satisfied with their children’s care situations.

Despite the complexity of the decision-making process and the difficult compromises many families made, most families expressed satisfaction with their child care arrangements. Nearly all (90%) of families were at least somewhat satisfied with the child care they currently use, and 54% said they were very satisfied.



Question 2: What are the challenges and supports for increasing provider capacity and quality, especially for home-based providers?

Child care providers operate in a complex system that includes licensing regulations, state quality standards (EXCELS), the Maryland Child Care Scholarship program, a range of professional development options, and business decisions and obligations, as well as direct work with families and children. Providers consider how to best meet their business and personal goals (e.g., how many children to enroll, what ages to serve, what hours to operate, how to retain staff), as well as make hard choices about how to meet operating costs, respond to market conditions, and weigh their values against some less-than-ideal options.

A countywide survey of 183 child care providers and 15 interviews with providers, plus interviews with local subject matter experts, explored the challenges Frederick County child care providers are facing in building and sustaining their businesses and the ways they are currently meeting those challenges. Their responses illustrated how market conditions, regulatory, training, and funding systems, in addition to professional motivations and career experiences, affected their decisions about how to run their business and how to provide quality care.

Capacity to Deliver Quality Child Care

Providers reported having the fewest openings for the youngest children.

Overall, providers reported little unfilled capacity, especially for infants and toddlers (children under age three).¹² While 42% of survey participants said they had openings for preschool-age children (three- to five-year-olds), only 19% said they had room for infants and toddlers.

¹² The survey asked about providers' licensed capacity and their availability of slots for children ages 0-2 and ages 3-5. Maryland's licensing regulations define "infant" slots as those reserved for children under two years old, or 0-23 months. To make clear that provider survey's youngest age category includes children up to 36 months, we refer to "infants and toddlers" (under 3 years old) and "preschool-age" (3-5 years old).

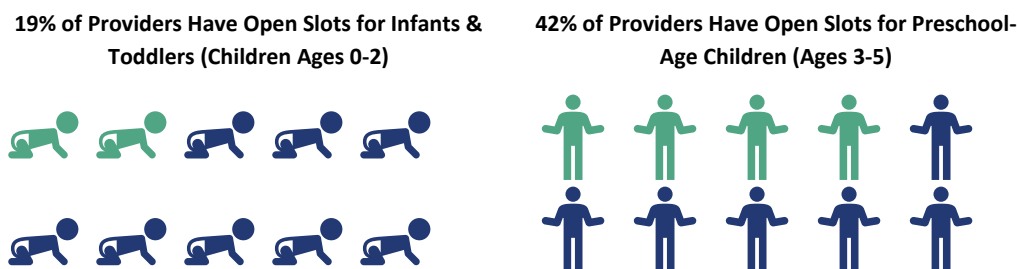


Figure 21. Percentage of Provider Survey Participants with Openings by Child Age Group

Waitlists for child care were common and long among the child care providers. Three out of four providers (74%) kept a waitlist, each with an average of nine families. Families spent an average of six months (25.7 weeks) on waitlists, and wait times were longer for home-based providers (26.8 weeks) than centers (21.5 weeks).

Families spent an average of six months (25.7 weeks) on child care providers' waitlists.

Although most providers experienced greater demand for their services than their licensed capacity allowed, providers frequently reported difficulty in filling their available child care slots. The top reasons providers gave for this included being unable to find children to fill the open slots (37%), followed by choosing to limit the number of children in their care (27%).

Some providers did not offer year-round or full-day programs.

School-year calendars and school-day schedules limited openings for children under two years old. Center-based child care programs that operated part-time, preschool-only programs offered limited availability for families who needed year-round, full-time care. Similarly, some home-based providers chose to limit their calendar and schedule to satisfy their business priorities, improve their professional experience, and meet the needs of a specific client base. These choices illustrate circumstances in which the actual availability of care is less than the number of licensed slots in the market, especially for younger children.

For example, several home-based providers chose to operate on a school-year calendar or a school-day schedule as a business plan, a modification, or a natural fit with client needs. One provider described the program she was planning to open in the fall “like a school, with summer off,” and recognized that this posed “a challenge for some families ... because they want [care] all year long.” Another provider said she stopped offering extended hours after feeling overworked: “When I first started, I didn't know any better. I was working from 6 a.m. to 6 p.m. I was just burning myself out. So now, my hours are 8:00 to 3:45, and it's wonderful.”



Business Challenges

Caring for very young children posed financial challenges for home-based providers.

Both providers and agency leaders acknowledged a critical shortage of infant-care capacity. According to one local leader, *“Infant slots are few and far between”* at both home-based child care providers and centers. Most home-based providers are only licensed for two “infant” slots (children 0-23 months) – commonly referred to as the “2 under 2” rule.

This rule was perceived by several of the home-based providers interviewed as a significant financial obstacle. As phrased by one of these providers, *“There's a huge amount of people who are looking for infant care and nobody has spots available. I know myself and lots of other providers ... would love for the infant age to be brought down to 18 months instead of 24 months.”*

Home-based providers have the option of raising their license level to a “large family home” designation, which would allow them to serve four children under two years old. However, the requirements for staffing a large family home have the potential to encumber them financially, as noted by the provider who said: *“A four-infant home provider has to have another full-time staff with her, whether or not she is caring for 12 [children, total].”* Providers generally thought that adding a full-time staff member to accommodate two additional children under two would not improve their finances.

Providers face a rapidly changing marketplace because of the expansion of public Pre-K, and many are uncertain how to adapt.

The Blueprint for Maryland’s Future¹³ is a state-level legislative initiative to improve the educational continuum from birth through high school. Early childhood education is one of its five pillars. The Maryland State Department of Education has expanded funding opportunities for Frederick County Public Schools and licensed child care providers to offer full-school-day, publicly funded Pre-K to three- and four-year-old children whose family incomes are up to 300% of the Federal Poverty Level.

The vast majority of publicly funded Pre-K seats in Maryland so far are in the public school system. According to a subject-matter expert: *“Right now we have 20 seats that are in community-based centers in Frederick. We have 1,200 full-day seats for four-year-olds in Frederick County Public Schools.”* Although the state’s Blueprint calls for a mixed-delivery system, home-based providers and centers are having difficulty participating.

The rapid expansion of Pre-K classrooms for four-year-olds, and the more recent inclusion of three-year-olds, has been challenging for many providers. When families move to public Pre-K, providers often either cannot afford the higher

¹³ “Blueprint Pillar 1: Early Childhood Education,” Blueprint for Maryland’s Future, <https://blueprint.marylandpublicschools.org/ece/>.



number of staff needed to care for the younger children who remain or the licensing “2 under 2” rule limits how many younger children they can take. One home-based provider captured the experience of confronting these twin financial challenges: *“All the providers need 3s and 4s, and everybody in the blue moon needs infant care ... we have four spots still available, but we can't fill them because we can only have two [children] under two [years old].”* The challenge was not limited to home-based providers. According to one center director, *“We will lose our 4s program. ... Then you're left with just your 3s. So that's not [financially] sustainable. You close.”*

“We have four spots still available, but we can't fill them because we can only have two [children] under two [years old].”

One home-based provider adapted to the change in the market by joining the mixed-delivery system for public Pre-K, moving from a traditional child care program to a Pre-K-only program, stating, *“Financially, I am hoping that ASPIRE¹⁴ is our saving grace and that it continues. But if that doesn't pan out, we're not going back to the infant program.”* In anticipation of greater competition for three-year-olds due to the expansion of public Pre-K, a center director lowered the age of enrollment at her center from three to two. Other providers remained uncertain about how public Pre-K expansion would affect their business. Six out of 10 providers (60%) who took the survey said they had not begun to think about how they would respond to the expansion of public Pre-K or were still figuring it out, compared to 20% who had a plan and 20% who thought it would not affect them.

Staffing challenges made it difficult for providers to grow their businesses.

Staffing was not only a problem of infant-care ratios. When weighing the prospect of hiring to expand child care capacity or to make their workload more manageable, the energy and expense of recruiting and retaining quality staff were key considerations. While center-based providers focused more on the practical aspects of scale – staffing and child enrollment – home-based providers tended to focus on the tradeoff between enrollment numbers and quality. One home-based provider described the financial investment as dubious: *“We have to train them at our expense before we can start them, even the aides. We have not had luck with anyone staying long-term... so time-wise and money-wise,”* her experience led her to conclude that investments in staffing did not necessarily pay off.

The cost of adding staff has led some providers to work more hours or caused the business to generate less income. One center director said, *“I was trying to find a teacher because I want to cut my hours. People want \$20 an hour. I don't even pay myself \$20 an hour.”* Another provider said that opening two more classrooms

¹⁴ ASPIRE Pre-K is a program of the Family Child Care Alliance of Maryland, which helps home-based child care providers participate in the mixed-delivery system for early childhood education established by the Blueprint for Maryland's Future (<https://blueprint.marylandpublicschools.org/ece/>).



was crucial for sustaining her center financially, but she could not find qualified candidates to staff them. A home-based provider described profound recent changes in staffing costs: *“Payroll for me has gone up over 40% since COVID. I can't even get an aide to come in at \$15 an hour.”*

Despite contending with threats to their financial viability, a number of providers expressed reluctance about increasing tuition to increase or maintain revenue in the face of inflation and rising staffing costs knowing that families already had a hard time affording child care. One center director described how she faced *“this big dilemma with how the minimum wage increase is going up... You can't just turn around and say, ‘Oh, well, because now it's \$15 an hour [for staff], I'm going to raise everyone's [child care] tuition \$100.’ I wish there was a way that we could have federal funding or state funding or something on a regular basis that would help us not just gouge parents to get that higher rate.”* A home-based provider put it simply: *“Daycare providers are poor. [But] I'd rather be full and have happy families, than try to gouge them and everybody be unhappy.”*

“You can't just turn around and say, ‘Oh, well, because now it's \$15 an hour [for staff], I'm going to raise everyone's [child care] tuition \$100.”

High worker turnover contributes to providers' challenges.

Child care providers experienced up to 50% higher turnover rates than those seen in K-12 schooling.¹⁵ High staff turnover can lead to increased direct costs to providers, such as job marketing, recruitment, and hiring. Beyond these economic impacts, high turnover in early care and education settings can also have negative consequences for children in their care, particularly children who stand to benefit the most from stable child care environments.

¹⁵ U.S. Census Bureau, “Longitudinal-Employer Household Dynamics Program, 2023,” Quarterly Workforce Indicators (1990-2022), accessed October 2, 2023, <https://qwiexplorer.ces.census.gov>.

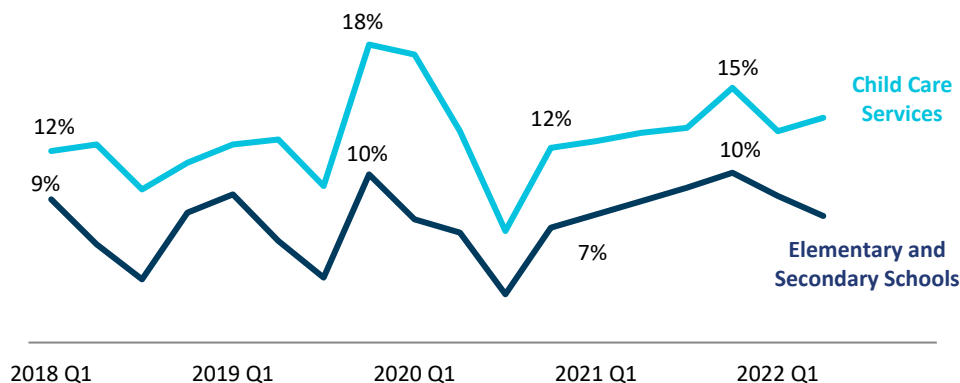


Figure 22. Turnover Rates of Child Care and K-12 Workers in Maryland, 2018-2022

Provider Earnings

Despite working long hours, most providers earned low incomes.

