Early Investment, a Lifetime of Returns:

Articulating the Value of Early Childhood Investments in Virginia

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Executive Summary

Leveraging temporary federal pandemic funds, Virginia substantially expanded access to early childhood care and education services (ECCE) in response to increased family demand since state fiscal year 2020 (SFY20). Virginia increased state and federal spending on ECCE year-over-year to target specific needs within the child care system and respond to increasing demand, culminating in an additional $309 million for ECCE in state fiscal year 2023 (SFY23) compared to SFY19. This investment supports both industry stabilization and program enhancement, which provides parents with ***choice*** to select care that best meets family needs. Simultaneously, the investment increases the ***availability***, ***affordability***, and ***quality*** of ECCE for families through investment in quality improvement and enhancement of two state programs, the Child Care Subsidy Program and the Mixed Delivery Program. Both programs provide free or subsidized child care to families with low-to-moderate incomes.

Virginia's SFY23 investment expands access to affordable, high-quality child care, but the vast majority of the new funding—$275 million—comes from federal sources that will begin expiring in 2023. To maintain the same level of access to affordable, high-quality child care for Virginia families, Virginia will need to continue this funding. As demand for affordable, high-quality child care continues to increase in tandem with Virginia's growing economy, additional investment is needed to continue meeting the growing child care needs of Virginia families.

This report describes the value of Virginia's new ECCE investments. We articulate how ECCE impacts children under age 5 and their families by identifying the research-based outcomes associated with high-quality ECCE and quantify the children and families who could reach each outcome as a result of Virginia's investment. We then identify the associated economic benefits and cost savings. Virginia's investment yields substantial returns to children, families, and the state, resulting in increased parental employment and family earnings, reduced poverty and child maltreatment, and a lifetime of improved educational achievement for children. These impacts will lead to hundreds of millions of dollars in state economic impacts for years to come.

Affordable, High-Quality ECCE Changes Lives

Children's earliest years bring the greatest vulnerability to adverse experiences, as well as the greatest opportunity for intervention. Healthy environments—with, for example, adequate material resources, positive parent-child relationships, and high-quality early learning opportunities—promote healthy brain and body development, supporting a lifetime of wellbeing and educational success.

Affordable, high-quality ECCE is a tool states can leverage to drive positive outcomes for children and families across the life course. When ECCE is affordable, parents can work, increasing family resources and reducing poverty, material deprivation, and family stress. When ECCE is high-quality, children spend the time that their parents are working in safe, nurturing, and responsive environments that promote learning and development.

The additional $309 million that Virginia invested in ECCE in SFY23 provides affordable, high-quality child care to an additional 11,151 children under the age of 5, and 3,939 children age 5 and older. The funding increase also raises the quality of child care for the over 60,000 children who receive affordable child care through state and federally funded programs such as the Virginia Preschool Initiative, Head Start, Early Head Start, CCSP, or Mixed Delivery. Based on the available research, we estimate the impact of a portion of this investment—the impact of providing high-quality, affordable child care to 11,151 new children under age 5. We estimate the investment will result in 10,710 newly employed mothers of children under the age of 5, lifting over 5,500 children under age

5 out of poverty. Among participating families in which the parents already work, reduced child care expenses will increase family disposable income by an average of $2,466 per child.

A Year of Investment, a Lifetime of Returns

Virginia's SFY23 investment launches a cascade of positive impacts that accrue across a child's life. Beyond the benefits to children and families, affordable high-quality child care also benefits the economy. In the next year alone, increased maternal employment and disposable income will generate a return of at least **$364.3 million from increased family earnings and disposable income.** At least **$30.4 million** of this new income will go directly back to the state in the form of new state tax revenue.

Further, we estimate that the combination of increased family resources and access to high-quality early learning opportunities will:

- improve child and parent wellbeing,
- reduce child maltreatment,
- prepare an additional 2,007 children for kindergarten, so they start ready to succeed,
- prevent 903 children from needing special education services,
- improve academic achievement throughout school, especially math and reading skills,
- prevent 926 children from experiencing grade retention, and
- lead to 1,271 more children graduating from high school.

Over the coming years, the additional SFY23 investment will return **$15.9-$63.1 million in cost savings** from prevention of grade retention and special education receipt, as well as **$397.8 million in economic benefit** from increased high school graduation. Beyond high school, we expect the 11,151 children who receive high-quality ECCE to be more likely to graduate college and have higher income as adults.

The ~5,500 children lifted out of poverty because of increased maternal employment and family earnings will experience better mental and physical health for the rest of their lives, at huge cost savings to the state.

In total, the additional $309 million invested in ECCE in SFY23 will generate **at least $778.0 million** in combined cost savings and economic benefits over the lifetime of the 11,151 children under 5 who receive care because of the investment. We expect this is an underestimate, because it does not include the enormous cost savings derived from poverty reduction and child maltreatment, or the economic impact of the investment on school-age children. Virginia's investment also has the potential to help stabilize its child care industry at huge cost savings to the state—inadequate access to infant and toddler care is estimated to cost the state of Virginia more than $3.1 billion per year[1]—and those economic impacts are not included in the estimated return on investment.

The additional $309 million Virginia invested in SFY23 will generate lifelong benefits for children, families, and the economy, and reflects only a portion of Virginia's full investment in ECCE. Investing in ECCE is an investment in healthy child development. Maintaining and strengthening this investment would support countless children and families to thrive across the life course, generating economic benefits for decades to come.

