

# Ready for Kindergarten, Ready for Life

## The causes and consequences of Northern Virginia's preschool enrollment disparity

High-quality preschool has the potential to narrow long-standing racial and economic opportunity gaps, provide crucial relief to Northern Virginia's working parents, and produce stunning long-term returns on investment. While all children benefit from the experience, children from families with limited economic means stand to benefit most.

Unfortunately, Northern Virginia's children at or near poverty have one of the lowest rates of preschool enrollment in the country; just 29 percent of three- and four-year-olds in this income bracket are in school, compared to 41 percent nationally. However, low rates of preschool enrollment are not a problem experienced at every income level; children in Northern Virginia's higher-income households enroll at a rate of 67 percent, creating the largest preschool *income disparity* in the entire country.

This brief explores how location, cost, and demand explain the region's low rate of preschool enrollment among its most financially-vulnerable children and concludes with a series of recommendations on how the community can fulfill the promise of preschool by focusing on:

- (1) Increasing the availability of high-quality preschool in Northern Virginia;
- (2) Filling the gap between what families can pay and what providers must charge; and
- (3) Supporting families who prefer family, friend, and neighbor care.

## The Power of Preschool in Closing the Opportunity Gap

Across the country, Black and Brown students and those from lower-income families enter kindergarten less equipped for academic success. This “opportunity gap” forms before a child ever sets foot in a classroom and tends to remain stable over time, neither increasing nor decreasing throughout the academic year.<sup>1</sup>

In Northern Virginia, where students perform on average an entire grade level above the typical student in America, economic and racial disparities in academic achievement are stark. As shown in **Figure 1**, children from higher-income homes perform an average of 2.52 grade levels ahead of children from less affluent families. White students are 2.36 grade levels above Hispanic students and 2.16 grade levels above Black students.<sup>2</sup>

Preschool has tremendous potential to narrow the opportunity gap and increase a child’s chances for long-term success. Research has found that children who attend a high-quality program, particularly if they subsequently enroll in a well-resourced elementary school, are more likely to show improved academic and cognitive skills, avoid special education placement/grade retention, graduate high school, complete more years of college, and experience consistent employment and higher earnings as adults.<sup>3</sup>

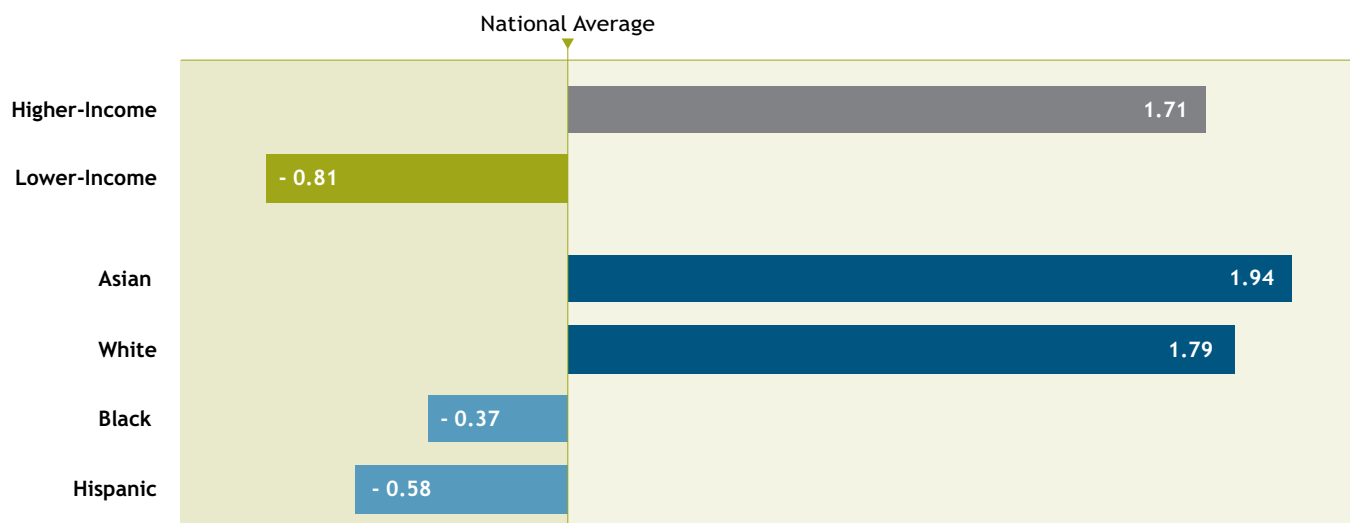
### Early Childhood Care and Education (ECCE)

refers to the continuum of care and education of children from ages 0-5, including infant-toddler (ages 0-2) and preschool (ages 3-4). Within ECCE, care can be provided by a paid provider that is licensed with the state (“licensed care”) or by parents, relatives, friends, and neighbors (“family, friend, neighbor care”).

These benefits are well-documented and vastly exceed the cost of programs; for example, in a recent meta-analysis, the National Forum on Early Childhood Policy and Programs found that high-quality early childhood programs yield four to nine dollars for every dollar invested, including the Perry Preschool model, which generated returns on investment of seven to twelve dollars.<sup>4</sup> Preschool—and early childhood care and education (ECCE) in general—is also crucial for economic competitiveness;<sup>5</sup> prior to the COVID-19 pandemic, researchers estimate that inadequate care was costing working parents across the country \$37 billion a year in lost income and employers \$13 billion a year in lost productivity.<sup>6</sup>

**FIGURE 1. Student performance on standardized tests in Northern Virginia, by family income and race**

Average number of grade levels above or below the national average for all Northern Virginia public school students in grades 3-8, by student race-ethnicity and family income, school years 2009-18



Source: Insight Region™ analysis of data from Reardon et al, 2021.

## Quality Matters

Preschool produces the greatest impacts for children at greatest risk of being “left behind”,<sup>7</sup> but these benefits come with a huge qualifier: to be effective, programs must be of high-quality.<sup>8</sup> While the specific definition of high-quality varies, a program is generally high-quality when it offers: well-equipped classrooms,<sup>9</sup> small group sizes, and low adult-child ratios; regular communication and positive relationships between teachers and children; daily opportunities for art, music/movement, science, math, block play, sand, water, and acting; materials and activities to promote understanding and acceptance of diversity; parent / family engagement; and qualified staff who receive fair compensation, regular supervision, and opportunities for growth.

As there is no national assessment of preschool program quality, the task of assessing quality typically falls to states, which oversee ECCE provider licensing and regulation. In Virginia, quality has historically been assessed through a voluntary Quality Rating and Improvement System (QRIS) that rated classroom-based and home-based providers on a five-level quality continuum (see **Figure 2**):<sup>10</sup>

In 2021, the Commonwealth began the process of moving to a new unified early childhood system, which will include a number of important changes:

- **Competency-Based.** The state will focus on *teacher competencies* as reflected in the CLASS assessment, and will no longer require specific teacher credentials (i.e., Level II in QRIS).
- **Mandatory.** Participation is no longer voluntary. The state will require all providers in receipt of federal, state, or public dollars—an estimated 4,000 providers in the state—be evaluated for quality.
- **Oversight.** The Virginia Department of Education will be solely responsible for early childhood education in the state, rather than the previous arrangement where responsibilities were shared/split with the Virginia Department of Social Services.
- **Evidence-Based.** The state will assess each classroom’s alignment with sixteen program models approved by the state as “evidence-based”<sup>11</sup> and will provide additional support for accessing free or low-cost approved curricula options for providers that do not offer these models.