Providers’ compensation was often low, even when their working hours were long. Three out of four provider survey participants (75%) earned less than \$35,000 per year, and 68% worked more than 45 hours per week.



Figure 23. Percentage of Provider Survey Participants Earning Less than \$35,000 Per Year or Working At Least 45 Hours Per Week

Working longer hours did not guarantee higher incomes. Nearly half of survey participants who worked more than 45 hours per week (46%) earned less than \$35,000 per year. A number of the providers who were interviewed offered extended care hours and spent many additional hours every week planning curriculum, activities, and menus; cleaning; interviewing prospective families; and handling administrative tasks such as payroll and licensing. *“It is all-consuming,”* said one home-based provider. A provider who participated in the Maryland Child Care Scholarship program and the subsidized food program said the documentation required for these programs added hours to her weeks: *“My regular hours are 6:30 in the morning until 5:30 in the afternoon ... There are nights when I’m sitting in here until ten or eleven o’clock.”*

**Providers had modest financial objectives.**

Sixty-five percent of providers who took the survey said their business was financially stable and 58% said it was profitable, despite the challenges of maintaining or increasing revenue. Interviews suggested that providers' financial satisfaction and objectives reflected ideas about what the child care market could pay rather than the income they should receive. For one home-based provider, financial stability was the critical factor in assessing the sustainability of her child care business: *"As far as income, if I could keep that steady, then yes, I would see it as a long-term career. [If not,] I will close."* Among providers describing a need or desire to increase their income, their financial targets were extremely modest: *"I don't even think it's \$10 an hour, like when you average it out. ... I would love to make minimum wage, but there's no way a parent's going to pay me minimum wage."*

Providers' empathy with families and staff influenced their business decisions.

Providers' assessments of their business success were also associated with the professional identities that informed their business goals.

"As far as income, if I could keep that steady, then yes, I would see it as a long-term career. [If not,] I will close." – Home-Based Child Care Provider

For some providers, income from their child care employment was not an important personal goal, but it had implications for their business decisions and experiences. One center director who said she earned approximately \$25,000 per year, was *"genuinely okay with it. I would rather my teachers make more because they're the ones with the students all the time."* One home-based provider said she could keep her rates low *"because my husband is the breadwinner. If I was by myself trying to make a living at this, I'd have to have eight children all the time, and I would have to charge more. I guess it makes me feel less guilty for taking time off because I don't charge as much."* After a setback in enrollment, another home-based provider experienced this struggle first-hand. She reflected that *"getting behind on utilities monthly and having them stack up and having to do payment plans, it's been extremely stressful."*

Quality Improvement**Providers sought support for quality improvement more often than support for business improvement.**

Providers said they experienced challenges related to business more frequently than they reported challenges related to providing quality child care, but they sought support less frequently for business issues. At least half of providers surveyed experienced challenges related to staffing and expenses: two out of three (67%) said they had trouble finding backup staff support and 53% said they experienced general staffing issues.

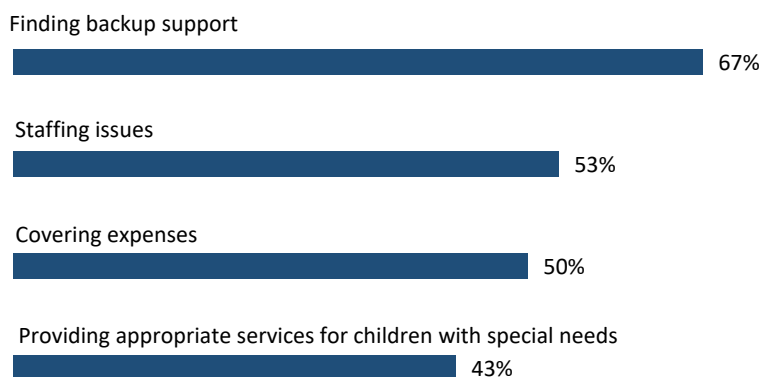


Figure 24. “Very” or “Pretty” Challenging Issues for Providers in the Last Year

Nevertheless, 84% of providers reported using resources for enhancing the quality of their child care practices, compared to 75% who said they used resources for improving their business practices. Notably, the most prominent challenge providers faced that related to quality was caring for children with special needs (43%). Child Care Choices was the most frequently consulted resource for both quality and business concerns.

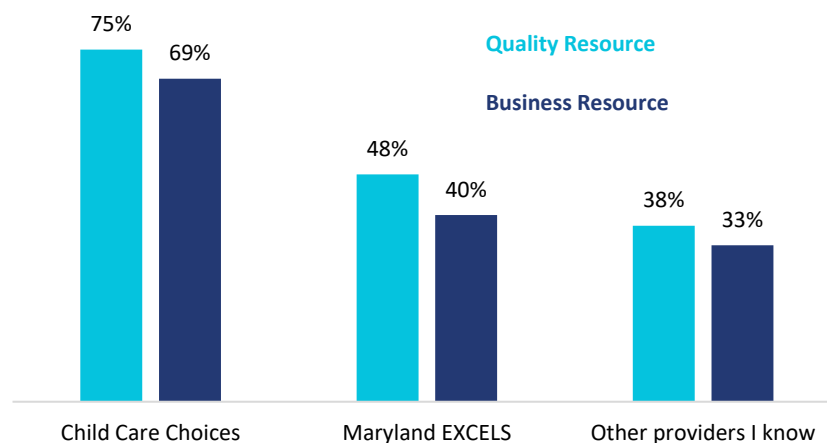


Figure 25. Top Three Resources Consulted by Providers for Guidance on Quality and Business

Providers valued formal measures of quality, but questioned whether they were worth the effort.

Several of the providers who were interviewed participated in EXCELS or were pursuing accreditation, but their definitions of quality child care did not depend on EXCELS ratings, accreditation, or other formal markers of quality. As one provider said, *“If you're also not in EXCELS or credentialed or going through accreditation, that doesn't mean that you're not high quality.”*



Both center-based and home-based providers considered the ability to attend to individual children's needs to be a distinguishing feature of the quality of care they offered. The value of individualized attention outweighed the financial incentive of enrolling more children, as expressed by one home-based provider: *"It's a double-edged sword with that. You keep your numbers low, you don't make as much. You keep it high, you make a lot more, but when you keep your numbers high, what is the quality of care I'm actually giving?"*

Home-based providers emphasized that licensed child care ensures children's safety and provider professionalism. According to one provider, parents *"know for sure that we've been background checked and we have continuing education."* Another provider referenced the importance of safety-related skills: *"We are trained in SIDs, we're trained in CPR. You're getting somebody who's highly qualified and highly knowledgeable to take care of your child. I just feel being licensed is number one. It's just safety."*

Home-based providers emphasized that licensed child care ensures children's safety and provider professionalism.





Question 3: In what ways can child care access improve economic and educational outcomes?

Child care is critical to economic prosperity for the community as well as for parents. Additionally, high-quality child care experiences support children's cognitive and social development. To address this research question, analyses of secondary data were combined with a detailed review of the academic literature on the impacts of child care. A social return on investment (ROI) analysis estimates the impact (modeled in financial terms) of child care on communities, families, and children.

Economic Prosperity

Businesses are more productive and profitable when child care is widely available.

Businesses rely on the child care sector to ensure a stable and productive workforce. With access to stable, affordable, and high-quality child care, parents improve labor productivity by putting in more work hours and missing fewer work days.¹⁶ When working parents adjust their hours or stop working entirely due to child care problems, businesses incur expenses related to lower productivity, extra recruitment costs, and lost future revenue (lower workforce capital). One estimate puts the costs to businesses at \$1,640 per working parent per year.¹⁷

Additionally, providing benefits for employees, such as on-site child care, child care assistance, or parental-leave policies, is linked to positive impacts on employees' productivity, tenure, and loyalty to their employer.¹⁸

¹⁶ Timothy Bartik, "Early Childhood Programs as an Economic Development Tool: Investing Early to Prepare the Future Workforce," Wisconsin Family Impact Seminars (n.d.): 27-42.

¹⁷ Clive R. Belfield, *Child Care and Working Families: A Post-Pandemic Economic Analysis for the U.S.* (Philadelphia, PA: Center for Benefit-Cost Studies in Education, University of Pennsylvania, 2023), <https://strongnation.s3.amazonaws.com/documents/1596/4db2b14c-a85b-4b49-9390-c6b90935e3de.pdf?1674854543&inline;%20filename=%22Child%20Care%20and%20Working%20Families:%20A%20Post-Pandemic%20Economic%20Analysis%20for%20the%20U.S..pdf%22>.

¹⁸ Taryn W. Morrissey, "Child care and parent labor force participation: a review of the research literature." *Review of Economics of the Household* 15, no. 1 (2017): 1-24; Lisbeth Trille G. Loft and Dennis Hogan, "Does Care Matter? Care Capital and Mothers' Time to Paid Employment," *Journal of Population Research* 31 (2014): 237-252. <https://doi.org/10.1007/s12546-014-9133-5>.



Tax revenue declines when parents work in the “care economy” instead of the “paid economy.”

Overall, the United States loses an estimated \$57 billion per year in revenue, wages, and productivity due to child care problems.¹⁹ Community tax revenues decline when parents reduce their work hours and lose wages or exit the workforce to care for their children. With the current savings rate estimated to be 3.5%,²⁰ each family is predicted to spend 96 cents of every post-tax dollar earned, which adds to both the local and national economies.²¹ Lessened spending in local economies reduces federal, state, and local tax revenues. One estimate puts the federal and state tax revenue lost due to child care problems (from lower incomes, a smaller tax base, and weaker economic growth) at \$1,470 per parent per year.²²

Property values increase with more child care options.

Many parents consider child care and educational opportunities when choosing where to live. Families are willing to pay more for homes that are assigned to schools with higher elementary student test scores.²³ Having accessible, high-quality child care options is also an attraction for families and can raise property values. One study estimated that for each \$1 in annual spending on high-quality Pre-K programs, local property values go up by \$13.²⁴

Family Outcomes

Access to child care supports parental employment outcomes, particularly for women.

During the COVID-19 pandemic, families – predominantly women – shouldered heightened responsibilities in raising and educating children due to the closure of schools and child care sites.²⁵ When families are unable to find or afford adequate child care, they may elect to have one parent (typically the lower-earner, often the mother) remain at home to provide child care. This person might face challenges re-entering the workforce years later when it is no longer

¹⁹ Katie Hamm, Allegra Baidar, Catherine White, Katherine Gallagher Robbins, Cathy Sarri, Megan Stockhausen, and Nina Perez, “America, It’s Time to Talk About Child Care,” Case for Child Care (October 2019), <https://caseforchildcare.org/2020CaseForChildCare.pdf>.

²⁰ U.S. Bureau of Economic Analysis, Personal Saving Rate, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PSAVERT>, October 3, 2023.

²¹ Bureau of Economic Analysis, “Personal Income and Outlays, July 2023,” accessed August 31, 2023, <https://www.bea.gov/news/2023/personal-income-and-outlays-july-2023>.

²² Clive R. Belfield, *Child Care and Working Families: A Post-Pandemic Economic Analysis for the U.S.* (Philadelphia, PA: Center for Benefit-Cost Studies in Education, University of Pennsylvania, 2023), <https://strongnation.s3.amazonaws.com/documents/1596/4db2b14c-a85b-4b49-9390-c6b90935e3de.pdf?1674854543&inline;filename=%22Child%20Care%20and%20Working%20Families:%20A%20Post-Pandemic%20Economic%20Analysis%20for%20the%20U.S..pdf%22>

²³ Fleishman, Larisa, Nir Fogel, Israella Fridman, and Yaffa Shif, “The effect of school performance on property values: A literature review and a case study.” *Journal of European Real Estate Research*, 10, no. 3 (2017): 277-302.

²⁴ Timothy Bartik, “Early Childhood Programs as an Economic Development Tool: Investing Early to Prepare the Future Workforce,” Wisconsin Family Impact Seminars (n.d.): 27-42.