Summary of Estimated Benefits and Cost Savings from Virginia's Additional SFY23 Investments in ECCE

	EXPECTED OUTCOME	ESTIMATED ECONOMIC IMPACT
Maternal employment	10,710 more employed mothers	$324.6 - $441.3 million more in annual income
Children in poverty	Between 5,528 and 5,757 children under age 5 lifted out of poverty	Lifetime cost savings of $1.8 million per child permanently lifted out of poverty*
Disposable income	Families have more disposable income	$39.7 million per year more disposable income
State tax revenue	More sales and income tax revenue	$30.4 - $41.7 million more in state tax revenue
Health and wellbeing	Better child and family wellbeing	*
Child maltreatment	Lower rates of abuse and neglect	Lifetime of cost savings of $830,928 per child prevented from experiencing maltreatment*
School readiness	2,007 more children enter school ready to succeed	*
Special education receipt	903 fewer children receive special education services	$3.9 million in cost savings *per year*
Chronic absenteeism	Lower rates of chronic absenteeism	*
Academic achievement	Better reading and math skills	*
Grade retention	926 fewer children retained a grade	$12.0 million in cost savings
High school graduation	1,271 more children graduate high school	$397.8 million in societal benefit
College graduation	More children graduate from college	*
Income at age 26	Higher income at age 26 for individuals who attended high-quality ECCE	Positive impact on state economy from increased tax revenue*
Child care industry stabilization	More child care programs remain open, lower educator turnover, more parents who need care can access it	Positive impact on state businesses and increased state tax revenue*
Child care for school-age children	3,939 children 5 and older receive access to high-quality child care	Positive impact on families, children, and economy*

Note: *Reliable estimate for total cost savings/benefit cannot be calculated; May be missing information for either number of individuals impacted or cost savings/benefit per individual.

CHAPTER 1:

Background and Purpose of the Report

Child care is an essential resource for children, families, and the economy. Without adequate child care, parents cannot join the workforce, they miss work, they turn down promotions, and they quit their jobs. Lack of access to reliable and consistent child care limits family resources and costs the economy billions of dollars in lost earnings, productivity, and revenue every year. High-quality child care not only enables parents to work, but also provides children with nurturing and responsive care that prepares children for school and promotes lifelong learning and healthy development.

Early childhood care and education (ECCE) is a powerful tool states can use to positively impact children and families across the life course while also supporting the state economy. **State investments in early childhood care and education then, dictate how many children and families will benefit, what the quality of that education will be, and ultimately determine the magnitude of the impact on children, families, and the economy.**

The federal government provided states with emergency child care funding in response to the COVID-19 pandemic; a crisis which exacerbated longstanding issues and left the child care industry on the brink of collapse. Virginia leveraged these temporary federal dollars to thoughtfully stabilize the industry and make child care more accessible to families. Virginia investments included significant enhancements of two state programs, (1) the Child Care Subsidy Program (CCSP), which helps eligible families pay for private child care, and (2) the Mixed Delivery Program, a recently-expanded and enhanced program which provides free, high-quality ECCE in private settings.

Investments in CCSP and Mixed Delivery expanded the availability of affordable, high-quality child care for children and families—an average of 11,151 more children under age 5 and 3,939 children age 5 and older received free or subsidized child care each month in state fiscal year 2023 (SFY23) compared to fiscal year 2019, before the COVID-19 pandemic. Additionally, the SFY23 investment includes funding for quality improvement and teacher retention, raising the quality of child care of all publicly funded child care programs. Access to high-quality, affordable child care enables parents to go to work, increases family resources, and provides high-quality early learning opportunities for children, setting them up for better outcomes throughout the rest of their life.

Virginia invested a total of $309 million in new funding toward CCSP and Mixed Delivery in SFY23, but $275 million of that new investment uses temporary pandemic funds, which will begin to expire in 2023. To continue meeting family demand for affordable, high-quality child care, Virginia will need to use state funding to maintain the program changes and enhancements that have occurred over the last few years. The cost of maintaining an investment of this magnitude is high, but the impact of funding affordable, high-quality child care lasts well beyond the time those children spend in care. Instead, the effects ripple out across a child's life: increasing family resources and the potential for family economic growth, preparing children for school, and setting them on a trajectory for success across the rest of their education and beyond.

This report estimates the value of that investment for children under the age of 5 and their families, and the potential return on investment that Virginia might expect from the additional $309 million invested in early learning in SFY23. Although the full $309 million investment serves children under the age of 13, we focus on the impact of this investment on children under the age of 5, where we expect benefits to be greatest. The Virginia Early Childhood Foundation (VECF) contracted with the Prenatal-to-3 Policy Impact Center at Vanderbilt University to conduct this analysis.

In this report, we detail the new investments made by Virginia and articulate the pathways through which these investments impact children and families. Using those pathways as a guide, we then estimate potential outcomes for families, children under the age of 5, and the state economy from the additional investment made in early childhood care and education in SFY23, and provide guidance to support the sustained impacts of these investments.

We find that the additional $309 million Virginia invested in ECCE in SFY23—which provides affordable, high-quality child care to an additional 11,151 children under age 5—drives a wide range of impacts for children and families, employing an additional 10,710 mothers, lifting more than 5,500 children under age 5 out of poverty, and improving educational outcomes from school readiness through high school graduation. These positive outcomes have tangible economic benefits and cost savings, contributing millions of dollars to annual tax revenue, and avoiding millions of dollars in costs related to child poverty, child maltreatment, special education, and grade retention. The investment made in children in SFY23 will pay dividends for the rest of these children's lives, and by continuing to maintain this investment in the future, Virginia can help children, families, and its economy thrive.

CHAPTER 2:

Our Approach

To estimate the impact of Virginia's new investments in early childhood care and education (ECCE) on children under the age of 5, their families, and the state, the Prenatal-to-3 Policy Impact Center thoroughly reviewed the literature, and then used evidence from rigorous studies to develop a theory of change that guides the calculations of the potential impact of child care investments on children and families in Virginia.

Step 1: Conduct a Literature Review

We conducted a comprehensive review of the literature to identify the potential effects of Virginia's investments in early childhood care and education. Virginia's investments increase availability, affordability, and quality of Virginia child care. Therefore, our review of the literature included research conducted on the impacts of child care subsidies, as well as on the impacts of participation in high-quality early childhood care and education.