**FIGURE 2.**

Levels of Provider Quality in the Virginia Quality Rating and Improvement System (QRIS)

- I. Basic Health and Safety.** Program is in good standing with local and state regulations.
- II. Teacher Education and Qualifications.** Tier I satisfied AND at least 50 percent of Lead Teachers have 12 child-related credits from an accredited college, a national Child Development Associate credential (CDA), or other approved credential AND the Center Director (if center-based) has earned an AA with at least 15 child-related credits or has earned/ is earning 24 child-related credits from an accredited college.
- III. Curriculum and assessment.** Tier II satisfied AND lead teachers have at least 8 hours of training on the program’s curriculum, and the program has demonstrated (through on-site document review and observation) alignment with Virginia’s Milestones of Child Development or Virginia’s Foundation Blocks for Early Learning.
- IV. Environment.** Tier III satisfied AND after completing the Environment Rating Scale (ERS) and Classroom Assessment Scoring System (CLASS) assessments, the program has achieved an *adequate score* in: Language-Reasoning/ Listening and Talking, Activities, Interactions, Program Structure, Emotional and Behavioral Support, and Instruction. issues are addressed through a quality-improvement plan.
- V. Interactions.** Tier III satisfied AND the program has achieved a *high score* in the items in Tier IV.

# Northern Virginia’s Preschool Enrollment Disparity

Unfortunately, the kids who are likely to benefit most from preschool—those from traditionally under-resourced groups—enroll at substantially lower rates.

In Northern Virginia, an estimated 29 percent of children at or near poverty attend preschool, the second lowest rate of enrollment among the top 50 metro areas and a full 37 percentage points below that of higher-income children growing up in the region.<sup>12</sup> This gap between lower-income and higher-income children—a region’s level of *income disparity*—was the highest in the country in Northern Virginia. See **Figure 3**; **Appendix A** provides a complete list of rates by metro area.

Because income and race are so inextricably linked in this country, Northern Virginia also had some of the country’s largest *racial disparities* in preschool enrollment; White children attend preschool at a rate 11 percentage points higher than Asian children, 20 points higher than Black children, and 31 points higher than Hispanic children.

**Income Disparity** refers to the gap in preschool enrollment (the percentage of 3- and 4-year-olds in school, based on custodial parent/guardian self-reporting in the 2015-19 American Community Survey) between children from lower-income households (family income below 200 percent of federal poverty, or less than \$50,000 for a family of 4 in 2017) and from higher-income households (family income at or above 400 percent of federal poverty, or \$100,000 for a family of 4).

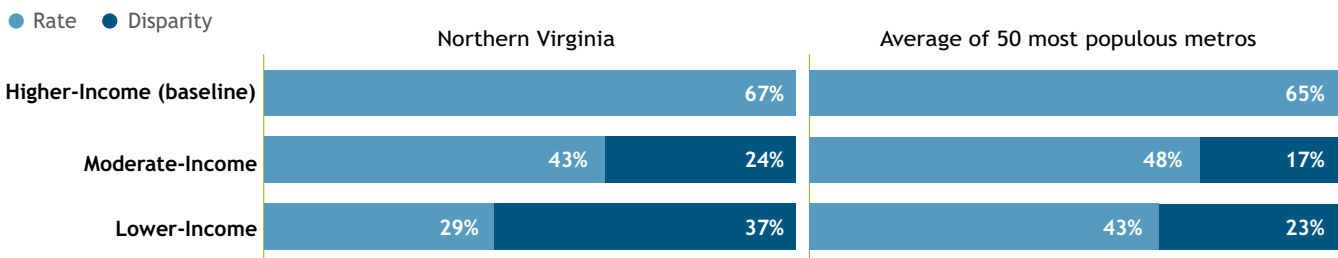
As there is no national source of data on the quality of preschool offered, it is difficult to assess enrollment disparities in *high-quality* preschool.<sup>13</sup> However, Insight Region™ found that just ten percent of all licensed ECCE slots in Northern Virginia were associated with a program in Level III or higher in the Virginia Quality Rating System (see **Figure 2** for a summary of quality levels).<sup>14</sup> To the extent that cost reflects quality and that children from higher-income families tend to enroll in higher-cost programs, we can assume even wider enrollment disparities when it comes to high-quality care.<sup>15</sup>

**FIGURE 3.**

Income and racial disparities in preschool enrollment in the top 50 metro areas and Northern Virginia

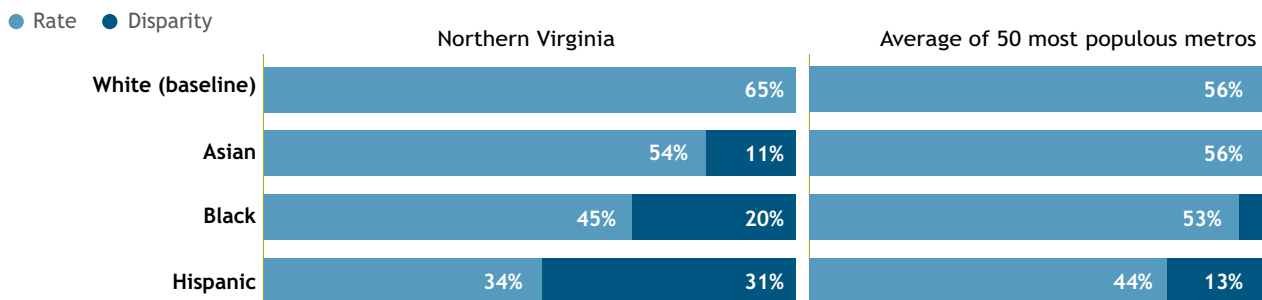
### Income Disparity

Percent of 3- and 4-year-old children enrolled in school by family poverty level



### Racial Disparity

Percent of 3- and 4-year-old children enrolled in school by child race/ethnicity



Source: Insight Region™ analysis of American Community Survey data (2015-19), accessed through IPUMS USA, University of Minnesota, [www.ipums.org](http://www.ipums.org).

Rates of preschool enrollment by jurisdiction are presented in **Figure 4**. Children at all income levels in Prince William County had the lowest rate of enrollment; Arlington had the highest rates across groups. The largest enrollment disparity (51 points) was observed in Alexandria, where a higher-income child was three times more likely to be enrolled in preschool than a lower-income child. Enrollment was lowest for Hispanic children in Alexandria, where just 22 percent attend preschool, compared to 75 percent of White children—a racial disparity of 53 percentage points. Arlington had the second largest disparity between White and Hispanic children—42 percentage points—driven primarily by the exceptionally high enrollment rates among White children. It is important to note that these rates are *estimates* of preschool enrollment, some of which are based on very small sample sizes.



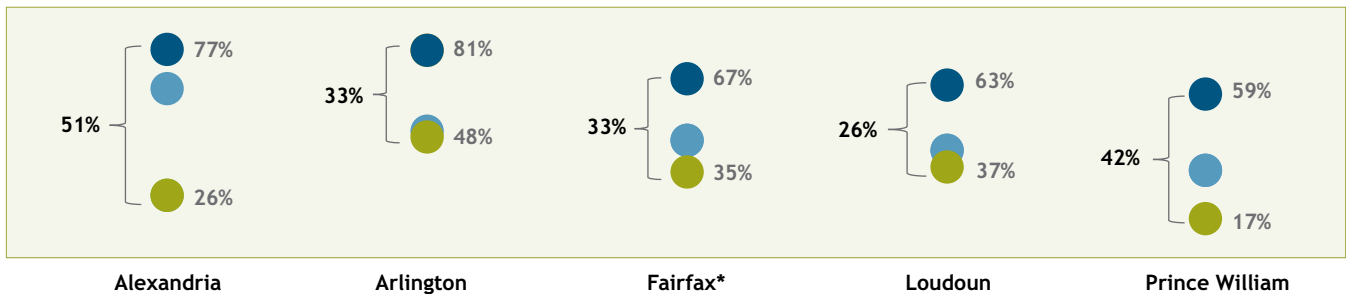
While it is difficult to estimate enrollment in high-quality preschool, we know that of the 12,000+ slots available with a Northern Virginia licensed ECCE provider rated as Level III or higher, about half were located in Fairfax County, 25 percent were in Prince William County, and 15 percent were in Loudoun County.