²⁵ Kate Power, “The COVID-19 Pandemic has Increased the Care Burden of Women and Families,” *Sustainability: Science, Practice, and Policy* 16, no. 1 (2020): 67-73. <https://doi.org/10.1080/15487733.2020.1776561>.



necessary to remain at home with children. One study found that applicants with gaps in their resume were 45% less likely to get called for an interview.²⁶

Taking time off from the labor force can reduce parents' present and lifetime earnings by 4%-5%.

Taking time off from the labor force impacts parents' overall lifetime earnings, as well as their present earnings. The Center for American Progress²⁷ predicts that one extra year of experience increases lifetime wages for women by almost 5%, while one additional year of no employment decrease lifetime wages by about 4%.

To calculate how much this represents in potential earnings for families, we used wage and employment data for Maryland from the American Community Survey. Extra income could occur in two different scenarios: (1) when a parent is employed part-time but enters full-time work (effectively doubling their income), and (2) when a parent who was out of the labor force entirely gets employment (going from zero income to wages). Assuming parents gained access to full-time child care and worked full-time, a parent currently working part-time could earn an extra \$18,295 per year on average, and a formerly unemployed parent who re-enters the workforce could earn an extra \$42,252 per year on average.

Investing in low-cost or subsidized child care can enhance workforce participation.

Greater availability of child care assistance to help families cover child care costs may improve long-term labor force outcomes, including maternal employment.²⁸ One estimate suggests a 10% reduction in the out-of-pocket cost of child care could boost the maternal employment rate by up to 2.5%.²⁹ Another estimate suggests that investments in child care could increase women's overall labor force participation enough to boost the Gross Domestic Product (GDP) by 1.2% (\$210 billion) and could create an estimated 2.3 million new jobs nationally.³⁰

When child care arrangements fall through, families lose out on wages by missing work.

As described earlier in the report, families use child care mainly to pursue work. More than half of families responding to the survey who used child care lost wages (55%) or missed out on their own education or training (52%) when they could not find backup child care. A lack of backup care caused 7 out of 10 ALICE, Black, and single-mother families (71%, 70%, and 69%, respectively) to

²⁶ Peter Yang, "How Resume Employment Gaps Affect Interview Chances of Job Applicants," ResumeGo, accessed September 28, 2023, <https://www.resumego.net/research/resume-employment-gaps/>.

²⁷ Michael Madowitz, Alex Rowell, and Katie Hamm, "Calculating the Hidden Cost of Interrupting a Career for Child Care." Center for American Progress, June 2016, <https://www.americanprogress.org/wp-content/uploads/sites/2/2016/06/ChildCareCalculator-methodology.pdf>.

²⁸ Chris M. Herbst, "Universal Child Care, Maternal Employment, and Children's Long-Run Outcomes: Evidence from the US Lanham Act of 1940," *Journal of Labor Economics* 35, no. 2 (2017): 519-564.

²⁹ Taryn W. Morrissey, "Child Care and Parent Labor Force Participation: A Review of the Research Literature," *Review of Economics of the Household* 15, no. 1 (2017): 1-24, <https://doi.org/10.1007/s11150-016-9331-3>.

³⁰ Hamm et al., "America, It's Time."



lose wages, and it caused 64% of single mothers to miss school or training. Additionally, one out of five families (19%) kept an older child home from school when their regular child care arrangements fell through.

Collectively, Frederick County families miss out on almost \$1 million dollars per year in lost wages due to child care problems.

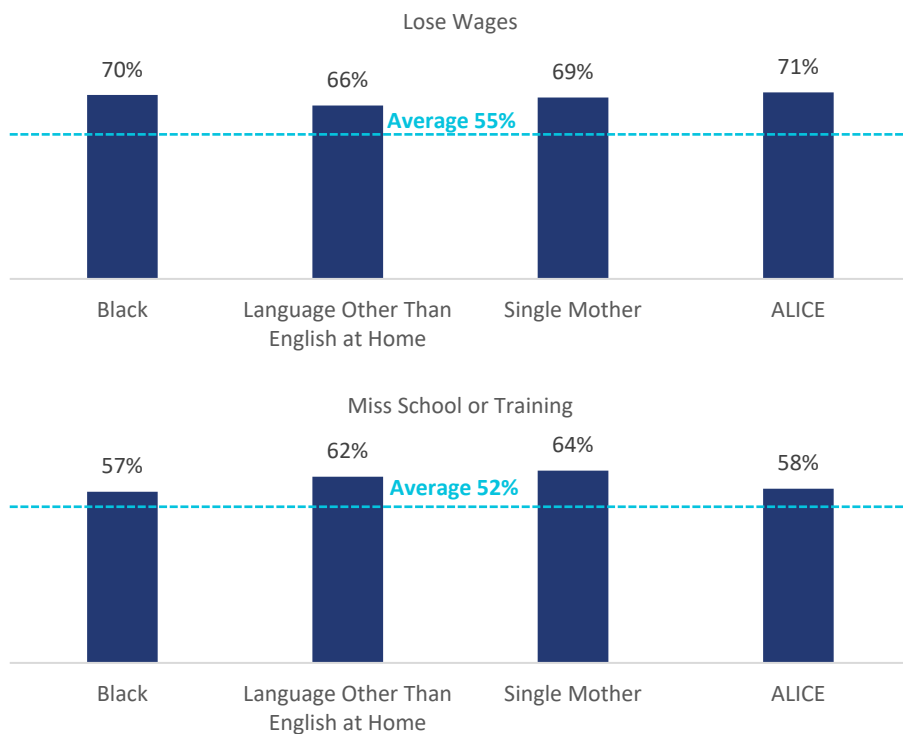


Figure 26. Percentage of Populations of Special Interest Reporting Negative Economic Impacts When Child Care Arrangements Fall Through

Between March 2022 and March 2023, over 30,000 parents in Maryland reported working reduced hours in the previous week because of child care problems.³¹ On average, parents lost three hours of work each week. The total value of lost wages because of child care problems is estimated to be \$987,528 annually (assuming each family only experienced one week of child care problems and did not have paid leave).³² Because negative economic consequences were more

³¹ Sarah Flood et al., IPUMS CPS: Version 11., Minneapolis, MN: IPUMS, 2023. <https://doi.org/10.18128/D030.V11.0>.

³² This value was calculated by estimating the hourly wage in Frederick County based on the per capita income (\$47,898, which corresponds to approximately \$23/hour). The hourly wage was multiplied by three, then multiplied by the number of households in Frederick County with children under age 5 (14,312).



likely to be reported by ALICE, Black, those who speak a language other than English in the home, and single-mother families, these impacts are likely to be more severe for populations of special interest.

Child care availability can reduce family stress and enhance psychological well-being.

When care demands fall heavily on families, stress increases, especially among women.³³ Young children not in school demand near-constant attention, and families often need child care support so parents can go to work or school, seek medical care, and take care of other responsibilities. Family supports such as paid family leave for fathers and greater availability of child care subsidies has been associated with less gender stereotyping at home and higher life satisfaction for family members.³⁴ If stronger and more inclusive family supports were to become the norm, both men and women may view taking family leave, and domestic caretaking in general, as a factor of everyday life and work. This psychological shift could reduce the harmful effects leave-taking and caretaking have on lifetime earnings and career profiles, particularly for women.³⁵

55% of families who used non-parental child care lost wages and 52% missed out on their own education or training when they could not find backup care.

Child Outcomes

Experience in formal child care settings can support academic success.

Many research studies have shown that children who participate in high-quality early childhood education are more successful academically, both in the immediate and long term, than children without such experiences. One study suggests that if these early care experiences lasted for one year or longer, children entered kindergarten with language and social skills near the national average, and performed better academically than children with similar economic backgrounds who did not attend that type of program.³⁶ Other research points to high-quality early care and education experiences relating to fewer problem behaviors among students.³⁷ The benefits of these experiences are particularly pronounced for families in disadvantaged communities or those with limited resources.³⁸

³³ Kate Power, "The COVID-19 Pandemic has Increased the Care Burden of Women and Families," *Sustainability: Science, Practice, and Policy* 16, no. 1 (2020): 67-73, <https://doi.org/10.1080/15487733.2020.1776561>.

³⁴ Willem Adema, Chris Clarke, and Valerie Frey. "Paid Parental Leave and Other Supports for Parents with Young Children: The United States in International Comparison," *International Social Security Review* 69, no. 1 (2016): 29-51.

³⁵ Ibid.

³⁶ Ajay Chaudry and Heather Sandstrom, "Child Care and Early Education for Infants and Toddlers," *The Future of Children* 30, no. 2 (2020): 165-190.

³⁷ Shannon Tierney Lipscomb, Caitlyn Abshire, and Hillary Lewis, "Adverse Childhood Experiences and Children's Development in Early Care and Education Programs," *Journal of Applied Developmental Psychology* (2021): 1-44, <https://doi.org/10.1016/j.appdev.2020.101218>.

³⁸ James J. Heckman, "The Economics of Inequality: The Value of Early Childhood Education," *American Educator* (2011): 31-47.



In Frederick County, formal care experience is associated with kindergarten readiness.

Among Frederick County Public School (FCPS) kindergarteners who had some kind of formal care experience prior to kindergarten (e.g., care from a center or a licensed home-based care provider), 55% demonstrated kindergarten readiness, as measured by the Fall 2021 Kindergarten Readiness Assessment (KRA). By contrast, among kindergarteners with only informal care experience (e.g., care only from parents/guardians or another type of informal care), 46% demonstrated kindergarten readiness.³⁹ The benefits of formal care experience are particularly pronounced for certain student groups, such as English learners, Hispanic/Latino students, and low-income students. After controlling for relevant background characteristics in the analysis (gender, race/ethnicity, English learner, student disability, and Free and Reduced-price Meals [FARM] eligibility), students with prior formal care experience were 1.6 times more likely to be assessed as kindergarten-ready.

Students with prior formal care experience were 1.6 times more likely to be assessed as kindergarten-ready.

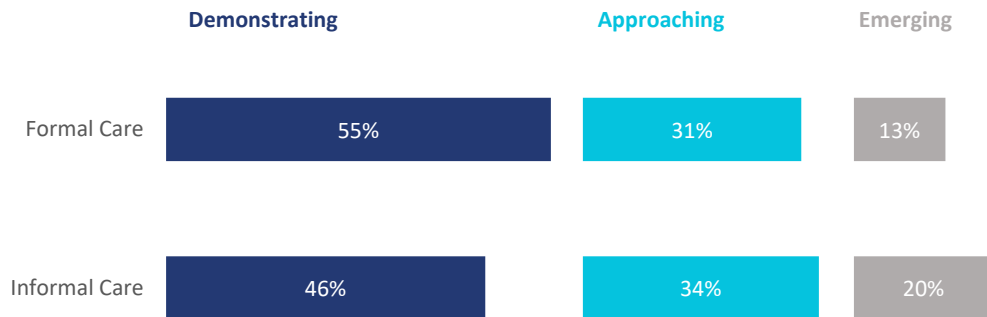


Figure 27. Percentage of FCPS Kindergarteners with Prior Formal and Informal Care Experience at Different Levels of Kindergarten Readiness, Fall 2021

Formal child care before kindergarten is particularly beneficial for Hispanic/Latino, English learners, and low-income students.

Formal care experiences showed greater benefit for certain student groups. A greater percentage of English learners, Hispanic/Latino students (of any race), and students eligible for FARM demonstrated kindergarten readiness when they had prior formal care experiences. Almost 1 in 5 English learners who had received formal care were assessed as kindergarten-ready, compared to only 1 in 20 who had received only informal care. Almost twice as many Hispanic/Latino students who had received formal care were assessed as kindergarten-ready, compared to those who had received only informal care. Students eligible for

³⁹ This difference is both meaningful and statistically significant ($\chi^2(2) = 35.99, p < .001$).