Other estimates for the return on investment of ECCE exist, but these estimates often rely on outdated studies and fail to consider holistically all of the different aspects that early childhood care and education can influence beyond just children's readiness for school. By contrast, we broaden the scope of our literature review to consider not only the impact of high-quality early childhood care and education on child outcomes, but also the impacts of maternal employment and reduced poverty which result from access to affordable child care.

Many studies of high-quality early childhood care and education rely on preschool age children. When possible, we use evidence that includes data from infants, toddlers, and preschool-aged children to inform our estimates. However, when only evidence from preschool aged children is available, we use data from those ages to guide our theory and discussion around the effect of high-quality ECCE on children under age 5, although the true impact on infants and toddlers may be somewhat different.

Step 2: Develop the Theory of Change

Often, the impacts of early childhood care and education are considered in isolation from one another, such as considering the direct effect of attending child care on academic performance, without considering the compounding effect of a parent also being able to work and generate new income for the family. By broadly considering the full system of positive impacts supported by the literature and the cascade of positive impacts for a family—each one bringing subsequent benefits—and considering how these individual family impacts lead to substantial returns on investment to the state, we can realize the full impact of investments in early childhood care and education.

Using the literature as a guide, we developed a theory of change that demonstrates how increased availability of affordable, high-quality ECCE impacts children across the life course. Importantly, when identifying the network of outcomes for this report, we focus on outcomes with a measurable effect that can be linked directly back to access to affordable, high-quality early childhood care and education. Early intervention into family resources may generate a host of additional outcomes linked to health and wellbeing, economic security, housing security, and more, but for the purposes of this report we limit the scope of our evaluation only to measurable effects that result from access to affordable, high-quality ECCE.

Step 3: Estimate and Describe Outcomes

Using the theory of change as a guide, we then estimate and describe outcomes for children and families in Virginia that derive from the additional investments put toward the Child Care Subsidy Program (CCSP) and Mixed Delivery Program in SFY23 ($520.4 million) compared to SFY19 ($211.0 million). The total additional investment made in SFY23 is $309 million, which provides affordable, high-quality child care to an additional 15,090 children ages 0-12 years, 11,151 of whom are under the age of 5.

Although widely cited estimates of the return on investment for participation in high-quality ECCE exist, these estimates often rely on outdated research and fail to consider the broader potential effects of access to child care on the state and economy. For this report, we explore the potential for targeted policy and program changes, paired with sufficient funding, to drive change within a specific state context.

We discuss potential outcomes that derive from Virginia's investments in three ways:

» **Estimates:** When the evidence is both rigorous and broadly applicable (e.g., using nationally representative samples or meta-analyses of multiple studies/early childhood education programs) we make specific estimates, based on the Virginia context using data from the American Community Survey and relevant state data (e.g., Virginia tax code, cost per-pupil for Virginia public schools, etc.). Detailed methods for our calculations can be found in Appendix A.

» **Statewide fiscal impact:** When there is also a reliable source for cost savings or economic benefit, we pair our estimates with an estimated fiscal impact on the state. If there is not a reliable source for cost savings or economic benefit, we talk generally about the potential fiscal impact on the state.

» **Narrative discussion:** When the literature available is narrower in scope (e.g., about the effects of a specific high-quality child care program or state context or using a specific assessment tool), relies on small sample sizes, or when findings across the literature are mixed, we describe the potential impacts of ECCE investments more broadly.

CHAPTER 3:

The Virginia Child Care Context

Motivation for Investment: Issues in the Virginia Child Care Industry

Across the United States, the child care industry was stressed almost to the breaking point during the COVID-19 pandemic. In Virginia, almost 40 percent of child care centers closed temporarily in 2020.[2,3] The COVID-19 pandemic represented a time of closures, new safety requirements and needs, staff shortages, and widespread stress and hardship for the child care industry. As part of the federal government's emergency response, the Coronavirus Aid, Relief, and Economic Security (CARES) Act provided state pandemic funding, approximately $70 million of which went to child care stabilization in Virginia. The Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA) provided an additional $10 billion in Child Care and Development Fund (CCDF) funding, and the American Rescue Plan Act (ARPA) provided an additional $24 billion in stabilization grants to states intended to support the child care industry throughout the COVID-19 pandemic.[4,5,6] States disbursed CARES, CRRSA, and ARPA relief money with considerable discretion to use the funds in the way that best served their state.

The COVID-19 pandemic exacerbated the issues facing Virginia's child care industry, but those issues did not start with the pandemic. In Virginia, a portion of the federal pandemic funds went to emergency stabilization measures, but Virginia also used this influx of federal funds as an opportunity to thoughtfully invest resources into efforts with the potential to provide long-term industry stabilization while also expanding access to affordable high-quality child care and providing parents with greater choice to select the child care that best meets family needs.

The state of child care across the United States leading up to and during the pandemic paints a dire picture: Nationally, early childhood educators are paid less than 98 percent of other occupations,[7] and almost one third report experiencing food insecurity.[8] In Virginia in 2020, 16 percent of early childhood educators were living in poverty, which was twice the statewide poverty rate, and almost eight times higher than the poverty rate for Virginia K-8 school teachers.[9]

Low wages make hiring and retaining early childhood educators a serious challenge—leading up to the time when core investments went into effect, 51 percent of Virginia child care centers reported serving fewer children than they hoped and were licensed to serve because of staffing shortages, and more than one third of centers reported needing to reduce the number of classes or classrooms they operate.[10]

Low wages lead to high early childhood educator turnover and prevent early childhood educators from joining or remaining in the industry, at the expense of child care quality.[11,12] Across the country, early childhood educators are leaving the field and not coming back—since the start of the pandemic, the early childhood care and education (ECCE) field has lost 8.4 percent of its workforce.[13] Even among educators who remain in the field, low wages can negatively impact mental and physical health, limiting the capacity for those early childhood educators to provide nurturing and responsive care to children.[14,15]

Child care programs cannot operate without early childhood educators, but child care programs operate on razor thin margins,[16] and cannot raise wages without raising tuition, which is already unaffordable for most families.[17] Private child care in Virginia is among the most expensive in the country. In 2020, the average annual cost for infant care in Virginia—the most expensive type of care, because of the need for high educator-to-child ratios—was $14,063, which was as much as the average family spent on rent and more than in-state college tuition.[18] Child care programs cannot raise tuition to cover the true costs associated with providing quality child care without pricing families out of the market. When families are priced out of the child care market, they may have to rely on cheaper, informal child care that can be less safe and less reliable, and in some cases parents may have to leave the workforce entirely.