**FIGURE 4.** Preschool income and racial disparities in Northern Virginia jurisdictions

**Income Disparity**

Percent of 3- and 4-year-old children enrolled in school by family poverty level

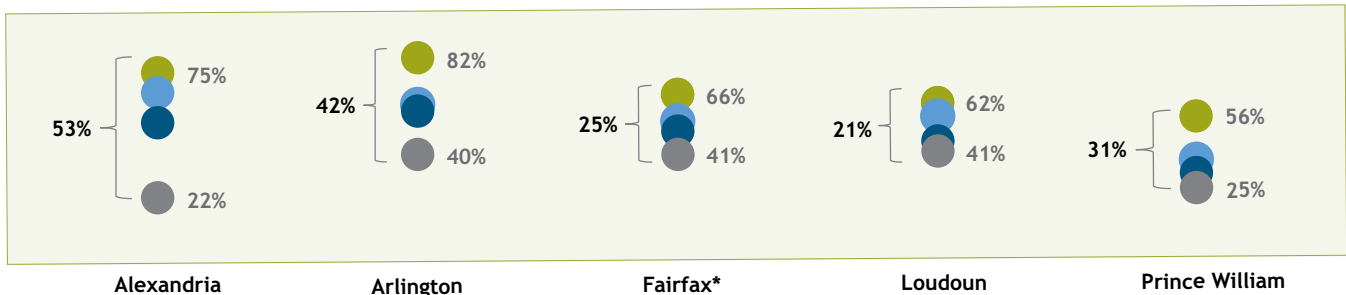
● Lower-income families ● Moderate-income families ● Higher-income families



**Racial Disparity**

Percent of 3- and 4-year-old children enrolled in school by child race/ethnicity

● White ● Asian ● Black ● Hispanic



\*Fairfax County includes Fairfax City and Falls Church; Prince William includes Manassas and Manassas Park.

Source: Insight Region™ analysis of American Community Survey data (2015-19), accessed through IPUMS USA, University of Minnesota, www.ipums.org. Figures may not sum due to rounding.

## Location: Can families find a preschool where they live?

The most recent list of ECCE providers licensed with the Virginia Department of Social Services suggests that Northern Virginia has the capacity to serve about 125,000 children, equivalent to 64 slots for every 100 young children under age 6.<sup>16</sup> This availability is about twice as many slots as the region needs before being considered a “childcare desert”.<sup>17</sup>

Some communities have far less availability, particularly in the less populous areas of northwest Loudoun County, suburban Manassas, Dale City-Woodbridge, Lorton, and the “inner beltway” neighborhood near Bailey’s Crossroads. See **Figure 5**. Overall, Arlington and Prince William counties had the lowest availability of licensed care (50 slots for every 100 children, compared to 67-70 slots for every 100 children in Loudoun, Fairfax, and Alexandria). These findings align closely with national research by the Center for American Progress (CAP), which identified similar locations throughout the region as having limited

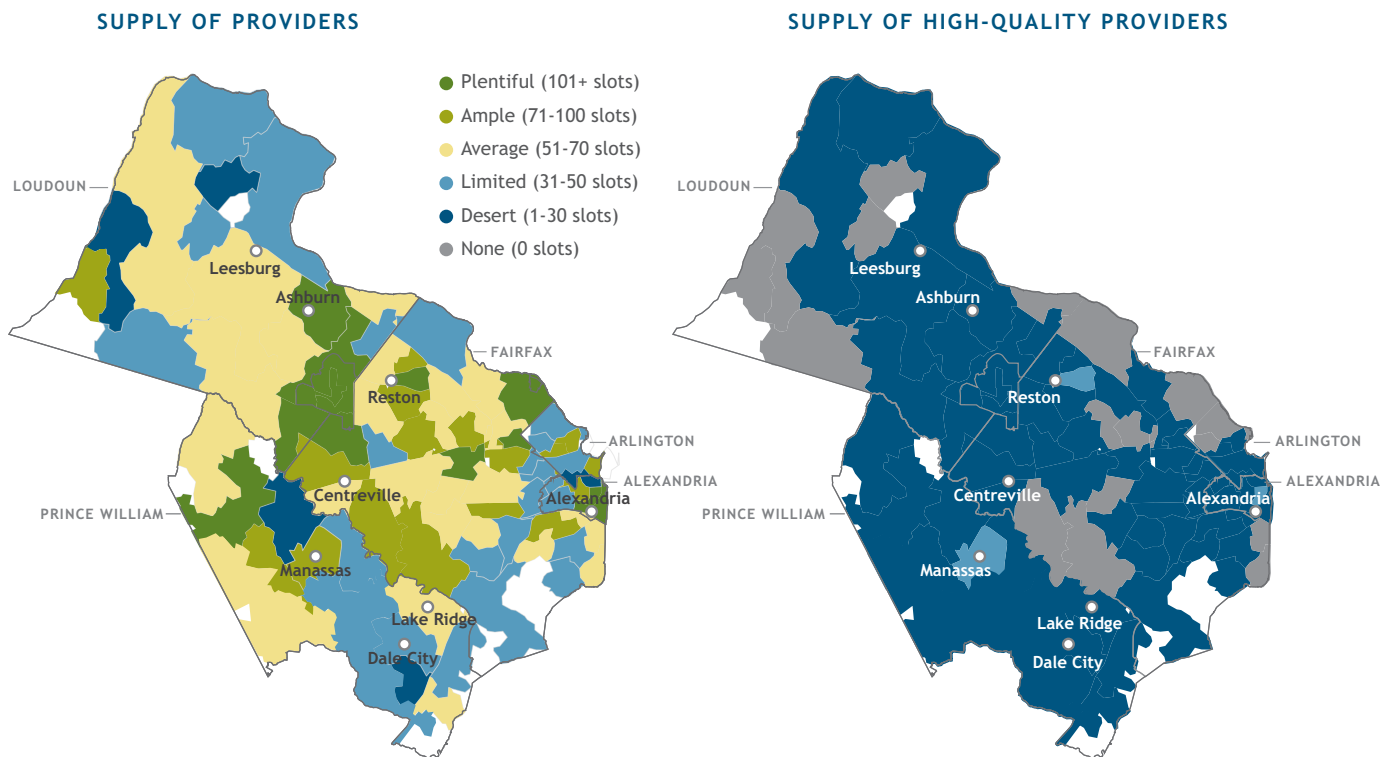
supply. This issue of constrained supply is widespread throughout the Commonwealth; in 2016, CAP researchers found that Virginia had one of the largest childcare deserts in an 8-state study, with 40 percent of the state’s residents living in a childcare desert.<sup>18</sup>

Nearly all zip codes in Northern Virginia would be considered “deserts” for high-quality licensed ECCE (Level III or higher in the Virginia QRIS), and 22 percent of zip codes have *no* rated high-quality providers. It is critical to note that because participation in the QRIS is voluntary, an estimated 87 percent of slots have not been evaluated, making it difficult to know if the remaining slots are lacking in quality ... or simply lacking in assessment.

Regardless of actual quality, most parents live in communities where their choices are limited to licensed providers whose quality has not been assessed by the state.

**FIGURE 5. Supply of licensed early childhood education (ECCE) in Northern Virginia**

Number of slots at a licensed ECCE provider for every 100 children under the age of 6



Source: Insight Region™ analysis based on the number of children under age 6 (ACS, 2015-19) versus reported capacity of licensed providers (obtained through web scraping of VDSS website).