FARM with formal care experience were 50% more likely to be assessed as kindergarten-ready.

Although students in these groups showed greater benefits associated with receiving formal care, they still lagged behind the overall percentages of kindergarten readiness among students receiving formal care (55%) and informal care (46%).

4x as many English learners and 2x as many Hispanic/Latino students are assessed as kindergarten-ready with prior formal care experience.

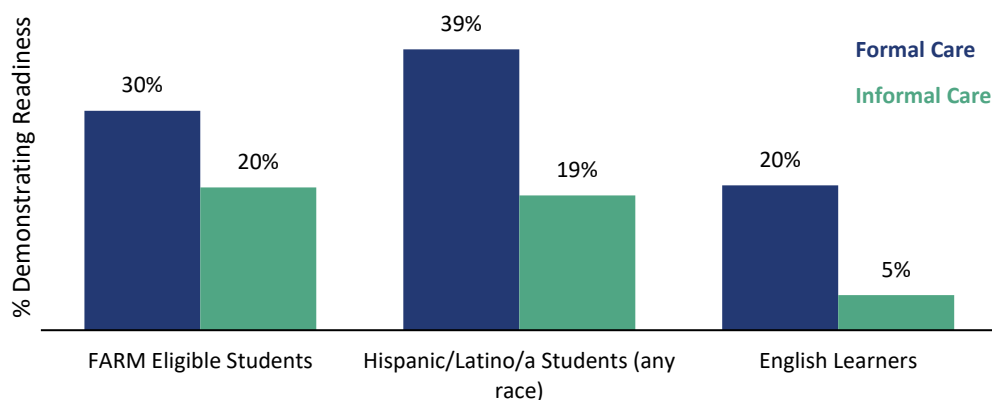


Figure 28. Percentage of FCPS Kindergarteners in Certain Groups With Different Types of Prior Care Experiences Assessed as Kindergarten-Ready, Fall 2021

Experience in child care can reduce the need for special education, improve long-term educational attainment, and increase future wages.

High-quality early care and education also contributes to children's longer-term academic success. Children with these types of experiences are 16% less likely to receive special education services later in their schooling,⁴⁰ 12% less likely to repeat a grade,⁴¹ and 14% more likely to graduate high school.⁴² Frederick County Public Schools budgets were used to assign dollar value to the special education savings (\$271 per student per year) and grade retention savings (\$1,796 per student per year) of access to child care.

Greater educational attainment can also enhance the lifetime earnings of those who received formal child care as children. Comparing the adult incomes of individuals in Maryland with varying levels of education (e.g., those who

⁴⁰ Frede, Ellen, Kwanghee Jung, W. Steven Barnett, Cynthia Esposito Lamy, and Alexandra Figueras, *The Abbott Preschool Program Longitudinal Effects Study (APPLES), Interim Report*, New Brunswick, N.J.: National Institute for Early Education Research, June 2007.

⁴¹ Schweinhart, Lawrence J., Zongping Xiang, Marijata Daniel-Echols, Kimberly Browning, and Tomoko Wakabayashi, *Michigan Great Start Readiness Program Evaluation 2012: High School Graduation and Grade Retention Findings*, Ypsilanti, Mich.: High Scope Educational Research Foundation, 2012.

⁴² Ibid.



graduated and did not graduate from high school) yields an estimated income increase between \$1,389 to \$5,081 per person per year.

Child care participation can also reduce the community crime rate and public benefits costs, while increasing the likelihood of healthier lifestyles.⁴³



⁴³ Heckman, "The Economics of Inequality."



SOCIAL RETURN ON INVESTMENT

The social consequences of child care access – positive and negative – are borne not only by individuals and families, but by communities and government. To understand the effect the child care market situation has on individuals and society, a social return on investment (ROI) was part of the Frederick County Child Care Market Study.

ROI is estimated by subtracting the total costs for the service (in this case, child care) from the estimated value of the total benefits (in financial terms), and dividing this amount by the total cost. Keeping within the study resources, the ROI presented here is basic and does not attempt to include every possible benefit or cost. For an explanation of the calculations in more detail, refer to the Methodology section (Appendix B).

$$\text{ROI} = \frac{\text{Total benefits} - \text{total cost}}{\text{Total cost}}$$

Child Care Costs

Home-based (\$10,549) and center-based (\$12,470) settings have different costs, mainly due to staffing and other business overhead expenses, which are higher for centers. Child care costs also vary by child age. This analysis uses tuition for children ages two to five.

Child Care Benefits

In total, benefits to families, child participants, and society add up to \$52,510 each year. Benefits considered included increased earnings for parents, additional business revenue, additional tax revenue, K-12 savings (special education, grade retention), and increased adult earnings for child participants.

Total Benefits per Dollar Invested

After recouping costs, the net benefit for center-based care is \$40,040, and for home-based care it is \$41,961. The value of the benefits per dollar invested for center-based care is \$3.21, and for home-based care it is \$3.98. Because home-based child care is generally more affordable (i.e., requires a lower investment), there is a greater return on that investment.

With each \$1 invested in child care, Frederick County could see \$3-\$4 in benefits.



Moving Toward Solutions for Frederick County

Child Care Priorities

A family finds an open slot, but it is too expensive. Another family has enough resources to pay the full cost of care but cannot locate a suitable slot. These families share a common need for additional affordable, quality slots that meet their needs. That is the demand side of the equation. Home-based providers and centers also share dilemmas that leave them in similarly tenuous positions. Most stark is the contrast between their deep commitment to caring for children and the financial instability and long hours they experience, despite an ongoing need for early care and education. Truly equitable child care access and a thriving economy are only possible when the demand and supply sides of the market equation are addressed and balanced.

The priorities outlined below set a direction for the County's efforts to balance the supply of and demand for child care in ways that are responsive to community needs and preferences. The results of the Frederick County Child Care Market Study informed these priorities and the suggested strategies.

The priorities and potential areas for action are limited to those that were substantively addressed in this study, including child care business challenges, families' varied preferences, gaps in infant/toddler care availability, and the market roles played by different provider types. Other issues, such as the impact of zoning regulations on home-based child care businesses or the workforce implications of Pre-K expansion, may also be valuable to explore.

PRIORITY 1: CHILD CARE SUPPLY

The growth in Frederick County's population and the decline in the number of child care providers and licensed slots point to a need to ensure sufficient capacity for the children needing care.

The provider survey and interviews revealed market conditions that limited the availability of slots for children under age two while making it increasingly difficult for providers to fill slots for three- and four-year-olds. Providers described their dedication to the work of child care, the challenges of adapting their business to a changing market, and their reluctance to achieve financial stability at the expense of families.



Potential Areas for County Action on Child Care Supply

Regulatory Review and Advocacy

- Recommend streamlined regulations and other opportunities to boost the number of licensed child care providers as well as provider participation in the Maryland Child Care Scholarship program.
- Advocate for increased state child care funding overall, including livable wages for child care workers, and support for organizations focused on increasing the supply of licensed child care providers.
- Support the transition to child care funding models based on the actual cost of providing high quality care.

Provider Support and Training

- Support local strategies to increase provider participation in the Maryland Child Care Scholarship program.
- Help new and existing providers develop Pre-K programs to benefit from public funding through Maryland's mixed-delivery system.
- Help new and existing providers adapt their business models to accommodate a smaller enrollment pool of three- and four-year-olds.
- Help existing providers improve business skills, including coordinated business practices, through collaborations with local, state, and federal business programs and resources tailored to child care providers.
- Foster opportunities for child care providers to gather and provide peer support to one another, with options for formal and informal providers.

Provider Pipeline

- Elicit interest in providing home-based child care through on-site outreach in faith-based institutions and other community settings.
- Use partnerships with local training programs to help more residents prepare to be child care providers.
- Create career pathways available in multiple languages to assist informal child care providers and others to become licensed.

Partnerships and Resources

- Explore strategies such as shared service alliances and other business partnerships to help providers reduce administrative costs and adapt to a changing market.
- Explore setting up a child care startup and expansion fund. Begin by identifying any state or municipal models that may provide insights on how to make such a fund financially sustainable.
- Support the development of a system to document the actual number of available child care slots (as opposed to the number of licensed slots) to better identify child care availability.



PRIORITY 2: CHILD CARE DEMAND

Families' difficulty in finding and affording licensed child care, combined with their low rates of participation in the Maryland Child Care Scholarship, highlight the opportunity to raise awareness of the Scholarship and other resources for maximizing families' access to care.

By better connecting resources and the people who need them, the County would be working toward greater accessibility across geographic regions, income levels, resident backgrounds, and family types. Doing so requires collaboration between the County and partner organizations to maximize the value of existing programs, funds, and networks.

Potential Areas for Action on Child Care Demand

Affordability and Advocacy

- Investigate how many additional Frederick County families could potentially qualify for the Maryland Child Care Scholarship and advocate for increased funding as needed to facilitate their participation in the program.
- Encourage provider payment rates in the Maryland Child Care Scholarship that align with the cost of providing quality care.
- Build county-level staff capacity to grow and maintain collaborative child care efforts with organizations at the local and state levels.

Information and Innovation

- Engage in a multi-lingual campaign to build family awareness of public resources for supporting access to child care, including the Maryland Child Care Scholarship and LOCATE (the free service that helps families find available child care options). Seek new opportunities to distribute information about these programs where families work and get services.
- Help businesses to learn about their employees' child care needs and situations so they can effectively recruit and retain workers.
- Develop creative models to connect immigrant and multilingual families with formal child care.
- Explore innovative ways of connecting families with flexible backup child care.

Attending to both the supply and demand aspects of the child care market fits well with the County's interest in fostering economic prosperity. Having quality child care available allows families to work and pursue higher education and benefits the next generation's long-term prospects. Helping child care providers remain financially healthy positions them to deliver the best quality care and rewards the crucial service they provide. All of this can generate increased revenue for the County and local communities.



Next Steps for the County

With the results of the Frederick County Child Care Market Study, the County is positioned to take its next steps toward improvements in this space. The Division of Family Services will create a Local Management Board workgroup with community participation to tackle the county's child care concerns.

The County plans to address the study findings through a three-step approach:

1. Propose solutions and set immediate and longer-term priorities with community input.
2. Develop cross-sector partnerships to act on the priorities.
3. Seek funding for sustainable and locally achievable solutions.

Through ongoing leadership, the County can work to improve equitable access to high-quality early childhood care and education for Frederick County families. These initiatives combined with ongoing collaboration, partnerships, and advocacy will help set the community on a path to increased prosperity for all families and for the county as a whole.