The same factors that limit child care availability—low wages and thin profit margins—also negatively impact child care quality. The best and most talented educators may be the educators most likely to leave to seek higher paying jobs, and in the absence of stable revenue or spare funds, child care programs may be unable to afford to invest in ways that could increase program quality, like activities, curriculum, professional development, and competitive compensation for staff.

Prior to new investments, Virginia's early childhood care and education system suffered from insufficient availability, affordability, and quality, resulting in an industry that could not adequately serve children, working families, or businesses. The investments Virginia made in response to this crisis address this network of problems in a coordinated way, and expand the availability of affordable, high-quality child care for Virginia families.

Insufficient Access to Child Care Hurts Children, Working Families, and the State

When parents cannot access child care, they cannot go to work, leading to lost earnings for families, losses to businesses because of lost revenue and increased hiring costs, and even additional burden on taxpayers because of lower income and sales tax revenue. **In Virginia, the sum loss to the economy because of insufficient infant and toddler care is estimated to be $3.1 billion per year, and that loss represents only a portion of the total burden of insufficient child care for children under age 5.[19]**

The impacts of insufficient child care go further than just year-over-year economic losses. Without consistent access to high-quality child care, Virginia's children do not enter school ready to learn. At the start of the 2022-2023 school year, only 35 percent of students from low-income households who did not attend preschool started the school year ready to learn. By contrast, 53 percent of students from low-income households who attended preschool enter school ready to learn.[20]

Without access to affordable, high-quality early childhood care and education, many children from families with low-incomes in Virginia begin their education at a disadvantage, and some children never catch up.[21,22] Investing in availability, affordability, and quality of early childhood care and education supports Virginia's economy and promotes positive outcomes for children and families.

Virginia's Pre-Pandemic Early Childhood Landscape

Prior to pandemic-era investments, four primary programs, funded with local, state, and federal funding, provided access to early childhood care and education for Virginia families with low incomes: Early Head Start (EHS) and Head Start (HS), the Virginia Preschool Initiative (VPI), the Child Care Subsidy Program (CCSP), and Mixed Delivery. The majority of these programs have served families in Virginia for decades, and they continue to provide critical support for families with low incomes.

Early Head Start and Head Start

Early Head Start and Head Start are federally-funded programs that offer high-quality early childhood care and education to children from families who earn less than 100 percent of the federal poverty guidelines (FPG)[i]. EHS and HS serve approximately 15,000 children per year in Virginia, the majority of whom are 3- and 4-year olds.[23]

Virginia Preschool Initiative

The Virginia Preschool Initiative (VPI) provides free, high-quality public pre-K for eligible 3- and 4-year olds.[24] Children can meet state eligibility requirements by having a family income at or below 200 percent of the FPG, experiencing homelessness, having parents or guardians who did not graduate high school, or having disabilities or delays eligible for special education services.[25] Additionally, VPI is designed to be responsive to local needs, allowing eligibility for 15% of slots to be set using local criteria. Full-time VPI provides 180 days of education per year, with 5.5 hours of instruction per day, whereas half-time VPI provides 3 hours of instruction per day. VPI is funded through a combination of local and state dollars and in state fiscal year 2022 (SFY22) it provided public pre-K for more than 20,000 3- and 4-year olds in Virginia.[26] Public pre-K is a critical service for many families, and leads to positive outcomes for children who participate.[27]

Child Care Subsidy Program

The Virginia Child Care Subsidy Program (CCSP), overseen by the Virginia Department of Education (VDOE) and administered by the Virginia Department of Social Services, provides eligible families with a subsidy, or financial assistance, to help them afford child care. Both state and federal funds contribute to CCSP, with federal funding derived from the Child Care and Development Fund

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[i] Head Start programs can serve some families up to 130 percent FPG; see https://eclkc.ohs.acf.hhs.gov/policy/head-start-act/sec-645-participation-head-start-programs

(CCDF), a state and federal partnership authorized under the Child Care and Development Block Grant (CCDBG) that provides more than $11 billion in federal funding for child care across the U.S.[28] Virginia received $231 million in federal CCDF funding in SFY23.[29]

Families who receive child care subsidies can choose to enroll their child in any participating child care program with an opening, and the state will reimburse that child care program for the child's attendance at a set rate, while the family pays a share of the cost (copayment), based on family income.[30] CCSP offers both full- or part-time care, depending on family needs, and provides child care assistance to eligible children ages 0 – 12 years. Pre-pandemic, income eligibility varied by locality[ii] from 150 to 250 percent of federal poverty guidelines (FPG), and CCSP served an average of 18,123 children under the age of 13 each month.

Mixed Delivery Program

Virginia's Mixed Delivery program, implemented by the Virginia Early Childhood Foundation (VECF) in partnership with VDOE, helps meet the needs of families who prefer private settings for their young children by providing public funding that supports ECCE services in private settings. Results of an external evaluation demonstrated that children enrolled in Mixed Delivery achieve outcomes similar to those of their peers served in school-based public preschool. Mixed Delivery meets the same child eligibility, curriculum, and assessment requirements as VPI and provides ECCE services for extended hours and days that meet the preferences of many families in which all available parents are working.