Variation in the supply of licensed ECCE across Northern Virginia may contribute to the region’s enrollment disparities. Sorting the region’s 500+ census tracts by median family income, neighborhoods where the median family income is less than \$50,000 per year (the national threshold for being at or near poverty for a family of 4) had just 32 slots for every 100 children (the threshold for a childcare desert). These neighborhoods were also majority-minority, with nearly half (45 percent) of residents claiming Hispanic origin, compared to 18 percent of Northern Virginia’s overall population. See **Figure 6**.

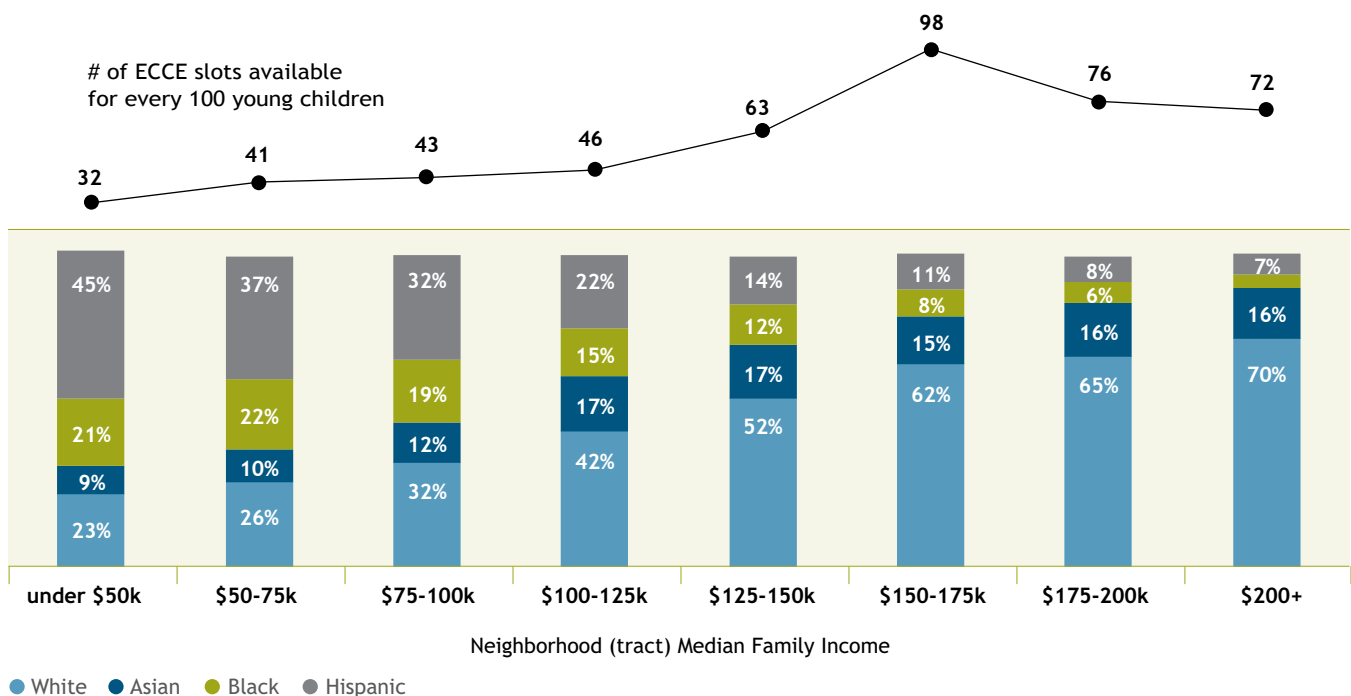


As neighborhoods gain affluence, they also have an increased supply of licensed childcare. Neighborhoods where median income is between \$150,000 and \$175,000 had the highest level of availability, with capacity to serve nearly all children under age 6 through licensed care (98 slots per 100 kids).

Access issues may become even greater as the region recovers from the COVID-19 pandemic and providers struggle to hire and retain workers (for example, at the end of the fourth quarter in 2019, there were 4,300 workers in “child day care services” in Fairfax County, dipping down to 2,900 in Q2 of 2020 and increasing to just 3,300 by Q4 of 2020).<sup>20</sup> Low pay (in May 2020, the average salary for a preschool teacher in the DC metro area was just under \$35,000) contributes to high rates of turnover in this industry.<sup>21</sup>

This finding—that licensed care tends to be less available in neighborhoods with fewer resources—is not new. The education and care of young children is expensive, and providers may opt to locate facilities in areas where families are better able to cover the full cost of the service.<sup>19</sup>

**FIGURE 6.**  
Supply of licensed ECCE by neighborhood income and racial-ethnic composition



Source: Insight Region™ analysis of data from American Community Survey (2015-19) and VDSS

## Cost: Can families afford preschool?

In 2021, families can expect to pay \$18,000 for a year of preschool in Northern Virginia, or about \$1,500 per month. These costs vary considerably by location; while residents of Prince William County might pay \$15,000, that number increases to \$18,500 in Fairfax County and \$23,000 in Arlington.<sup>22</sup> The objectively steep cost of preschool is a reflection of the strict regulations that protect child health and safety (child-teacher ratios drive up labor costs, square footage requirements drive up real estate costs) as well as the industry's inability to outsource to less expensive markets.<sup>23</sup>

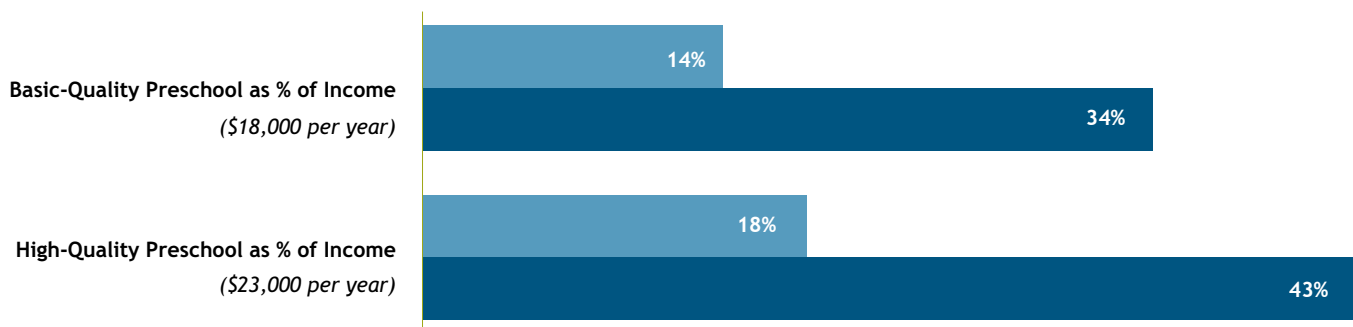
When examining affordability in the aggregate, researchers often compare the median household income for a locality against the cost of care, which is considered affordable if it does not exceed seven percent of a family's income.<sup>24</sup> In Northern Virginia, the cost of preschool is equivalent to 14 percent of the DC median family income; for a family earning at or near the federal poverty level, this rate increases to 34 percent of total income.<sup>25</sup> See **Figure 7**.

High-quality preschool in Northern Virginia generally costs more, though estimates of the actual increase over “basic care” range from \$2,000 to \$7,500 per year.<sup>26</sup> Taking the average of these estimates—\$5,000—and applying it to Northern Virginia, that would mean a cost of \$23,000 per year for high-quality preschool, just shy of \$2,000 per month. For families earning the area median income, this care would account for 18 percent of their income.

### FIGURE 7.

Estimated costs in 2021 of basic and high-quality preschool in Northern Virginia as percent of income for families earning the median income (\$129,000) versus those at or near poverty (\$53,000)

● Families earning AMI (\$129,000) ● Families earning 200 percent of federal poverty (\$53,000)



Source: University of Washington Self-Sufficiency Standard, 2021; high-quality care cost assumes \$5,000 in addition costs above base care. Northern Virginia estimates based on population-weighted average.