Appendix A: Index

Table 1. Research Questions and Locations of Related Information Within the Report

Research Question	Report Pages
To what extent are families able to get the child care they need and want?	
How many children (ages zero to four) and families in Frederick County could be served by child care?	13-14
How much child care is available throughout the county?	13-17
What are the demographic trends in populations of interest in the last five years and projected for the next ten years?	13-14, 59-63
What are the key market trends affecting child care providers in the last five years and projected for the next ten years?	13-18, 68-69
To what extent do populations of interest participate in high-quality child care?	18-21
To what extent do populations of interest report moderate to high levels of stress, social isolation, and mental health related to child care access and caregiving responsibilities?	25-27
To what extent do families of special interest use formal and informal child care?	18-20
What do families consider “good” child care?	19-20
What factors drive families’ child care decisions?	21-27
What are the challenges and supports for increasing provider capacity and quality, especially family child care businesses?	
What are the main drivers of and barriers to economic sustainability for child care providers?	29-34
To what extent will the anticipated or planned changes in child care as a result of the Maryland Blueprint for Education and Maryland Child Care Scholarship program change the supply of child care providers?	30-31
To what extent do providers participate in any of the child care business supports provided by Maryland State Department of Education, Maryland Family Network, Child Care Choices, and FCPS Judy Centers?	34-35
What do providers consider “good” child care?	35-36
What do providers consider a successful child care business?	34
What factors drive providers’ business decisions?	30-34
In what ways does child care access impact family income, child educational outcomes, and community economic prosperity?	
To what extent do populations of interest experience short- and long-term negative economic impacts because of limited access to child care when their children are ages 0-4?	38-41
To what extent are populations of interest able to secure and/or maintain employment while raising children 0-4 years old?	38-40



Research Question	Report Pages
To what extent do populations of special interest demonstrate kindergarten readiness and academic proficiency in third grade?	42-43, 69-71
To what extent can economic drivers of and barriers to financial sustainability of child care providers be addressed through local policy or program interventions, rather than through state or federal policy?	47
To what extent is the county's economic prosperity impacted by the negative economic and social impacts on families because of limited child care access and utilization?	37-41, 43-44, 71-75
Populations of Special Interest	Report Pages
ALICE-approximate and families with incomes at or below Federal poverty level	7-8, 23-24, 39-41, 66-68
Asian families	7, 53-54, 65, 69-71
Black families	7, 18, 21, 25, 39-41, 53-54, 63, 65, 70-71
Hispanic/Latino families	7, 18, 42-43, 53-55, 63, 65, 69-71
Single-mother heads of household	8, 21, 25-26, 39-41
Families with parents born outside of the United States	7, 12, 27, 55
Families speaking language other than English at home	12, 18, 26, 40-42, 54-55, 60, 65, 71
Families of children with special needs and/or child disability	18, 65, 70-71



Appendix B: Methodology

Primary Data Sources

FAMILY SURVEY

The survey of families living in Frederick County was conducted online in English and Spanish between April and May 2023. To create the survey, the research team consulted with representatives from Frederick County's Office of Children and Families (OCF), the Child Care Advisory Group (CCAG), the Community Advisory Board (CAB), and the study community liaison.

Families living in Frederick County were invited to complete the family survey via various forms of outreach. The survey first debuted during Frederick County's Children's Festival in April 2023. Representatives from Public Policy Associates and the study community liaison attended the festival to distribute flyers and encourage survey participation on site. Additional in-person outreach included Frederick County Public Library story time groups, a Waverly Elementary School Judy Center diaper distribution event, Child Care Choices Resource Specialist events, and the Multicultural Night at Butterfly Ridge Elementary School. OCF staff and CCAG and CAB members shared the survey through their networks via email, social media, flyers, and word of mouth. The study community liaison also focused her distribution efforts on the Hispanic/Latino populations throughout Frederick County via emails to community organizations, social media, flyers, and in-person outreach. In addition, 16 organizations, including Frederick County Public Schools were included in the outreach communications.

The survey required participants to be parents or guardians of children under age 5 not in kindergarten who resided in Frederick County. The survey remained open for four weeks and gathered a total of 1,507 responses. After data cleaning for anomalies (e.g., bot-generated answers) and removing responses from families living outside the county, 1,300 responses were useable for analysis. Ten families that completed the survey were randomly selected to receive a \$100 electronic gift card from Public Policy Associates.

We conducted descriptive analyses for each survey question and ran cross-tabulations to explore potential differences among groups (e.g., demographic differences, type of care used, race/ethnicity).

We also examined participants' self-reported primary home language. This indicator may identify those who are immigrants, although that is not guaranteed. Among these 136 survey participants, 71% of this group spoke Spanish at home. The remaining 29% spoke one of the following at home: Arabic, Burmese, Chinese, Farsi, French, Gujarati, Hindi, Marathi, Nepali, Pashto, Portuguese, Russian, Sourashtra, Tamil, Telugu, Ukrainian, and Urdu.



The survey was open to all county residents who met the criteria, so no sampling occurred, and no representation of the county's population was intended as a result. However, the survey participants generally reflected the county's population (using American Community Survey 2021 estimates).

As shown in Table 2, the survey respondents tended to be more educated than the county population overall (66% had a four-year degree or higher, compared to 45% of adults over age 25). The survey asked for the *highest* education level of the adults in the *household*, possibly biasing the sample's education level upward. Additionally, most survey respondents were women (76%) and were between the ages of 26 and 49 (94%).

Table 2. Comparison of Demographic Characteristics Between Survey Respondents and Frederick County Population

	Characteristic	Survey Sample	County Population
Geographic Region	City	53.4%	41.5%
	Northern	16.2%	22.0%
	Southwestern	15.2%	25.3%
	Southeastern	15.2%	11.3%
Household Type	Single-Parent	12.8%	24.5%
	Dual-Parent	87.2%	75.5%
Language spoken at home	English	87.2%	86.5%
	Spanish	8.4%	6.8%
	Another language	4.4%	6.7%
Race/Ethnicity	White	62.9%	68.0%
	Black	8.4%	8.4%
	Asian	4.4%	5.1%
	Hispanic/Latino (of any race)	11.7%	11.3%
	Other race/ethnicity	12.6%	7.2%
Household Income	Less than \$50,000	16.5%	13.9%
	\$50,000-\$99,999	27.3%	23.9%
	\$100,000-\$149,000	29.1%	24.8%
	\$150,000+	27.1%	37.3%
Educational Attainment	Some high school	3.2%	6.5%
	High school diploma/GED	8.3%	24.1%
	Some college, no degree	12.3%	16.4%
	Associate degree	10.5%	8.2%
	Bachelor's or graduate/professional degree	65.7%	44.9%

NOTES: County population estimates for household type are for households with children aged 5 and under. County population estimates for language spoken at home are for individuals aged 5 and older. County population estimates for household income are for families. County population estimates for educational attainment are for individuals aged 25 and older. On the family survey, the associate degree category also included those with a professional credential.



FAMILY FOCUS GROUPS

Focus group questions explored child care use and decision-making about what types of care families used, the positives and negatives of current/recent child care experiences, and ideas for county-level improvements to increase access to quality child care.

Participants needed to live in Frederick County and have one or more children who had not yet started kindergarten (age 0-5). Forty-six parents participated in five virtual focus groups and two in-person focus groups between September and December 2023. To ensure voices from populations of special interest were heard, one focus group targeted parents/guardians who worked non-traditional hours (overnight, weekend, early morning, etc.) and two groups focused on immigrant families. Each participant received an electronic gift card as an incentive for their participation.

The Frederick County OCF, the study community liaison, and advisory group members shared the bilingual (English and Spanish) invitation through their networks electronically, on paper, and by word of mouth. Two large-scale employers with substantial numbers of non-traditional work shifts (Aldi Warehouse and AstraZeneca) shared the flyers directly with selected employees. To reach immigrant populations, the OCF partnered with Family Partnership and the Asian American Center of Frederick to conduct outreach among their clients and host the focus groups; one focus group was also open to non-clients. Both organizations shared the multilingual flyers and forms with clients and supplied child care and transportation. Spanish, French, and Twi interpreters assisted at the immigrant-community focus groups.

Groups were organized by location in the county, preferred time of day, and preferred day of the week. The following tables describe focus group participant characteristics.

Table 3. Characteristics of Focus Group Participants, N=46 and Number of Children, N=50

	Characteristic	Frequency	Percentage
Gender	Female	38	82.6
	Male	7	15.2
	Unknown	1	2.2
Race/Ethnicity	White	13	28.3
	Hispanic/Latino	10	21.7
	Black/African/African American	8	17.4
	Asian	4	8.7
	Unknown	11	23.9
	Language	English	33
	Spanish	10	21.7
	French	2	4.3



	Characteristic	Frequency	Percentage
	Twi	1	2.3
Household type	Dual parent	40	86.9
	Single parent	5	10.9
	Unknown	1	2.2
Form of child care used	Grandparent or other relative	14	31.1
	Parental care only	13	28.9
	Preschool or center	11	24.4
	HBCC	6	13.3
	Pre-K (at a school)	5	11.1
	Friend, neighbor, or babysitter	3	6.7
Child age	0-11 months	11	22.0
	12-23 months	10	20.0
	2 years old	9	18.0
	3 years old	12	24.0
	4 years old	6	12.0
	5 years old	2	4.0

NOTE: Some participants used more than one form of care. Not all focus group participants provided information about their race/ethnicity.

Table 4. Zip Code Distribution of Virtual Focus Group Attendees, N=23 and Country of Origin for Focus Groups Intended for Immigrants, N=23

	Location	Number of Participants	Percentage
Virtual Groups - Geographic Region	City	12	52.2
	Northern	5	21.7
	Southwestern	5	21.7
	Southeastern	1	4.3
	Total	23	100
Country of Origin (Immigrant-focused groups only)	Central America	7	30.4
	Unknown Hispanic Origin	4	17.4
	West Africa	4	17.4
	Southeast Asia	2	8.7
	East Asia	1	4.4
	South America	1	4.4
	Unknown	4	17.4
	Total	23	100

PROVIDER SURVEY

An online survey of child care providers in English and Spanish was conducted between May and June 2023 (over four weeks). As with the family survey, the research team consulted with OCF staff, the CCAG, and the study community liaison throughout the provider survey development. Their input influenced the



response options relating to provider perspectives and experiences. The study community liaison provided further guidance to assist with making the Spanish version of the survey more accessible and easier to read for respondents.

Child care providers in Frederick County were invited to complete the provider survey via email, social media, and word of mouth through OCF and community partners, including the local child care resource and referral agency Child Care Choices (a program of the Mental Health Association of Frederick County) and the Frederick County Interagency Early Childhood Committee. Additionally, the CCAG members and the study community liaison conducted email and social media outreach to their professional networks. Several outreach emails were also sent directly to providers.

Any Frederick County-based child care provider who cared for children aged 5 and under not yet in kindergarten was eligible to take the survey. A total of 214 survey responses were collected. After data cleaning to remove anomalies, 183 responses were used for analysis. We ran descriptive analyses for each survey question. Respondents were not distributed enough across the four county regions, so regionally, providers were compared based on whether they lived in the City region or the Northern, Southeastern, and Southwestern regions (non-City). Fifty-nine percent of respondents provided child care within the City region, and 41% provided care within the non-City areas. Most survey respondents were women (94%).

Table 5. Provider Survey Respondent Demographics

	Characteristic	Percentage
Provider Type	Licensed, home-based	63.9
	Licensed, centers or preschools	23.5
	Informal, home-based	6.0
	Unknown setting or license	6.6
Race/Ethnicity	White	72.1
	Hispanic/Latino	15.4
	Black	7.7
	Asian	3.9
	American Indian, Native American, or Alaska Native	0.9
Educational Attainment	High school/GED or less	15.5
	Some college	24.1
	2-year degree or vocational credential	27.6
	4-year degree or advanced	32.8
Annual Income	Less than \$35,000	75.0
	Over \$35,000	25.0



PROVIDER INTERVIEWS

Fifteen child care providers were interviewed virtually about their experiences, including perceptions of quality child care, professional goals and use of business supports to achieve those goals, and the factors that influence their business decisions. Interviews were conducted between July and August 2023. Most of the provider interviews (13) had indicated interest in participating in a follow-up interview through the provider survey. The two participants that were not recruited from the survey were recruited through the CAB and the study community liaison. Each participant received an electronic gift card for their participation.

Participants were purposefully selected for a range of characteristics including provider type and setting, zip code, whether they were currently caring for children under age two, and income level. Nearly half (47%) provided care in the city of Frederick. Over half (53%) provided care to children under age 2.