Prior to the pandemic, the Mixed Delivery program was in its last year of an earlier program model in which communities were awarded funding to develop and test innovative strategies that addressed barriers to access to publicly funded preschool for eligible children. Mixed Delivery funds were awarded to organizations representing community collaborations charged with increasing the proportion of children served in private settings with public funding and maximizing opportunities for private ECCE providers to participate in publicly funded preschool.

During the first four years of Mixed Delivery (FY17-20), Mixed Delivery grantees developed and implemented strategies including integrating Head Start and VPI funding with Mixed Delivery funds in private child care center classrooms; discerning how to adequately finance and incentivize program improvement including through meaningful, effective dosages of high-quality coaching based on CLASS scores;[iii] and developing community-level inclusive and collaborative decision-making structures with representation from key stakeholders. These multi-year grants were not intended to increase access by paying for the full cost of ECCE services for enrolled children. In fact, regional Mixed Delivery grantees who used Mixed Delivery funding to help support the costs of ECCE services for enrolled children were required to ensure that other sources of public and/or private funding were integrated to cover the costs. During these years, the reach was fairly small (at most approximately 250 children in FY19).

[ii] Income eligibility for CCSP is set based on locality; Each locality is assigned to one of three groups based on local median income and some adjustments made for actual cost of care. Each group uses a different income eligibility cutoff for CCSP (ranging from 150 to 250 percent of SMI).

[iii] The Classroom Assessment Scoring System (CLASS) is an observational assessment tool designed to assess classroom quality. See: https://www.doe.virginia.gov/home/showpublisheddocument/2378/637951633981830000

Gaps in Existing Programs

EHS, HS, VPI, CCSP, and Mixed Delivery work together to support children and families in Virginia, providing access to affordable child care and supporting child development, but prior to new investments, significant gaps remained in terms of availability, affordability, and quality.

Family income eligibility varied across programs (100-250% of the FPG depending on program and locality), but in most regions families who earn over 200 percent of the FPG were not eligible for ECCE services from any of Virginia's existing programs. In other words, a single mother with an infant and a preschooler who earned $50,000 per year would be ineligible for child care assistance in many regions. If she paid the average cost of child care in Virginia, she would spend almost half of her of income on child care.[31,32]

Pre-pandemic, publicly funded child care served only the most vulnerable families, but even eligible families still faced challenges accessing care that meets their needs. Many families live in areas without easy access to a Head Start program,[33] and VPI does not offer full-time, full-year care for children, making it insufficient for many families who work jobs that don't align with VPI care hours. CCSP offers up to full-time, full-year care to families across the state based on their work or school schedule, but pre-pandemic, low eligibility levels and low reimbursement rates limited both program participation and subsidy availability.[34],[35] Prior to the child care investments that began along with the pandemic, CCSP served an average of 9,657 children under the age of 5 per month while thousands of children remained on the waitlist.

Although Mixed Delivery provided another option for families in its first few years, it only served up to 250 children per year, and was available in only a small proportion of communities. This earlier Mixed Delivery model wasn't intended to cover the full costs of quality ECCE services, so private ECCE providers either had to try to combine multiple funding streams, often with diverging requirements, to help fully cover the costs or simply had to do without the funding necessary to fully support these critical ECCE services.

Even families receiving subsidized child care often found themselves with high out-of-pocket costs. The parent share of cost for CCSP (copayment) could be as high as 10 percent of family income, and if the family chose care that cost more than the state reimbursement rate, families were responsible for paying the remaining tuition themselves in the form of a fee to the child care program. In other words, a family earning $80,000 per year could pay as much as $8,000 per year in copayment, while also paying additional fees directly to the child care program; high family costs meant that in many cases subsidy receipt made little financial difference to a family.

In addition to these barriers in access to affordable child care for families, Virginia did not have a statewide, unified approach to measure, support, or incentivize child care quality among child care programs participating in publicly funded ECCE until a law was passed in 2020. Nationally, many states have developed Quality Ratings and Improvement Systems (QRIS) to evaluate and support quality. Thirty-eight states provide higher subsidy reimbursement rates for child care programs who offer higher quality care, including Virginia. Historically, however, Virginia's QRIS included only one out of six publicly funded child care programs. In 2020, Virginia passed a law to require the implementation of a statewide measurement and improvement system that includes all early childhood programs that take public funding.

CHAPTER 4:
Virginia's Investments in ECCE

Recognizing the existing gaps in availability of affordable, high-quality early childhood care and education (ECCE), Virginia invested new state and federal dollars in two programs that provide high-quality child care in private settings: The Child Care Subsidy Program (CCSP) and the enhanced and expanded Mixed Delivery Program. The investments in these programs expand availability of affordable, high-quality child care for families and provide much-needed resources to private child care businesses that provide early childhood care and education to the youngest Virginians before they are old enough to go to public school and outside of public school hours.

Virginia's investments in child care have increased year over year since the start of the pandemic, culminating in an additional $309 million in state and federal dollars going toward CCSP and Mixed Delivery in SFY23 compared to SFY19. This increased investment expands the reach of these programs by more than 11,100 children under the age of 5. The following sections detail the investments made to expand and improve CCSP and implement the new Mixed Delivery Program, as well as specific investments made in child care quality.

Investments in the Child Care Subsidy Program

Temporary pandemic funds, a temporary increase to the federal matching rate which increases the impact of state investments, and a $1.9 billion increase to the federal CCDBG discretionary fund provided an influx of federal money to the Virginia Child Care Subsidy Program.[36],[37] Virginia used this additional money to make thoughtful changes to the Child Care Subsidy Program that increase the availability of affordable, quality care for families. These changes include:

» Requiring reimbursement rates for CCSP to be set using a "cost of quality" methodology

» Expanding eligibility for subsidies and serving more families in response to increased demand

» Reducing family copayments

Setting Reimbursement Rates Using a Cost Estimation Model

Virginia's investments included big changes to how subsidy reimbursement rates are set. Most states—including Virginia, pre-pandemic—followed long-established federal guidelines and set subsidy reimbursement rates using a market rate survey.[38] A market rate survey asks child care providers across a state about the prices they charge for child care, and the state uses that information to set reimbursement rates, which is the amount of money a provider receives from the state for serving a child whose family receives a child care subsidy. However, the market rate reflects what child care programs are able to charge families in their region, which is constrained by what families can afford to pay. Reimbursement rates that are set at a percentile of the market rate often underestimate the cost of providing child care. By underpaying child care programs, they exacerbate the issues of low early childhood educator wages and insufficient program quality. Further, low reimbursement rates provide little incentive for child care programs to participate in CCSP, limiting access and choice for child care for children who are eligible for subsidies.