**Lower-income families would need to spend an astounding 43 percent of their pre-tax income to put their child in high-quality preschool.<sup>27</sup>**

In many states, the cost of care is offset by state assistance in the form of provider subsidies. Historically, the use of subsidies in Virginia has been quite low. In FY2016, the Commonwealth provided subsidies to 21,700 children, just 5 percent of the estimated 426,000 children eligible under federal criteria and 9 percent of the 235,000 children eligible under state criteria.<sup>28</sup> These rates were some of the lowest in the entire country; see **Appendix B**. Since these estimates were produced, the state has continued to serve fewer and fewer children, with the latest estimate of 18,700 served in FY2019.<sup>29</sup> Subsidy uptake varies by race-ethnicity, with Hispanic children in particular having very low rates of receipt. In early 2020, the state had a waiting list of 2,400 kids waiting to receive a subsidy.<sup>30</sup>



Low subsidy uptake in Virginia is likely the result of limits on who can receive the subsidy and where they can use it:

- **Who can receive it?** Historically, families must supply documentation that their income falls below a maximum threshold (which varies by jurisdiction); that the applicant child is a U.S. citizen or legal resident; that all custodial parents are employed, looking for work, or in school<sup>31</sup>; and that non-custodial parents who provide financial support participate in the state’s child support enforcement system. During the pandemic, the state temporarily eased some of its eligibility criteria, including increasing the income threshold and allowing parents who are not employed, looking for work, or in school to receive support. The state has also permanently stopped requiring non-custodial parents to participate in the child support enforcement system.
- **Where can they use it?** Families may only use subsidies with “approved” providers registered as state-contracted vendors. Unapproved providers—61 percent of those operating in Northern Virginia—are not required to register or to accept subsidies at a family’s request. Only five percent of licensed ECCE providers in the region are rated as high-quality *and* can accept subsidies.<sup>32</sup>

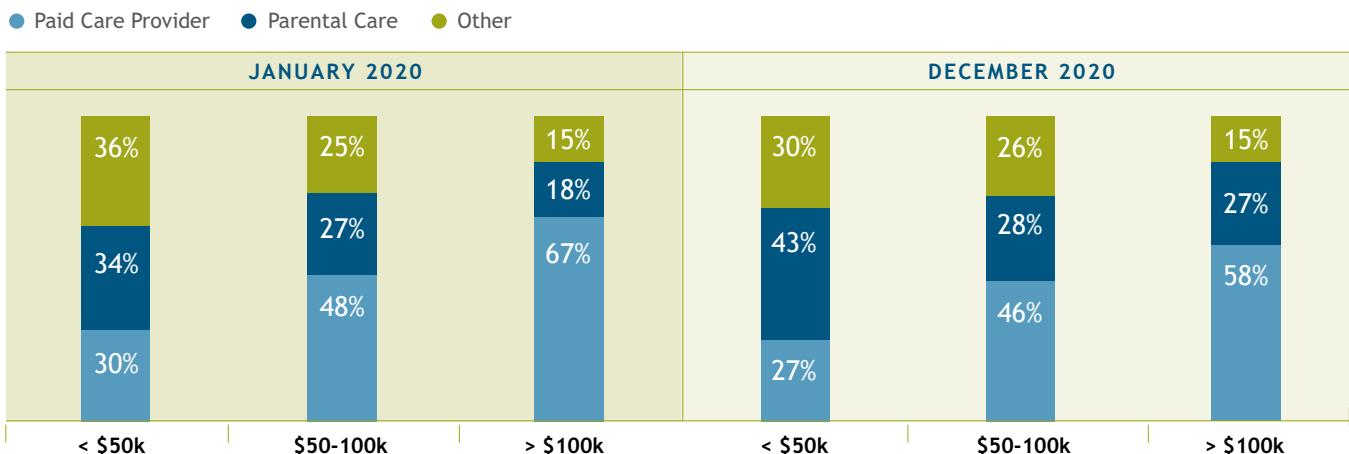
Absent government support, financially-limited families will need to select cheaper care options; research shows a strong, positive correlation between family income



and the price paid for care.<sup>33</sup> These lower prices may be achieved by opting for an unlicensed care facility, compromising on quality, or relying on relatives, friends, and neighbors. However, an increasingly common care arrangement for poor, working parents is the parents themselves. A recent survey by the Bipartisan Policy Center found that prior to the pandemic and among families *where all parents were working*, one-third of those earning less than \$50,000 also served as their young child’s primary care provider, typically achieved by alternating schedules, leaving a child alone, or multitasking during care.<sup>34</sup> During the pandemic, this rate increased to 43 percent of families earning under \$50,000. See **Figure 8**. The increased availability of virtual employment is responsible for some of these shifts, yet in families where all parents are working *outside the home*, 28 percent are also their child’s primary caregiver.

**FIGURE 8. Many working parents also serve as their young child’s primary caregiver**

Care of children among families *where all parents are working*, by income and timeframe



Source: Source: Bipartisan Policy Center, 2021

## Demand. Do families want to send their kids to preschool?

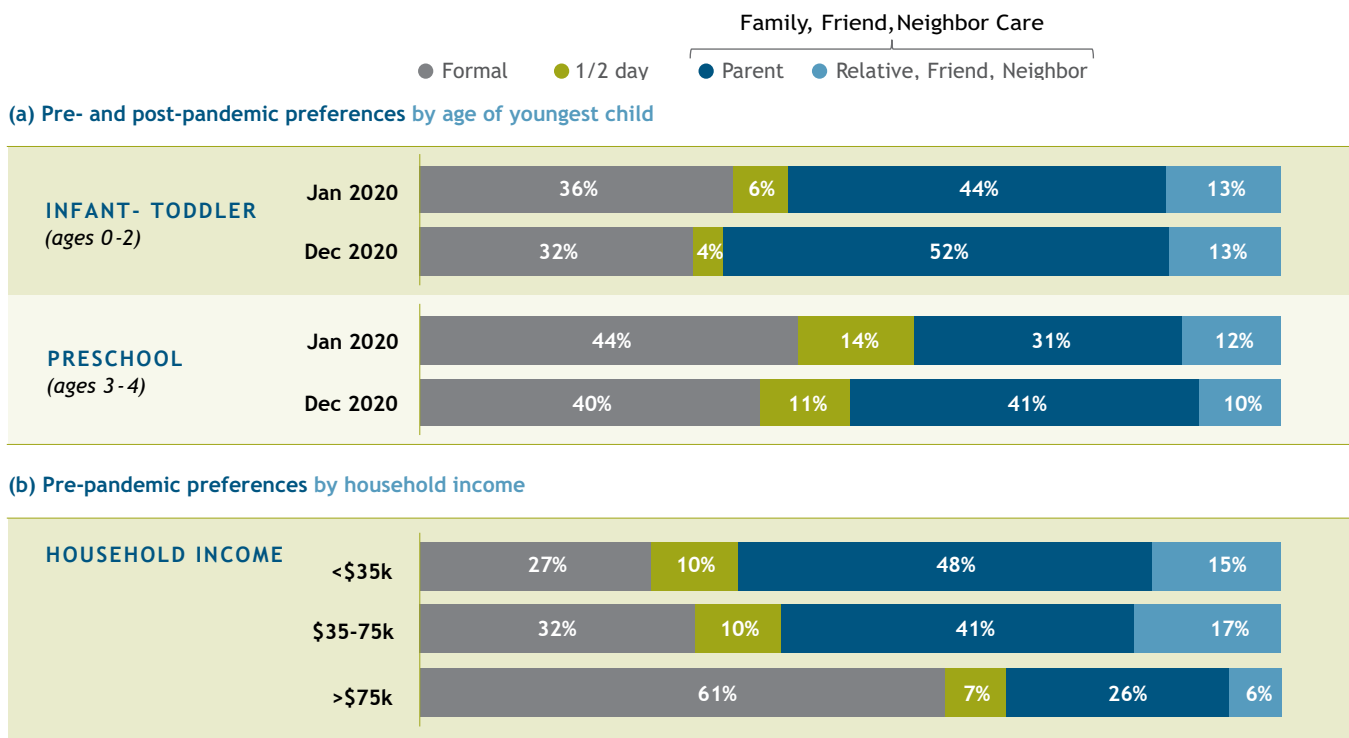
Beyond the practical concerns of *needing care* for work or study, families appear quite divided in whom they would prefer care for their children. The Bipartisan Policy Center recently commissioned a national survey that asked parents of young children about their ideal childcare arrangement, assuming all options were equally affordable and accessible.<sup>35</sup> Prior to the pandemic and among parents of preschool-age children, 44 percent preferred a formal childcare provider, 43 percent preferred family, friend, or neighbor care, and 14 percent preferred a hybrid (half-day).