Table 6. Demographic Characteristics of Providers Participating in Interviews

	Characteristic	Frequency	Percentage
Provider Type and Setting	Center - Secular	2	13.3
	Center - Faith-based	2	13.3
	Home-based - large family home	2	13.3
	Home-based - family home	8	53.4
	Informal	1	6.7
Race/Ethnicity	White	11	73.3
	Asian, Black, Hispanic/Latino, Unknown	4	26.7
Income	Less than \$15K	2	13.3
	\$15-\$24K	2	13.3
	\$25-\$34K	3	20.0
	\$35-\$50K	3	20.0
	\$75-\$100K	2	13.3
	Unknown	3	20.0
Education	High school	1	6.7
	Some college	3	20.0
	2-year degree	4	26.7
	4-year degree	7	46.7
Region of child care setting	City	6	40.0
	Northern	3	20.0
	Southeastern	3	20.0
	Southwestern	2	13.3
	Unknown	1	6.7



SUBJECT-MATTER EXPERT INTERVIEWS

Six subject-matter expert interviews added to the exploration of quality child care access and potential impacts of Maryland Blueprint for Education and the Maryland Child Care Scholarship program in Frederick County. Interviews explored state policy directions such as geographic gaps, workforce growth priorities, access to care to among families with special needs, supports for providers, and the impact those may have on child care providers, families, and the local economy. All interviews with County and State leaders were conducted virtually in June 2023. Interviewees were determined as subject-matter experts by the Frederick County OCF and included: Frederick County Executive Jessica Fitzwater, and representatives from the County’s Emergency Management Division, Immigrant Affairs Commission, and Frederick County Public Schools’ Early Childhood Education and Judy Centers; Child Care Choices (a program of the Frederick County Mental Health Association); and the Frederick County Chamber of Commerce.

STAKEHOLDER MEETINGS

Stakeholder meetings further explored child care issues and potential solutions relevant to specific stakeholder groups, which included 15 organizations grouped by the following categories: low income and income-constrained families (3), public workforce (3), private workforce (2), provider pipeline (2), special needs and circumstances (2), immigrant communities (2), and faith communities (1). The OCF shared the opportunity with potential organizations through email and personal outreach. Seven hour-long virtual meetings were held between August and September 2023.

COMMUNITY INFORMATION AND INPUT SESSIONS

We conducted four community information and input sessions to share information from the study and invite community members’ reactions, reflections on personal experiences, and ideas for solutions to improve access to high-quality child care. These events were also used to prompt interest in the study, including opportunities for future engagement with the County.

Any Frederick County residents interested in child care matters were invited to attend any of the four 1.25-hour-long sessions. Although the four sessions were open to the public, each session had a specific audience focus.

Table 7. Community Information and Input Session Details and Attendance

Session Description	Session Accommodations	Number of Attendees, N=71
Provider Focus, October 2023, Virtual	ASL and Spanish interpreters	20
Family Focus, November 2023, Virtual	ASL and Spanish interpreters	17



Session Description	Session Accommodations	Number of Attendees, N=71
Employers and Business Focus, December 2023, Virtual	ASL and Spanish interpreters	28
Immigrant Community Focus, December 2023, In-Person at Waverly Elementary School	Multi-lingual interpreters, dinner, and child care	6

The Frederick County Office for Children and Families, CCAG and CAB members, and the study community liaison shared the bilingual (English and Spanish) outreach flyer through their networks via email, social media, physical flyer posts, and word of mouth and press releases was issued. Most attendees were women (86%).

Table 8. Community Input and Information Session Participant Demographic Characteristics

	Characteristic	Percentage
Role in Community	Other community member	35.1
	Parent of young child	25.7
	Child care provider	24.3
	Employer or business owner	14.9
Race/Ethnicity	White	60.6
	Black/African American	23.9
	Hispanic/Latino	9.9
	NA/No response	4.2
	Asian	1.4

Secondary Data Sources

COUNTY CHARACTERISTICS

Demographic, Housing, Social, and Economic Characteristics

Data from the American Community Survey (ACS) was used to describe Frederick County's demographic, housing, social, and economic characteristics for 2021 (the most recent year for which estimates were available). We used one-year estimates to describe the characteristics of the county as a whole and used five-year estimates to describe variation by zip code. The tables downloaded and their associated characteristics are listed in Table 9. Hyperlinks to the specific tables that were downloaded are provided in the left column.

**Table 9. American Community Survey Data Tables**

Table Description	Characteristics
Demographic and Housing Estimates	Race/ethnicity; age
Selected Social Characteristics	Place of birth; language spoken at home
Selected Economic Characteristics	Median household income
Own Children Under 18 Years by Family Type and Age	Single-parent households
Zip-Code Level Estimates	Overall population; population of children 0-4

Regional Breakdown

To explore how geography impacted child care throughout the county, four regions based on zip code were used: Northern, City, Southeastern, and Southwestern (see Table 10 for the zip codes associated with each region; see also Figure 29). Zip code was used as the unit of geographic measurement because it is used in provider records, population estimates, and the family and provider surveys. These four regions approximately align with the County's five [County Council Districts](#) (see Figure 29), with the Northern region loosely corresponding to County Council District 5, the City region to County Council Districts 3 and 4, the Southeastern region to County Council District 2, and the Southwestern region to County Council District 1.

Table 10. Community and Zip Code in Each Region

City	
Frederick	21701
Frederick	21702
Frederick/North Frederick	21703
Frederick/Urbana	21704
Frederick (Post Office)	21705
Frederick (Post Office)	21709
Braddock Heights (Post Office)	21714
Northern	
Cascade	21719
Emmitsburg	21727
Keymar	21757
Ladiesburg (Post Office)	21759
Libertytown (Post Office)	21762
Myersville	21773
New Midway (Post Office)	21775
New Windsor	21776
Rocky Ridge	21778
Taneytown	21787
Sabillasville	21780
Smithsburg	21783
Thurmont	21788



Union Bridge	21791
Walkersville	21793
Woodsboro	21798
Southeastern	
Clarksburg	20871
Ijamsville	21754
Monrovia	21770
Mt. Airy	21771
New Market	21774
Unionville (Post Office)	21792
Southwestern	
Dickerson	20842
Adamstown	21710
Brunswick	21716
Burkittsville	21718
Jefferson	21755
Knoxville	21758
Middletown	21769
Point of Rocks	21777
Tuscarora	21790
Buckeystown (Post Office)	21717



POPULATION GROWTH

The Maryland Planning Department provided population growth estimates for Frederick County to examine how the county's demographics are expected to change in the next several decades. Data were reported by race/ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic of Any Race, and All Other Races/Ethnicities) as well as age (the age categories referenced are 0-4 and total). Projections were provided in five-year increments from 2025 to 2045. Actual population estimates from 2010 to 2020 using ACS five-year estimates were also used. The population projections do not describe the geographic locations where population growth is expected to occur.

Table 11. Actual and Projected Population of Frederick County, Overall and by Racial/Ethnic Group, for the Total Population, and for Children Ages 0-4

		Non-Hispanic White			Non-Hispanic Black			Hispanic (All Races)		All Other Races/Ethnicities	
		Total Population		N	%	N	%	N	%	N	%
Actual	2010	233,385	181,645	78	19,611	8	17,135	7	14,994	6	
	2015	245,000	184,480	75	21,746	9	21,319	9	17,455	7	
	2020	264,780	192,597	73	25,461	10	25,755	10	20,967	8	
Projected	2025	285,688	200,491	70	29,588	10	30,721	11	24,888	9	
	2030	300,578	204,038	68	33,613	11	34,750	12	28,177	9	
	2035	316,360	207,485	66	37,983	12	39,139	12	31,753	10	
	2040	329,152	208,316	63	42,237	13	43,384	13	35,215	11	
	2045	341,134	208,069	61	46,587	14	47,720	14	38,758	11	
		Child Population (0-4)		N	%	N	%	N	%	N	%
Actual	2010	14,862	9,619	65	1,503	10	1,922	13	1,818	12	
	2015	14,177	9,297	66	1,587	11	2,082	15	1,211	9	
	2020	16,204	10,353	64	1,845	11	2,404	15	1,602	10	
Projected	2025	18,983	11,558	61	2,203	12	3,004	16	2,218	12	
	2030	20,436	11,885	58	2,491	12	3,466	17	2,594	13	
	2035	21,221	11,604	55	2,725	13	3,899	18	2,993	14	
	2040	20,993	10,624	51	2,947	14	4,208	20	3,214	15	
	2045	20,995	10,138	48	3,210	15	4,439	21	3,208	15	

NOTE: Actual population estimates from the ACS five-year estimates. Projected population estimates provided by the Maryland Department of Planning.

CHILD CARE PROVIDERS

Number of Providers and Slots Over Time

Licensing statistics from the [Maryland State Department of Education, Division of Early Childhood, Office of Child Care](#) were used to analyze changes in the number of licensed child care providers and slots over time. Licensing statistics include the number of licensed providers and number of licensed slots for each month from July 2018 to June 2023, separately by provider type. The number of providers and slots from Large Family Child Care Home and Registered Family Child Care were combined to represent home-based child care, while Licensed Child Care Center estimates for both providers and slots were used to represent center-based child care.



Features of Child Care Providers

Detailed provider records maintained by the Maryland Family Network (MFN) as of April 2023 were used to examine features of child care providers. The data included specific details on each provider in Frederick County, including type of provider (i.e., home-based or center), address, zip code, ages cared for, infant capacity, total capacity, child care scholarship participation, languages offered, EXCELS participation, and EXCELS rating. Of the original list of 424 providers, we excluded 33 because the provider only cared for children ages 5 and older. These data were limited to a single point-in-time and did not include information on enrollment or slot availability. Subsidy participation and languages offered were only available if the provider provided that information (i.e., some providers may offer these services but do not report them to MFN).

FREDERICK COUNTY PUBLIC SCHOOLS DATA

Student Demographics

Frederick County Public Schools (FCPS) provided data in response to a Public Information Act request. Data included anonymized information on all 3,225 FCPS kindergarteners enrolled in Fall 2021. Data included student demographics (gender, race/ethnicity, English learner status, disability status, and whether the student was eligible for Free and Reduced-price Meals [FARM]). The number of students identifying as Native American/American Indian was small (<10) and were not included.

Prior Child Care Experience

In addition to demographics, each student had a prior care indicator. At kindergarten registration, parents provided information about the setting(s) in which their child had received care prior to kindergarten. These data did not include information on the frequency, recency, nor quality of prior care. The frequencies of different types of prior care are reported in Table 12.

Table 12. Frequency of Different Types of Prior Care⁴⁴

	N	%
Child care center	515	15.9
Family child care	137	4.2
Non-public nursery school	339	10.5
Head Start	54	1.7
Public Pre-K	861	26.6
Informal care	2,187	67.6

We grouped students into two broad categories: (1) those who received any type of formal child care at all (including care in a child care center, family child care, non-public nursery school, Head Start, or public Pre-K), sometimes in combination with informal care, and (2) students who received *only* informal care. See Table 13 for demographics of the overall sample (right-most column), as well as students who accessed formal or informal care.

⁴⁴ Percentage does not sum to 100% because some students were reported in multiple types of care.



Table 13. Demographic Characteristics Overall and for Students Receiving Formal and Informal Care

		Formal Care (N = 1,814)		Informal Care (N = 1,408)		Total Sample (N = 3,235)	
		N	%	N	%	N	%
Gender	Female	905	49.9	711	50.5	1,622	50.1
	Male	909	50.1	697	49.5	1,613	49.9
Race/ Ethnicity	Asian/Pacific Islander	119	6.7	91	6.5	210	6.5
	Black/African American	219	12.1	150	10.7	372	11.5
	Hispanic/Latino (any race)	234	18.4	308	21.9	643	19.9
	2+ Races	155	8.6	143	10.2	298	9.2
	White	984	54.2	714	50.7	1,707	52.8
	English Learner	No	1,678	92.5	1,266	89.9	2,957
	Yes	136	7.5	142	10.1	287	8.6
Disability	No	1,563	86.2	1,355	96.2	2,929	90.6
	Yes	251	13.8	53	3.8	306	9.5
FARM Eligible	No	1,300	71.7	1,018	72.3	2,329	72.0
	Yes	514	28.3	390	27.7	906	28.0

Kindergarten Readiness

FCPS data also included students' scores on the Kindergarten Readiness Assessment (KRA). The assessment, administered in English early in the school year, used a combination of performance tasks, selected response items, and teacher observation of work and play. Students were scored in four domains: social foundations, mathematics, language and literacy, and physical well-being and motor development. Students had an overall assessment level (Demonstrating Readiness, Approaching Readiness, Emerging Readiness), as well as numeric scores in each domain and an overall domain score. Only students with complete assessments ($n = 3,008$) were analyzed.