Recognizing how low reimbursement rates were impacting availability, affordability, and quality,[39] Virginia passed budget language directing the use of a cost estimation model to set reimbursement rates at the true cost of providing child care. By reimbursing child care programs at rates that reflect the cost of providing quality care and specifically positioning programs to be able to offer more competitive compensation, more child care programs may be willing to participate in CCSP, expanding access to affordable child care for families. Higher reimbursement rates should also eliminate the need for families to pay additional fees to child care programs over and above the reimbursement rate, making subsidized child care more affordable for families.

Importantly, by raising child care program revenue, reimbursement rates set at the true cost of quality have the potential to improve the quality of child care for all children—even those not participating in CCSP. Reimbursement rates that cover child care costs, including better wages for early childhood educators, can support child care programs staying in business and higher educator wages. Further, if rates cover the cost of quality care, child care programs may have money available to invest in improving quality. Over time, reimbursement rates that reflect the true cost of quality have the potential to increase the supply of high-quality child care in Virginia.[40]

Expanding Subsidy Eligibility and Number of Funded Slots

Virginia's investments significantly expanded the number of families who can access affordable child care through CCSP. This occurred through two mechanisms: First, by expanding eligibility for CCSP, and second, by raising the number of subsidies Virginia funded in response to family demand.

Virginia raised CCSP eligibility for children age 5 and under—which varied by locality, from 150 to 250 percent of the FPG—up to 85 percent of state median income (SMI) (just over 300% of the FPG), expanding the number of families in Virginia eligible to receive child care assistance. This means a family of three who earns up to $81,454 per year will qualify for a subsidy, whereas pre-pandemic, a family of three earning $32,005 would have been over the income eligibility limit in most localities.[41]

In addition to increased income eligibility, Virginia also changed rules to allow parents looking for work to be eligible for CCSP. This combination of program changes allowed CCSP to respond to the growing demand for affordable child care from families under the direction of the General Assembly.

This increased demand was supported with investments to increase the supply of subsidized child care for eligible families. Virginia committed to eliminating their CCSP waitlist. In other words, every eligible family who applies for a child care subsidy should receive one while funds are available. CCSP has served an average of 18,899 children under age 5 each month in SFY23, compared to 9,657 children under age 5 each month in SFY19. Importantly, the number of children served by subsidies continues to increase month over month in response to increasing parent demand—in July of 2022 CCSP served just over 16,000 children under age 5, while CCSP served more than 20,000 children under age 5 in February 2023.

Although the focus of this report is on care provided to children under the age of 5, CCSP also serves children through age 12, and a portion of the SFY23 investment goes toward providing high-quality child care to children over the age of 5, who may need care during the summer or part-time care after school.

Limiting Costs for Families

Higher reimbursement rates should eliminate significant differences between the cost of private tuition and what the state pays for care, which should limit the extent to which families need to pay that difference as a fee to the program. To remove additional economic strain from families, Virginia fully covered family copayments for families participating in CCSP through December 2021, and then implemented lower copayment rates. Copayments reflect the parent's share of child care cost based on family income. Monthly copayments are now set at a flat, per-child fee for each child in care up to 3 children, with families whose household income is below 100 percent of the FPG paying $0 per month.[42] No family pays more than 7 percent of family income (in alignment with federal guidance for what is considered affordable).[43] This revision of the copayment system makes accessing child care subsidies more affordable for all eligible families.

Virginia's SFY23 Investment in CCSP

Compared to SFY19, Virginia has invested $204.2 million additional dollars into child care provision through CCSP. These investments increase family access to care, with the monthly average of children under the age of 5 served increasing by 8,858 children compared to SFY19. $181.7 million of the new SFY23 CCSP investment uses pandemic funds—in other words, almost 90 percent of the new investment relies on temporary funding.

The additional $204.2 million invested in CCSP in SFY23 provides child care for an average of 9,242 more children under age 5 each month, but it also expands care for school-age children. More than half of children served by CCSP in SFY23 are under the age of 5 (60%), and we expect the impacts of high-quality child care to be more pronounced for younger children, but care for school age children allows parents to work, provides learning and social opportunities for children, and can also stabilize revenue for child care programs, because high child-to-educator ratios make caring for older children more profitable. Providing affordable, high-quality care to school-age children benefits children, families, and child care programs, but we expect positive impacts of ECCE to be greatest for children under 5. For this reason, this report focuses on the impact of the additional SFY23 investment on children under 5.

TABLE 1:

CCSP Increase in Investment and Children Served (monthly average), SFY19 to SFY23

	SFY19	SFY23	TOTAL INCREASE, SFY19 TO SFY23
Number of children under age 5 served	9,657	18,899	9,242
Total children served	18,123 (53% under 5)	31,304 (60% under 5)	13,181 (70% under 5)
Total investment	$176.5 million	$380.6 million	$204.1 million

Note: The monthly averages for SFY23 include data from July 2022 – April 2023.

Investments in the Mixed Delivery Program

Building on the success of the Mixed Delivery pilots and results of an external evaluation finding positive program effects, in 2020, Mixed Delivery expanded with a new focus on increasing access to and funding for preschool (3- and 4-year old) slots in private child care programs. In 2022, Mixed Delivery further expanded by piloting services for infants and toddlers. Mixed Delivery provides free, high-quality ECCE services in private childcare settings funded by a combination of state and federal (ARPA) dollars.