The pandemic has rendered all arrangements less preferable to parental care; in December 2020, 41 percent of parents of preschool-age children preferred to be the primary care provider, compared to 31 percent just 11 months prior. See **Figure 9a**. Note that parents of infants and toddlers showed a strong preference for family, friend, neighbor care before (57 percent) and during (65 percent) the pandemic.<sup>36</sup>



The same survey revealed that parental preferences vary substantially by household income (see **Figure 9b**). Among parents of young children (under age 5), 61 percent in households earning over \$75,000 preferred formal care, compared to 32 percent in households earning \$35,000 to \$75,000, and 27 percent in households earning less than \$35,000. These results did not control for parental employment, which may explain these findings (parents may earn less money because they have chosen to care for children instead of working; parents with lower wages may also have lower levels of labor force attachment). The survey found virtually no variation in the preferences expressed by parental race/ethnicity.<sup>37</sup>

**FIGURE 9. Parents' ideal care arrangement for their young children**



Source: Insight Region™ analysis of data from Bipartisan Policy Center, 2021

# Coming Together Around Solutions

In Northern Virginia, Black and Brown students and those from less affluent families are at least two grade levels behind their peers, an opportunity gap that likely formed before children ever set foot into public school. High-quality preschool has the potential to narrow this gap, but programs must be accessible, affordable, and desirable to realize this promise.

## 1. Location. Increase the availability of high-quality preschool in Northern Virginia

Boosting preschool enrollment among kids at or near poverty is not enough to narrow the opportunity gap; these children must enroll in a high-quality program. Unfortunately, just 10 percent of the region's 125,000 ECCE slots are considered high-quality. Most slots (87 percent) are of unknown quality.

### To expand the availability and quality of preschool offerings:

- a. Encourage provider participation in Virginia's new unified early childhood system by educating donors and parents about the state's new quality standards.
- b. Focus efforts to expand and enhance programs on those located in one of the region's childcare deserts.
- c. Support providers in understanding standards and improving the quality of programs offered, such as purchasing materials and curricula and providing additional training to teachers.
- d. Better understand the role of local school systems in supporting high-quality ECCE, particularly as the state moves to a unified system.

## 2. Cost. Fill in the gap between what families can pay and what providers must charge

Preschool is expensive in Northern Virginia, but high-quality preschool is prohibitively costly for many families. At an estimated \$23,000 per year, a family at or near poverty would need to spend 43 percent of their income to enroll a child in high-quality preschool.

### To help lower-income families pay for high-quality preschool:

- a. Create and encourage the development of scholarships / private subsidies / employer benefits that families can use to enroll their child in a high-quality preschool.
- b. Monitor ARPA distribution to ECCE providers, schools, and parts of the region in need of resources.
- c. Support quality among home-based care providers and others with lower overhead costs.
- d. Help all parents understand and navigate the state's childcare subsidy system.

## 3. Demand. Support families who prefer family, friend, and neighbor care

Even if preschool were universally affordable and accessible, not every family would want it. In fact, 51 percent of today's parents—still coping with the uncertainty of the ongoing pandemic—feel that family, friend, and neighborhood care is the best option for their preschool-age child.

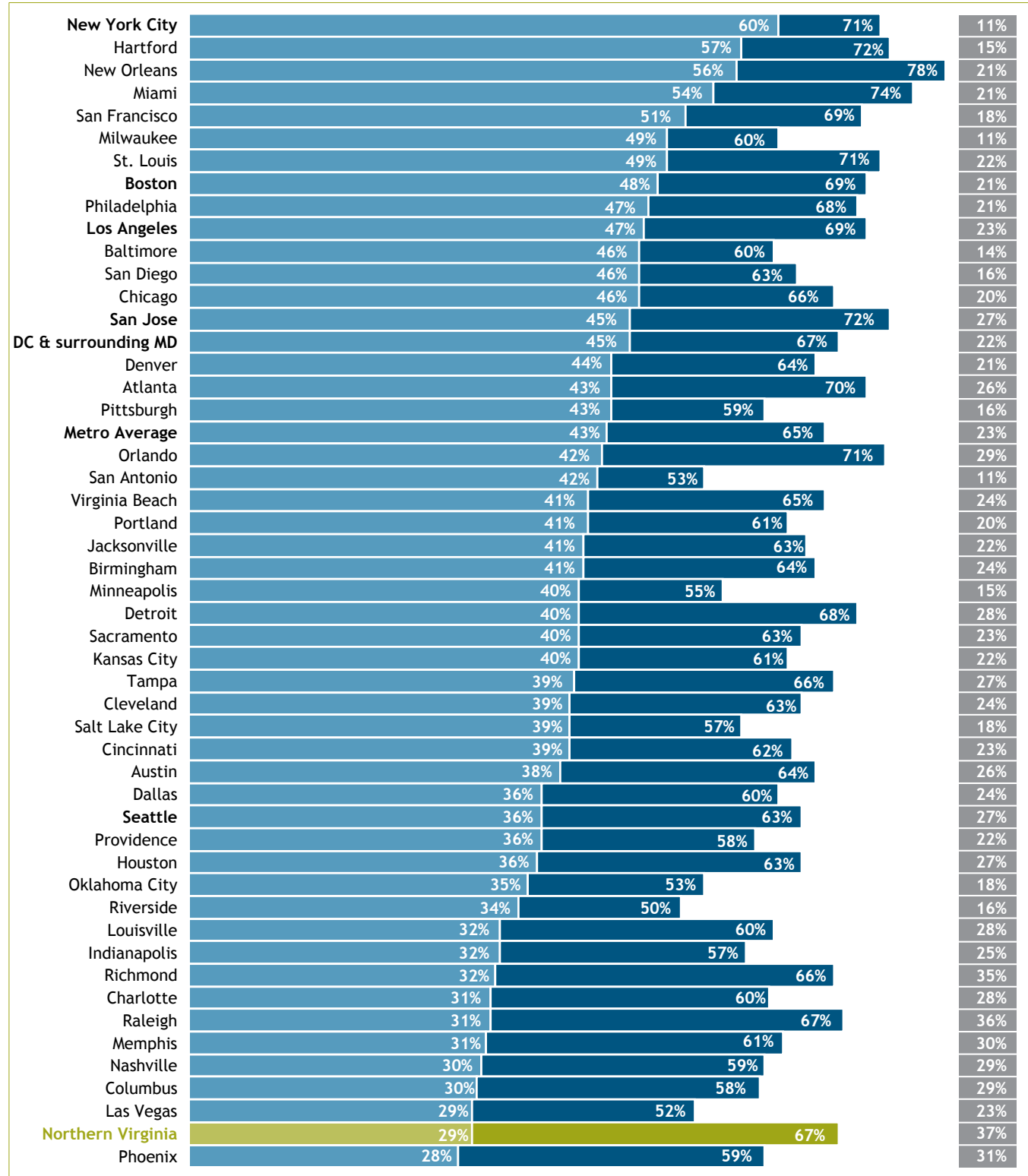
### To support families that want alternatives to formal preschool:

- a. Provide materials to parents, relatives, and other informal providers on how to emulate a high-quality preschool at home.
- b. Create and encourage the development of private subsidies / employer benefits that families can use to offset the (opportunity) cost of care provided by parents, relatives, friends, and neighbors.
- c. Expand programs for children who did not attend preschool to "catch up" before entering kindergarten.
- d. Conduct further research on parental preferences for preschool in Northern Virginia and how needs/wants vary by family structure, demographics, and other factors.