LITERATURE REVIEW

The literature review explored the impacts that quality and accessible child care may have on children, families, and communities. Specific areas of interest included children's social and academic outcomes, parents' economic and psychological well-being, and economic impacts on community prosperity.

To identify articles, search terms related to workforce participation, labor productivity, job creation, education, and academic achievement were used. We then organized findings by type of impact (economic, social, or academic) and the affected population (children, families/parents, or communities). The selection criteria for the review included a preference for resources that met all or



some of the following criteria: were peer-reviewed articles or reports from government agencies; were research syntheses or summaries; were relatively recent (within the last 10 years); had robust methodologies; focused on children ages 0- 5; and examined quality-related factors. Although child care can impact several aspects of children's and families' lives, this review focused heavily on the economic short- and long-term benefits. The literature review informed the social return on investment analysis.

ANALYTICAL DETAILS

Identifying ALICE Families from the Family Survey

To identify families as ALICE, two variables were required: family composition and household income. Due to limitations in both measures on the family survey (described in more detail below), we were only able to roughly mirror the calculations used by United Way to define the ALICE population.

Family Composition

Family composition is based on the total number of adults, infants, preschoolers, and school-age children living in the household. United Way uses the ACS/U.S. Census definition of *household*, meaning the number of people for whom parent(s) are financially responsible (for the purpose of taxes or public benefits). In the family survey, the number of infants (0-23 months) and preschoolers (2-5 years) were reported by families. Survey respondents also reported whether the children's other parent lives in the home, allowing us to estimate the number of adults in the home. Finally, families reported their total household size. While we did not directly ask about the number of school-age children in the home, we can approximate this number by subtracting the number of adults, infants, and preschoolers from the total household size.

Caveats to this approach are:

1. Participants' definitions of *household* may differ from its meaning in the sense of financial responsibility. For example, say two families are renting a home together, yet they operate separate finances (i.e., file taxes and apply for benefits separately). For total household size, the person responding to the family survey may have reported the total number of people living together in the home in both families, not the number of people for whom they are financially responsible.
2. We may be overestimating the number of preschool-age children and underestimating the number of adults and/or seniors. Families may live in households with other adults (e.g., grandparents), and for adults, the survey only asked about the children's other parent. This has implications for the ALICE threshold. For example, the ALICE threshold in Frederick County for a four-person household with two adults, one preschooler, and one school-age child is \$90,192. The ALICE threshold in Frederick County for a four-person household with three adults and one preschooler is \$94,020.



Family Income

ALICE income thresholds are specific to the dollar. Families are designated as ALICE if their household income is below the threshold for their specific household size and composition. The family survey did not ask for a specific income, but instead, asked respondents to identify the range in which their income fell (e.g., \$75,000 to \$99,999). If the ALICE threshold lies within one of the ranges (e.g., \$90,192), we are limited in our ability to identify families as ALICE or not. This is one of the key reasons why we must qualify our analysis as approximating ALICE.

We used the United Way website⁴⁵ to calculate the ALICE threshold for households of differing compositions. We only referenced the thresholds for families with at least one infant and/or preschooler (since that was the target population for the family survey), and we only referenced the thresholds for households with one or two adults.

Combining Family Composition and Household Income

For the subset of family survey respondents who reported both household income and family composition (n = 920), their survey data was compared to Frederick County's ALICE thresholds. There are 276 survey responses (30%) we can "unambiguously" classify as ALICE. For example, they reported incomes of less than \$50,000, which is lower than the lowest relevant ALICE threshold (\$65,136, for a household with one parent and one preschool-aged child). An additional 318 survey responses (35%) were "unambiguously" classified as non-ALICE (e.g., they were a one-parent, one-preschool-age child household with an income greater than \$75,000).

For the remaining 326 cases, the ALICE threshold for that specific family's household size/family composition lies within the income range they selected. For example, their income range was \$75,000-\$99,999, and the ALICE threshold for their household composition was \$90,129. For these cases, we elected to use the midpoint of the income category as the estimate of each family's income. In the example given, \$87,500 was used to estimate that family's income. The income category midpoint was then compared to the household survival budget for that respective household size and composition. In the example given, the family would be classified as ALICE, since their estimated income (\$87,500) is below the ALICE threshold (\$90,129).

Table 14 presents the number of family survey respondents that are ALICE-approximate by family income (rows) and household size (columns). Just under half of the sample, 455 families (49%), are ALICE-approximate, while 465 families (51%) are not approximate.

⁴⁵ The steps we followed to get the thresholds are: (1) Go to <https://unitedforalice.org/household-budgets-mobile/maryland>. (2) In the box with the header, "STATE DOWNLOADS," click the button that says, "Household Budgets." (3) Scroll down to where it says: "The ALICE Survival Budget Can be Calculated for Different Household Types." (4) Under State, enter Maryland. Under County, enter Frederick. Use the dropdown to select different family compositions.



Table 14. Cross-Tabulation of Family Survey Respondents by Household Size and Family Income, Color-Coded by ALICE-Approximate Category

		Household Size							Total	
		2	3	4	5	6	7	8		9
Household Income	Less than \$15,000	5	5	5	11	6	2	0	0	34
	\$15,000 to \$24,999	0	7	6	6	4	4	0	0	27
	\$25,000 to \$34,999	2	9	11	7	1	2	0	0	32
	\$35,000 to \$49,999	6	6	16	12	5	3	0	0	48
	\$50,000 to \$74,999	6	16	32	19	10	1	1	0	85
	\$75,000 to \$99,999	3	24 2	74	33	16	7	0	0	159
	\$100,000 to \$149,999	0	62	124	53 1	9 14	8	4	1	276
	\$150,000+	0	35	131	75	12	5	1	0	259
	Total	22	166	399	217	77	32	6	1	920

NOTE: Color shading indicates ALICE-approximate category: Green = ALICE-approximate; Red = not ALICE-approximate. For some combinations of household size and income (e.g., 6-person households reporting incomes between \$100,000 to \$149,999), Frederick County's ALICE thresholds differed enough by household composition that some families in the cell are ALICE-approximate and some are not ALICE-approximate.

PROJECTED NUMBER OF CHILD CARE PROVIDERS AND SLOTS

Maryland child care licensing data were used to project the number of child care slots and providers into the future. We conducted four linear regression models, one for each outcome: Number of home-based providers (Model 1); number of center-based providers (Model 2); number of licensed slots at home-based providers (Model 3); and number of licensed slots at centers (Model 4). In each model, an indicator for month/year was used as the predictor variable.

As shown in Table 15, Model 1 predicts that 1.13 home-based providers will close each month. In line with this estimate, Model 3 predicts that the county will lose 8.63 slots in home-based providers per month. The estimate of model fit (R^2) from these two models demonstrates that the month/year indicator variable explains 97% of the variation over time in the supply of home-based providers and home-based provider slots, suggesting the trends are highly reliable.

The results from Models 2 (number of child care centers) and 4 (number of center-based slots) are slightly more ambiguous. The estimated coefficient for the month/year indicator in Model 2 suggests a new child care center is expected to open every 20 months. At the same time, the results from Model 4 suggest that child care centers will lose 11.59 slots per month. The somewhat contradictory nature of these findings suggest that the number of centers may increase at the same time their capacity decreases. As discussed in the main text, the total number of slots in centers is relatively stable, around 7,500 (see Figure 8).



Table 15. Results from Regression Models Predicting Number of Providers and Slots in Frederick County Over Time

Outcome	Model 1 HBCC Providers	Model 2 Centers	Model 3 HBCC Slots	Model 4 Center-Based Slots
Intercept (SE)	321.43*** (0.94)	106.72*** (0.56)	2,476.46*** (6.96)	7,487.52*** (34.62)
Month/Year Indicator (SE)	-1.13*** (0.03)	0.05** (0.02)	-8.63*** (0.20)	-11.59*** (0.99)
R ²	0.97***	0.14**	.97***	0.70***

Note: *** p < .001; ** p < .01; * p < .05; ^ p < .10.

The results from the regression model for number of home-based slots were used to estimate, in part, the total number of licensed slots projected to be available in the key years of interest (2025, 2030, 2035). To arrive at the total number of estimated slots in home-based providers, the month/year indicator was determined for each of these years, entered into the equation below, and averaged over the 12 months for each year.

$$\widehat{HBCC\ Slots} = 2,476.46 - 8.63 * MonthYearIndicator$$

Finally, 7,500 was added to the above estimate to represent the total number of child care slots in centers predicted to be available throughout the county.

KINDERGARTEN READINESS AND STUDENT DEMOGRAPHIC CHARACTERISTICS

Group Comparisons

Descriptive statistics were used to examine the relationship between prior care (formal care vs. informal care) and students' KRA assessment level. Inferential statistics (Chi-square tests) were used to evaluate whether the relationship between prior care and kindergarten readiness is different for students of different backgrounds. For specific student groups of interest (including English language learners, Hispanic/Latino students, and FARM-eligible students), the percentage of students demonstrating kindergarten readiness who had received prior care in formal settings was calculated. We compared this percentage to the percentage of students demonstrating kindergarten readiness who had received prior care only in informal settings. Table 16 presents the findings.

Table 16. Percentage of Different Types of Students Demonstrating Kindergarten Readiness on the KRA and Results from Significance Testing

		% Demonstrating Readiness		Result from Chi- Square Test	Significance Level
		Formal Care	Informal Care		
Gender	Female	60.82%	50.23%	$\chi^2(1) = 16.87$	*** p < .001
	Male	49.88%	41.60%	$\chi^2(1) = 10.10$	** p = .001
Race	Asian/Pacific Islander	67.89	56.76	$\chi^2(1) = 2.35$	p = .13



	% Demonstrating Readiness		Result from Chi-Square Test	Significance Level
	Formal Care	Informal Care		
Black/African American	45.23	37.59	$\chi^2(1) = 1.90$	$p = .17$
Hispanic/Latino (any race)	38.78	18.60	$\chi^2(1) = 28.71$	*** $p < .001$
Multiracial/Biracial	54.38	46.34	$\chi^2(1) = 1.53$	$p = .22$
White	51.58	57.79	$\chi^2(1) = 2.39$	$p = .12$
English Learners	20.00	4.84	$\chi^2(1) = 13.00$	*** $p < .001$
Students with a disability(ies)	26.40	34.69	$\chi^2(1) = 1.34$	$p = .25$
Students eligible for FARM	30.30	19.71	$\chi^2(1) = 11.68$	** $p = .001$

NOTE: *** $p < .001$, ** $p < .01$, * $p < .05$.

A significantly greater percentage of students receiving formal care were assessed as demonstrating kindergarten readiness, and this holds for: male and female students, Hispanic/Latino students, English learners, and students eligible for FARM. Hispanic/Latino students are the only racial/ethnic group for whom the percentage of students who demonstrate kindergarten readiness is statistically higher for students who received formal care. Numerically, the same pattern exists for Asian/Pacific Islander, Black/African American, and Multiracial/Biracial students, though statistically, the difference is not reliable.

For white students, a somewhat greater percentage were assessed as kindergarten-ready who received informal care (58%) compared to formal care (52%). This pattern was also observed for students with disabilities; 26% of those who received formal care were assessed as ready for kindergarten, compared to 35% of those who received only informal care. These differences, while not statistically significant, are still practically significant, since they are in the opposite direction of what is theorized. It is unclear why this pattern reversal occurred for these students, but it could relate to greater resources or individualized attention available from parents at home. Children with disabilities may experience less stress while learning in familiar environments with their parents at home. Finally, the quality of formal care settings can vary widely, and not all providers may be equipped to meet the specialized needs of students with disabilities.