Mixed Delivery operates using a unique funding structure, supporting the private child care industry by providing contracted slots that take up at least 10 slots in a participating center or at least half of the slots within a family day home. Contracted slots provide predictable income for child care programs and allow for the concentration of resources within that classroom. Together, this ensures that child care programs have the funds needed to provide high-quality care to the children in that classroom—benefiting both the children participating in Mixed Delivery, as well as any children sharing the classroom with them.

Mixed Delivery generally has the same eligibility requirements as VPI, including design that allows it to be responsive to local needs, allowing eligibility for 15% of slots to be set using local criteria. Additionally, Mixed Delivery meets different needs that families may have, including:

» Because Mixed Delivery is offered in private child care programs, starting in FY24, it provides year-round, full-time care—at least 240 days or 2,400 hours of ECCE services each year—making it accessible to families who need this coverage to be able to work and/or who do not want to make alternative arrangements for afterschool or the summer, when public schools are closed.

» Mixed Delivery provides families with additional options for ECCE services. Families may prefer a private setting for ECCE services because it is more convenient for their family, because they want to continue with the same care arrangement that their child used prior to Mixed Delivery services, or because they prefer the care offered in private child care programs.

Mixed Delivery has expanded to serve more children—as of SFY23, 2,159 children receive free, high-quality child care—and has also started serving infants and toddlers. Reimbursement rates for Mixed Delivery are set at rates intended to allow child care programs to invest in quality care. In SFY24 reimbursement rates will increase, based on a cost estimation methodology, with assumptions and incentives for increased compensation for early childhood educators.

Virginia's SFY23 Investment in Mixed Delivery

Compared to SFY19, Virginia has invested $26.4 million additional dollars into Mixed Delivery, including almost $7 million in state funding. These investments provide high-quality child care to 2,159 children under the age of 5. $19.4 million of the new SFY23 Mixed Delivery investment relies on temporary pandemic funds.

TABLE 2:

Mixed Delivery Increase in Investment and Children Under Age 5 Served, SFY19 to SFY23

	SFY19	SFY23	TOTAL INCREASE, SFY19 TO SFY23
Number of children under age 5 served	250	2,159	1,909
Total investment	$1.5 million	$26.4 million	$24.9 million

Note: In SFY19, most Mixed Delivery funding supported the development and implementation of innovative strategies to address barriers to families' access to publicly funded preschool, rather than paying for the full cost of ECCE services for enrolled children.

Investments in Quality and Accountability

Virginia also made specific investments in child care quality and accountability, including developing the Unified Virginia Quality Birth to Five System (VQB5), which is paid for with federal CCDF funds. VQB5 is a quality rating and improvement system (QRIS) required by new state law, intended to evaluate and raise the quality of all publicly funded birth to age 5 classrooms across the state.[44] Through VQB5, third party experts observe and evaluate child care programs and the early childhood educators working there, and provide feedback and mentorship to raise educator and program quality. The program began in 2021, but starting in Fall of 2023, participation will be mandatory for all publicly funded programs.

A key component of VQB5 is a program called RecognizeB5, which offers incentives of up to $2,500 per year to early childhood educators who work at least 30 hours per week in a child care or family day home program participating in VQB5—which starting in Fall of 2023 will be every child care program that accepts any public funding for services, including VPI, Early Head Start, Head Start, Mixed Delivery, and the Child Care Subsidy Program. Educator incentives will increase to $3,000 per year in SFY24. The goal of RecognizeB5 is to improve early childhood educator retention in child care (private, community, non-school based programs).

RecognizeB5 has made Virginia a national leader in addressing early childhood educator compensation. The pilot phase of RecognizeB5, using incentives of $1,500 offered in three installments of $500 over an 8-month period, found that 29 percent of center-based early childhood educators who did not receive the incentive had left their positions, compared to just 15 percent of early childhood educators who received the incentive. In other words, early childhood educators who received the supplement showed nearly half the rate of attrition of early childhood educators who did not receive the supplement.[45] Lower turnover not only means higher staffing levels—and more child care availability—but it also means more experienced early childhood educators remain in their positions, promoting stronger relationships between children and educators, further contributing to high-quality child care.[46,47]

Critically, though this report focuses on the impact of high-quality child care for the children who newly access care because of the SFY23 investment, the funding put toward VQB5 and RecognizeB5 raise the quality for all children accessing publicly funded ECCE services—including all 30,000 children who receive care through CCSP and Mixed Delivery, as well as the ~35,000 who access care through VPI, HS, or EHS. Combined, the additional investments in child care quality, as well as additional investments put toward infrastructure to support the implementation of program changes (see Table 3) promote quality and access to child care for Virginia's publicly funded child care system as a whole, although new access to care for children under age 5 is the focus of this report.

Finally, though VQB5 and RecognizeB5 are focused on raising the quality of publicly funded child care, the vast majority of child care programs that participate in CCSP or Mixed Delivery also accept private pay families. As a result, these investments in quality have the potential to positively impact even children from private pay families, by improving teacher retention (and therefore child care availability) and raising the quality of child care for everyone who uses it.

Virginia's SFY23 Investment in Quality and Accountability

In SFY23, Virginia has invested an additional $80.4 million into raising the quality of all publicly funded child care slots—including those provided by CCSP, Mixed Delivery, VPI, and Head Start/Early Head Start. This investment includes money spent toward directly raising child care program quality, investing in health and safety, and supporting system infrastructure. As part of this investment, Virginia invested $35.4 million additional dollars into VQB5, including $25 million for teacher retention incentives, and $10.4 million for quality assessment, training, and coordination. Additionally, Virginia increased its investment in system infrastructure, which supports administration of CCSP, Mixed Delivery, and other state ECCE services.