## Appendix A.

### Preschool enrollment in top 50 metro areas and NOVA jurisdictions by poverty level

● At or near poverty ● Higher-income ● Income Disparity



Source: Insight Region™ analysis of IPUMS, 2015-19; "DC & surrounding MD" includes DC, Frederick, Montgomery, Prince George's, Charles, and Calvert counties.

## Appendix B.

### Subsidy receipt by state

	Average # kids receiving a subsidy each month (US Office of the Administration for Children and Families)					Percent of eligible kids who received a subsidy in FY16 (CLASP estimate based on ACS data)	
	FY2016	FY2017	FY2018	FY2019	Chg FY16-FY19	Based on federal criteria	Based on state criteria
<b>NATIONAL</b>	<b>1,366,300</b>	<b>1,307,200</b>	<b>1,344,200</b>	<b>1,396,500</b>	<b>2.2%</b>	<b>7.8%</b>	<b>12.4%</b>
<b>Virginia rank</b>	<b>21</b>	<b>22</b>	<b>24</b>	<b>24</b>	<b>38</b>	<b>45</b>	<b>40</b>
Alabama	27,300	28,500	27,900	33,400	22.3%	10.6%	19.5%
Alaska	3,500	3,100	3,000	3,300	-5.7%	8.0%	8.2%
Arizona	22,900	24,600	27,100	28,900	26.2%	6.1%	9.8%
Arkansas	6,500	5,200	4,800	8,400	29.2%	4.0%	6.7%
California	104,700	93,200	112,000	121,000	15.6%	5.0%	7.0%
Colorado	22,900	22,400	20,400	17,800	-22.3%	7.7%	12.2%
Connecticut	12,800	17,300	16,200	16,400	28.1%	7.1%	11.2%
Delaware	7,600	7,600	7,300	6,200	-18.4%	13.9%	22.3%
DC	1,100	1,200	1,100	1,500	36.4%	3.0%	4.0%
Florida	82,300	88,000	99,100	98,600	19.8%	7.8%	13.3%
Georgia	53,900	50,500	24,600	25,500	-52.7%	8.5%	14.8%
Hawaii	5,800	4,700	3,900	3,000	-48.3%	10.2%	14.2%
Idaho	5,900	6,200	7,100	6,700	13.6%	6.4%	13.8%
Illinois	40,600	43,500	44,200	54,200	33.5%	5.5%	10.2%
Indiana	32,700	35,300	25,700	29,200	-10.7%	8.7%	21.5%
Iowa	17,100	17,200	18,100	17,800	4.1%	9.2%	24.0%
Kansas	12,400	11,600	10,000	10,300	-16.9%	6.1%	10.6%
Kentucky	14,200	15,800	18,000	20,100	41.5%	6.4%	10.8%
Louisiana	15,600	19,200	17,400	16,700	7.1%	5.8%	8.1%
Maine	3,400	3,800	4,100	4,700	38.2%	5.9%	6.0%
Maryland	14,600	13,600	13,700	18,300	25.3%	4.1%	12.2%
Massachusetts	28,100	28,800	26,900	29,200	3.9%	8.7%	15.4%
Michigan	29,400	34,700	39,700	38,100	29.6%	5.7%	13.9%
Minnesota	20,000	18,100	20,400	20,300	1.5%	5.5%	11.9%
Mississippi	18,000	17,000	16,400	20,900	16.1%	10.8%	12.8%
Missouri	37,900	37,600	35,900	33,000	-12.9%	11.0%	23.3%
Montana	3,500	3,700	3,700	3,600	2.9%	6.5%	12.0%
Nebraska	10,200	10,000	9,500	9,300	-8.8%	7.8%	23.6%
Nevada	6,600	7,600	8,800	9,700	47.0%	3.8%	7.8%
New Hampshire	5,500	5,200	4,900	4,500	-18.2%	9.1%	15.3%
New Jersey	42,800	43,300	44,100	45,300	5.8%	8.9%	16.6%
New Mexico	16,800	17,300	19,500	19,300	14.9%	14.8%	16.1%
New York	120,400	89,200	102,200	89,400	-25.7%	12.6%	19.2%
North Carolina	60,700	47,600	48,500	49,900	-17.8%	10.4%	13.7%
North Dakota	3,100	2,500	2,700	2,700	-12.9%	6.8%	7.1%
Ohio	47,700	48,900	50,300	48,200	1.0%	7.4%	16.2%
Oklahoma	23,500	24,500	27,700	28,400	20.9%	10.2%	14.8%
Oregon	15,100	14,700	13,400	13,000	-13.9%	7.2%	11.6%
Pennsylvania	94,300	92,300	99,700	99,300	5.3%	14.2%	23.2%
Rhode Island	6,300	6,400	6,500	4,200	-33.3%	13.3%	23.3%
South Carolina	11,200	12,400	11,600	11,000	-1.8%	4.0%	7.2%
South Dakota	3,700	3,600	3,600	3,600	-2.7%	6.2%	10.1%
Tennessee	20,000	21,100	22,400	22,400	12.0%	5.6%	8.7%
Texas	108,100	102,200	115,000	145,600	34.7%	6.1%	7.5%
Utah	11,600	11,800	12,100	12,400	6.9%	5.7%	13.4%
Vermont	4,300	3,200	3,300	2,700	-37.2%	12.3%	23.9%
Virginia	21,700	18,900	18,000	18,700	-13.8%	5.1%	9.2%
Washington	46,800	41,900	38,200	34,000	-27.4%	12.9%	22.4%
West Virginia	7,800	7,100	8,300	9,600	23.1%	9.4%	14.6%
Wisconsin	22,100	16,700	16,500	17,900	-19.0%	6.4%	11.6%
Wyoming	3,000	3,000	3,000	2,900	-3.3%	7.4%	17.0%

Source: Ullrich, Schmit, & Cosse, 2019; Office of Administration for Children and Families