Students' Probability of Being Assessed as Kindergarten-Ready

We used logistic regression to model the impact of prior care experiences on students' probability of being assessed as kindergarten-ready, while controlling for demographic characteristics (see Table 17). Predictors include the formal care indicator, along with a series of variables to denote students' race/ethnicity (with white students as the reference category), gender (with male students as the reference category), English learner status, disability status, and FARM eligibility. Because the outcome is a binary variable (e.g., ready vs. not ready)



and not a continuous variable (e.g., KRA scores), coefficients are reported in terms of log-odds.⁴⁶ A positive coefficient means the predictor makes it *more likely* that a student is assessed as kindergarten-ready, while a negative coefficient means the predictor makes it *less likely* that a student is assessed as kindergarten-ready.

Table 17. Results from Logistic Regression Predicting Students' Kindergarten Readiness as a Function of Their Background Characteristics

Background Characteristic	Coefficient (Standard Error)
Intercept	.23** (.08)
Formal Care	.49*** (.08)
Black	-.43** (.13)
Hispanic	-.61*** (.12)
Asian	.41* (.18)
Two or More Races	-.23 (.14)
Female	.39*** (.08)
English Learner	-1.58*** (.22)
Disability	-1.22*** (.16)
FARM Eligible	-1.16*** (.10)
Log Likelihood	-1796.73
Pseudo R ²	13.3%

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

SOCIAL RETURN ON INVESTMENT

For the social return on investment (ROI) analysis, we relied heavily on the framework developed by Arthur Reynolds and Judy Temple.⁴⁷ We used several sources of data to inform this analysis, in addition to the relevant literature to identify and assign dollar values to the hypothesized benefits.

The calculation is highly theoretical and presents a hypothetical scenario where the instantaneous one-year benefits (both at present and into the future) of child

⁴⁶ Log-odds can be converted to odds by exponentiating the coefficient. For example, in the model, the effect of formal care is 0.49; $e^{0.49} = 1.63$. Odds can also be converted to probabilities by dividing the odds by 1 plus the odds; for example, $1.63 / (1 + 1.63) = 61.9\%$. For an additional resource, see http://vassarstats.net/tabs_odds.html.

⁴⁷ Reynold, Arthur J., and Judy A. Temple, "Economic Returns of Investments in Preschool Education," *A Vision for Universal Preschool Education* (Cambridge University Press 2006), 37-68.



care access are calculated and compared to the present costs of one year of child care. In reality, many benefits (particularly those to child care participants) may not be evident for years (in some cases, not until their own wage-earning years).

Two major categories are calculated in an ROI analysis: costs and benefits. To be included as a benefit, it must be possible to assign a dollar value to the benefit, and benefits can only be counted once (e.g., we did not separately include benefits for child care participants related to both increased high school graduation and increased earnings later in life, since these factors are related). For child care, benefits fall into several categories: K-12, society, parent income, and child income. Each of these is discussed below following the discussion of child care costs.

Child Care Costs

Tuition estimates for Frederick County from the Maryland Family Network⁴⁸ were used to estimate annual costs of providing child care full-time. Because home-based and center-based care have different costs, costs for care in each of these two settings were separately computed. As described in the main text (see Figure 9), cost varies by child age; this analysis uses tuition for children ages two to five (\$12,470 for home-based care and \$10,549 for center-based care).

K-12 Benefits

To assign a dollar value to K-12 benefits, we referred to the FY2021 Frederick County Public Schools budget. The literature review found that children are 16% less likely to use special education services if they have prior child care experiences.⁴⁹ In FY2021, FCPS spent a total of \$76,321,388 on special education, and enrolled 45,058 students. This means that each year, FCPS spends \$1,693.85 per student. We calculated 16% of this value (\$271) to arrive at our estimated benefit to special education savings.

A similar strategy was used to estimate the financial benefits associated with the 12% reduced likelihood of grade retention.⁵⁰ The total annual budget for FCPS in FY2021 was \$674,521,699, meaning per-student costs are \$14,970.08. We assumed students would only be retained once in their school careers and took 12% of the per-student annual costs to arrive at our estimated benefit of \$1,796.

⁴⁸ Maryland Child Care Resource Network: Child Care Demographics 2023, Frederick County Report (2023), Maryland Child Care Network, Maryland State Department of Education, Baltimore, MD: MSDE, <https://www.marylandfamilynetwork.org/sites/default/files/2022-02/Frederick%202022.pdf>.

⁴⁹ Frede, Ellen, Kwanghee Jung, W. Steven Barnett, Cynthia Esposito Lamy, and Alexandra Figueras, *The Abbott Preschool Program Longitudinal Effects Study (APPLES), Interim Report*, New Brunswick, N.J.: National Institute for Early Education Research, June 2007.

⁵⁰ Schweinhart, Lawrence J., Zongping Xiang, Marijata Daniel-Echols, Kimberly Browning, and Tomoko Wakabayashi, *Michigan Great Start Readiness Program Evaluation 2012: High School Graduation and Grade Retention Findings*, Ypsilanti, Mich.: High Scope Educational Research Foundation, 2012.



Benefits to Society

To estimate benefits to society (e.g., business and tax revenue), we utilized estimates from Clive R. Belfield.⁵¹ He estimated the business revenue (\$1,640) and tax revenue (\$1,470) lost per working parent due to inadequate child care. Annual burdens from inadequate child care were estimated for each working parent with a child aged 0-3; values are slightly reduced from ages 4-5. Business estimates account for reduced revenue (lower output), extra workforce costs (disruptions/absences, extra recruitment costs), and lost future revenue (lower workforce capital). Tax revenue accounts for lower federal and state/local taxes due to lower incomes, a smaller tax base, and weaker economic growth associated with lost future tax revenue. Some limitations of using these estimated benefits are that they were derived from a survey, and the survey was not specific to the Maryland context.

Benefit to Parents: Additional Earnings

To arrive at our estimated additional earnings for parents, we utilized micro-area data from the 2021 five-year ACS. All calculations were done using data from Maryland exclusively.

The goal was to calculate the value added to parents by child care in terms of their annual income. This value occurs for two reasons:

- Parent is out of the labor force and returns to working full time.
- Parent is working part time and begins working full time.

The value of these additional wages was calculated under several assumptions:

- All parents who are not in the labor force, and all parents who are working part time, want to be working full time, although we recognize this is not always the case.
- Individuals who work 40 hours per week are considered “full time.” In some cases, workers are considered full time even if they work fewer than 40 hours. Additionally, some individuals work multiple part-time jobs that add up to over 40 hours. For these calculations, we utilize the entire wage earned throughout the year. This will in some cases be the average of multiple jobs worked at once, or multiple jobs worked consecutively.

Calculations: Parents Re-Entering the Labor Force

Parents in this category do not have a current rate for which they work. However, for approximately half of the cases, parents currently outside of the labor force did previously report their occupation. Regression analyses, utilizing occupation, age, gender, parental status, work type (full time or part time), and education level, were used to estimate wages within Maryland for different

⁵¹ Clive R. Belfield, “Child Care and Working Families: A Post-Pandemic Economic Analysis for the U.S.,” Center for Benefit-Cost Studies in Education (University of Pennsylvania, 2023), <https://strongnation.s3.amazonaws.com/documents/1596/4db2b14c-a85b-4b49-9390-c6b90935e3de.pdf?1674854543&inline;%20filename=%22Child%20Care%20and%20Working%20Families:%20A%20Post-Pandemic%20Economic%20Analysis%20for%20the%20U.S..pdf%22>.



occupations. We estimated annual salaries for parents out of the labor force, with the additional assumption that parents would be working full time. For cases where parents did not provide a previous occupation, a similar regression was conducted utilizing age, gender, parental status, work type (full time or part time), and education level to estimate wages within the state of Maryland. Overall, we estimated that parents out of the labor force could earn \$42,252⁵² a year on average by re-entering and working 40 hours a week if child care was available. This value was used in the social ROI analyses as the benefit to parental income.

Calculations: Part Time to Full Time

The ACS micro-area data provides wages earned over the course of the previous year. A parent's total income from wages was divided by 52.1429 to get a weekly average. To estimate an hourly rate, this value was divided by the number of hours parents reported they usually worked. As this number is an average based on total earnings, it may not reflect the parent's true hourly rate at any given job.

The number of hours worked by the part-time parent was subtracted from 40 to estimate the additional number of hours the parent could be working, if child care was provided. This number was then multiplied by the parent's hourly rate to get the added wages due to child care on a weekly level, which was multiplied by 52.1429 to annualize it. On average, part-time parents would earn an additional \$18,294⁵³ by being able to go to full time due to child care.

Benefit to Child Participants: Additional Income Earned

Children are about 14% more likely to graduate high school if they have prior experience in early care and education.⁵⁴ Using this, we estimated the additional salaries they might earn due to the additional educational attainment.

Using the 2021 ACS micro-area data, the average adult with only a high school diploma made \$9,918 dollars more a year than someone without a diploma (while controlling for age, gender, full-time status, and whether they have children)⁵⁵. However, additional income earned could be even greater, as children who graduated high school might also be more likely to pursue postsecondary education, leading to even higher earnings. In Maryland, people who did not graduate high school earn \$36,294 less each year than adults with at least a high school degree.⁵⁶ These two numbers (\$9,918 and \$36,294) were multiplied by 14% to estimate the range, per year, of potential added adult income available to child care participants. The range is \$1,389 to \$5,081 dollars per child, the maximum of which we use in our ROI analyses.

⁵² Ibid.

⁵³ Author calculation; IPUMS USA, University of Minnesota, www.ipums.org.

⁵⁴ Schweinhart, Lawrence J., Zongping Xiang, Marijata Daniel-Echols, Kimberly Browning, and Tomoko Wakabayashi, *Michigan Great Start Readiness Program Evaluation 2012: High School Graduation and Grade Retention Findings*, Ypsilanti, Mich.: High Scope Educational Research Foundation, 2012.

⁵⁵ Author calculation; IPUMS USA, University of Minnesota, www.ipums.org.

⁵⁶ Ibid.



Table 18. Social Return on Investment for Increased Child Care Access in Frederick County

Costs and Benefits	Center-Based Care	Home-Based Care
Program Costs		
Average annual cost	\$12,470	\$10,549
Program Benefits		
Additional earnings per parent	\$42,252	\$42,252
Additional business revenue	\$1,640	\$1,640
Additional tax revenue	\$1,470	\$1,470
K-12 Special Education Savings	\$271	\$271
K-12 Grade Retention Savings	\$1,796	\$1,796
Additional earnings per participant	\$5,081	\$5,081
<i>Total Benefits</i>	\$52,510	\$52,510
Net Benefits (Benefits - Cost)	\$40,040	\$41,961
Total Benefits Per Dollar Invested (Net Benefits ÷ Cost)	\$3.21	\$3.98

One limitation of this analysis is that child care market rates are not a good estimate of the true cost of child care.⁵⁷ An additional limitation is that social ROI analyses are best understood in the context of comparison to similar programs. For example, how might investment in early child care compare to investment in reducing K-12 class sizes, another strategy shown to benefit students' educational attainment? Additionally, most of the research on estimated benefits (for factors such as reduced need for special education) was conducted on 'model' programs, which tend to be relatively small in scope. It is unclear the extent to which benefits are realized for all program types, or how program quality impacts the benefits. Furthermore, most published research looks at the effects for low-income/high-need children who were primarily Black/African American; it is unknown the extent to which benefits are experienced by middle-income families or by more ethnically diverse groups. Finally, we do not examine other benefits that may occur due to increased availability of child care, such as increased property values.

⁵⁷ The Administration for Children and Families is moving states toward alternative methodologies for basing subsidy program payment rates on cost of care rather than a market rate study knowing that cost is often higher than parents can pay out of pocket. See: Office of Child Care, Program Instruction, "CCDF-ACF-PI-2018-01," U.S. Department of Health and Human Services, February 26, 2018, https://www.acf.hhs.gov/sites/default/files/documents/occ/ccdf_acf_pi_2018_01.pdf.



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