## Appendix C. End Notes

- For a useful summary of research on the opportunity gap, see Porter, A. nd. [Rethinking the Achievement Gap](#). University of Pennsylvania Graduate School of Education.
- Insight Region™ created a population-weighted average across the five largest school districts in Northern Virginia, based on data from Reardon, S. F., Ho, A. D., Shear, B. R., Fahle, E. M., Kalogrides, D., Jang, H., & Chavez, B. 2021. [Stanford Education Data Archive \(Version 4.1\)](#).
- For a recent summary of the latest research on preschool effectiveness, see Meloy, B., Gardner, M., & Darling-Hammond, L. 2019. [Untangling the Evidence of Preschool Effectiveness](#). The Learning Policy Institute.
- For an overview of the returns on investment of high-quality early childhood education, see The Center For High Impact Philanthropy. 2015. [High Return on Investment](#). For a thorough (though somewhat dated) review of the economic benefits of investing in early education, see Karoly, L.A., Kilburn, M.R., & Cannon, J.S. 2005. [Early Childhood Interventions: Proven Results, Future Promise](#). RAND Corporation. The Washington State Institute of Public Policy also produces regular, digestible reports on benefit-cost analysis across policy areas, including ECE; see <https://www.wsipp.wa.gov/BenefitCost>.
- For a thorough review of the role of childcare in states' economies, see RegionTrack, Inc. nd. [Child Care in State Economies: 2019 Update](#). Committee for Economic Development of The Conference Board (CED).
- Sasser Modestino, A., Ladge, J.J. Swartz, A., & Lincoln, A. 2021. [Childcare Is a Business Issue](#). Harvard Business Review.
- See Murano, D., Sawyer, J.E., & Lipnevich, A.A. 2020. [A Meta-Analytic Review of Preschool Social and Emotional Learning Interventions](#). Learning Accelerator Research Paper.
- Research that compares higher-quality to lower-quality programs is quite rare. A recent evaluation of Head Start found that variation in program quality explained a substantial proportion of the variation in program effectiveness See Walters, C. 2014. Inputs in the production of early childhood human capital: Evidence from Head Start. *American Economic Journal: Applied Economics*, 7(4), 76-102. c.f. Meloy, Gardner, & Darling-Hammond, 2019. Also see Early Childhood Action Collective. 2016. [Does low-quality ECE lead to negative outcomes for children?](#)
- Research suggests that formal, classroom-based preschool produces better outcomes than home-based care. See Booren, L. 2016. [Children in preschools receive higher-quality care than those in home-based care, study finds](#).
- See [https://www.virginiaquality.com/sites/default/files/VA\\_Quality\\_Standards\\_0.pdf](https://www.virginiaquality.com/sites/default/files/VA_Quality_Standards_0.pdf).
- For a full list of state-approved programs, see <https://www.doe.virginia.gov/early-childhood/curriculum/index.shtml>.
- Unless otherwise noted, all data in this brief from 2015-19. Note that, nationally, an additional seven percent of children are enrolled in non-relative home care. Also, there may be issues with underreporting preschool enrollment if parents do not understand the definition provided at the time of survey collection. Comparing Northern Virginia rates against national rates by income and race-ethnicity may account for some of these differences in self-reporting.
- See National Institute for Early Education Research. n.d. [High-Quality Preschool: Why We Need It and What It Looks Like](#). Reading Rockets.
- Data collected through scraping of Virginia Department of Social Services website.
- Whitehurst, G. J. 2018. [What is the market price of daycare and preschool?](#) Brookings Institution.
- Based on data scraped from the Virginia Department of Social Services website. Note that in addition to the 1,924 licensed providers operating in Northern Virginia, there are 567 additional providers that are unlicensed and do not report their care capacity. These providers are not required to undergo background checks, training/orientation, or health and safety requirements; and only minimal Code of Virginia requirements apply.
- The most complete source of national data on childcare availability is the Center for American Progress, whose researchers worked in concert with the University of Minnesota to identify childcare “deserts” (that is, fewer than 33 spots for every 100 children). The center’s data explorer allows users to view childcare abundance and scarcity for any geography, and compare categories against various demographic groups, including poverty. See [childcaredeserts.org](#).
- Malik, R., Hamm, K., Adamu, M., & Morrissey, T. 2016. [Child-care Deserts: An Analysis of Childcare Centers by ZIP Code in 8 States](#). Center for American Progress.
- Workman, S. 2021. [The True Cost of High-Quality Childcare Across the United States](#). The Center for American Progress.
- Insight Region™ analysis of data from the Quarterly Census of Employment and Wages. Also see Carrazana, C. 2021. [About 700,000 parents with young kids left the workforce in 2020. For many, loss of child care was to blame](#). The 19th news.
- Data for SOC code 25-2011 from Bureau of Labor Statistics. nd. [May 2020 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates: Washington-Arlington-Alexandria, DC-VA-MD-WV](#).

22. University of Washington Center for Women’s Welfare. Nd. [Self-Sufficiency Standard for Virginia, 2021](#)
23. Thompson, D. 2019. [Why childcare is so ridiculously expensive](#). The Atlantic, 11/26/2019
24. U.S. Department of Health and Human Services. 2016. 45 CFR Part 98. Federal Register, 81 (190). For a deeper discussion of this threshold, see Smith, L., Suenaga, M., & Campbell, M. 2020. Demystifying Child Care Affordability. Bipartisan Policy Center. <https://bipartisanpolicy.org/blog/demystifying-child-care-affordability/>
25. The DC area median income in 2021 was \$129,000. The threshold for 200 percent of federal poverty (“lower-income”) was \$53,000 in 2021.
26. The Center for American Progress estimated that high-quality childcare would cost \$7,500 more than base care in Virginia. A 2014-15 analysis by the Virginia Department of Social Services found that subsidy rates would need to increase by 6.5% - 28.1% to address the cost of quality and maintain provider profitability—or between \$2,000 and \$6,000 in Northern Virginia. See Workman, 2021 and Theis, M. nd. [Virginia’s Child Care Subsidy Program: 2018 Market Rate Survey Report](#). Virginia Department of Social Services.
27. Readers may find it interesting to examine how different elements of quality affect cost at <https://www.costofchildcare.org/>
28. Ullrich, R. Schmit, S., & Cosse, R. 2019. [Inequitable Access to Child Care Subsidies](#). CLASP. For self-reported subsidy use, see Morning Consult. 2021. [Child Care Market Survey Analysis](#). Prepared for the Bipartisan Policy Center. Researchers also note that subsidy policies may create barriers for parents whose care needs fluctuate or take place outside standard operating hours.
29. Data on subsidy use by state can be found at Office of the Administration for Children and Families. [nd]. [Child Care and Development Fund Statistics](#).
30. Schulman, K. 2021. [On The Precipice: State Child Care Assistance Policies 2020](#). National Women’s Law Center.
31. Exceptions include receiving child protective services or participating in an assigned activity through the Virginia Initiative for Education and Work or Supplemental Nutrition Assistance Program Employment and Training. Some of these restrictions were lifted temporary during the pandemic to increase participation.
32. Insight Region™ analysis of VDSS data
33. Whitehurst, 2018
34. Morning Consult, 2021
35. Morning Consult, 2021
36. It is interesting to note that most families report utilizing their ideal childcare arrangement, with some variation by income level (72 percent of families with incomes over \$100,000 and 64 percent of families at the next income brackets down).
37. This finding comes in sharp contrast to reported research that has found that Hispanic families prefer parental care for their children and suggests that the variation observed between racial-ethnic groups might be more a function of access, affordability, and income, versus purely cultural preferences. For more resources on cultural care preferences, see for example, Wang, W. Mooney Suarez, M., & Brown, P.T. 2021. [Familia Sí, Guardería No: Hispanics Least Likely to Prefer and Use Paid Child Care](#). Institute for Family Studies; and Crosby, D., Mendez, J., Guzman, L., & López, M. 2016. [Hispanic Children’s Participation in Early Care and Education: Type of Care by Household Nativity Status, Race/Ethnicity, and Child Age](#). National Research on Hispanic Children and Families.

# About the Community Foundation for Northern Virginia

The Community Foundation for Northern Virginia is a trusted public charity that grows philanthropy to respond to need, seed innovation and lead and convene the community. Comprised of donor advised funds, permanent funds, giving circles, and other charitable endowments, the Community Foundation works to address some of the most complex civic and social challenges we face through community dialogue and strategic investments.

In the last two years, the Community Foundation awarded \$20 million in grants and scholarships and currently reports \$89 million in managed philanthropic assets.

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## About Insight Region™

Launched in 2020, Insight Region™ is a research center at the Community Foundation for Northern Virginia that analyzes local trends, convenes civic leaders, and promotes civic and social action. It is a growing hub for reliable, well-researched, and actionable data and analyses on issues critical to Northern Virginia.

In the last two years, Insight Region™ is focused on understanding and promoting Inclusive Prosperity – increasing self-sufficiency, expanding economic opportunity, and forging pathways for long-term movements out of poverty for all of Northern Virginia’s residents.

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