TABLE 3:

Investments in Quality and System Infrastructure, SFY19 to SFY23

	SFY19	SFY23	TOTAL INCREASE
Quality & System Infrastructure	$33.0 million	$113.4 million*	**$80.4 million**

Note: *In SFY23, Quality Budget includes $10.4 million for VQB5 (third party observations and Ready Region coordination) and $25 million for RecognizeB5 (teacher incentive program).

Summary of Virginia's ECCE Investments

The combination of Virginia's investments provides more access to affordable, high-quality child care for children in Virginia. Enhancements and program changes to CCSP and Mixed Delivery result in more children receiving access to free or subsidized child care, whereas VQB5, RecognizeB5, and true cost of quality reimbursement rates work together to ensure that early childhood educators remain in the field, and child care in Virginia is high-quality.

In SFY23, an average of 21,058 children under the age of 5 access free or subsidized child care through CCSP or Mixed Delivery each month. Compared to SFY19, an average of 11,151 more children under the age of 5 access affordable child care each month in SFY23 because of investments in CCSP and Mixed Delivery. This report focuses on the new care provided to children under age 5, because we expect the impact of high-quality care to be greatest on young children, and their access to high-quality care is at risk if the state stops meeting the demand for access to affordable child care. Importantly, however, this $309 million investment also provides care to children age 5 and older, and so the full impact of this investment is greater than what we can estimate in this report. Further, the investments Virginia is making in quality care raise the quality of care received by all children who receive care at a program that receives public funds, and the quality of child care programs as a whole, therefore the actual statewide impacts of ECCE investments may be higher than the estimates included in this report.

The majority of estimates discussed in this report are based on the increase in investment (dollars), or on the increase in the number of children under age 5 who attend child care in SFY23 compared to SFY19 (children served). In CCSP however, some children apply for and are granted a subsidy (enrolled), but do not use that subsidy every month to access care. Children may miss child care for any number of reasons—they or someone in the family may be sick, the family may have inconsistent access to transportation, job changes within the family may mean care is not needed that month, etc.—and so the total number of children enrolled in CCSP is greater than the number of children served by CCSP each month.

To be conservative, in Chapter 7 we focus estimates on the number of children who actually attend child care (see Table 4, Children Under Age 5 Served), but because the number of children enrolled reflects parent demand for child care in Virginia, as well as Virginia's commitment to meeting that demand, we also briefly share estimates for educational outcomes derived from the number of children enrolled (see Table 4, Children Under Age 5 Enrolled). Estimates that rely on enrollment can be considered the potential of Virginia's subsidized child care system, if all children who received a subsidy attended care. The Mixed Delivery Program does not distinguish between enrolled and served in the same way, and so we consider the same number of children to be enrolled and served by Mixed Delivery.

TABLE 4:

Total Children Under Age 5 Enrolled in and Served by CCSP & Mixed Delivery, SFY19 to SFY23

	SFY19	SFY23	TOTAL INCREASE
Children Under Age 5 Enrolled (Monthly Averages)			
Mixed Delivery	250	2,159	1,909
CCSP	10,437	20,712	10,275
Total (Enrolled)	10,687	22,871	12,184
Children Under Age 5 Served (Monthly Averages)			
Mixed Delivery	250	2,159	1,909
CCSP	9,657	18,899	9,242
Total (Served)	9,907	21,058	11,151

Note: Because of different payment practices, Mixed Delivery does not separately collect enrolled vs served.

Expiring Investments

Investments made by Virginia into their early childhood care and education system have the potential to change family economic resources, prepare children for school, and support the economy, but the bulk of the program changes discussed in this section rely on temporary federal funds (see Table 5). We discuss the benefits to children, families, and the Virginia economy derived from these investments in detail in the following sections. To sustain the positive impact of this investment following the expiration of federal emergency funds, Virginia will need to continue the investment with state funds to ensure that access to affordable, high-quality care can continue to meet family demand.

TABLE 5:

Permanent and Temporary Funding for CCSP and Mixed Delivery, SFY19 to SFY23

	SFY19 INVESTMENT	SFY23 INVESTMENT	TOTAL INCREASE, SFY19 TO SFY23	EXPIRING INVESTMENT
CCSP	$176.5 million	$380.6 million	$204.1 million	$181.7 million
Mixed Delivery	$1.5 million	$26.4 million	$24.9 million	$19.4 million
Quality & System Infrastructure	$33.0 million	$113.4 million	$80.4 million	$73.5 million
Total	$211.0 million	$520.4 million	$309.4 million	**$274.6 million**

Note: Quality budget for SFY23 includes $10.4 million for VQB5 (third party observations and Ready Region coordination) and $25 million for RecognizeB5 (teacher incentive program).

CHAPTER 5:

Theory of Change for ECCE Investments

Virginia's investments in early childhood care and education (ECCE) increase availability and expand eligibility for the Child Care Subsidy Program (CCSP) and Mixed Delivery Program. The result is that more families can access affordable child care, and more children receive high-quality early childhood care and education.

To identify the network of impacts across the life course that are influenced by Virginia's SFY23 investment in ECCE, we conducted a comprehensive review of the extant literature to identify and understand the pathways through which access to affordable, high-quality early childhood care and education impact children and families. Children are most vulnerable to adverse conditions in their earliest years of life, but it's also when there is the greatest opportunity for intervention, as children's brains are rapidly developing. Understanding the full range of ways that Virginia's SFY23 investments impact children requires recognizing the dual impact that access to affordable, high-quality child care has on families by simultaneously increasing family resources and increasing time spent in safe, nurturing, and responsive care.

Increased family resources and time spent in safe, nurturing, and responsive care work together to support healthy child development and learning. Children experience less material deprivation, lower family stress, and more nurturing and responsive care both at home and when their parents are at work. By investing in children during their earliest years, affordable, high-quality ECCE supports improved parent and child wellbeing, school readiness, and better educational outcomes for years to come.

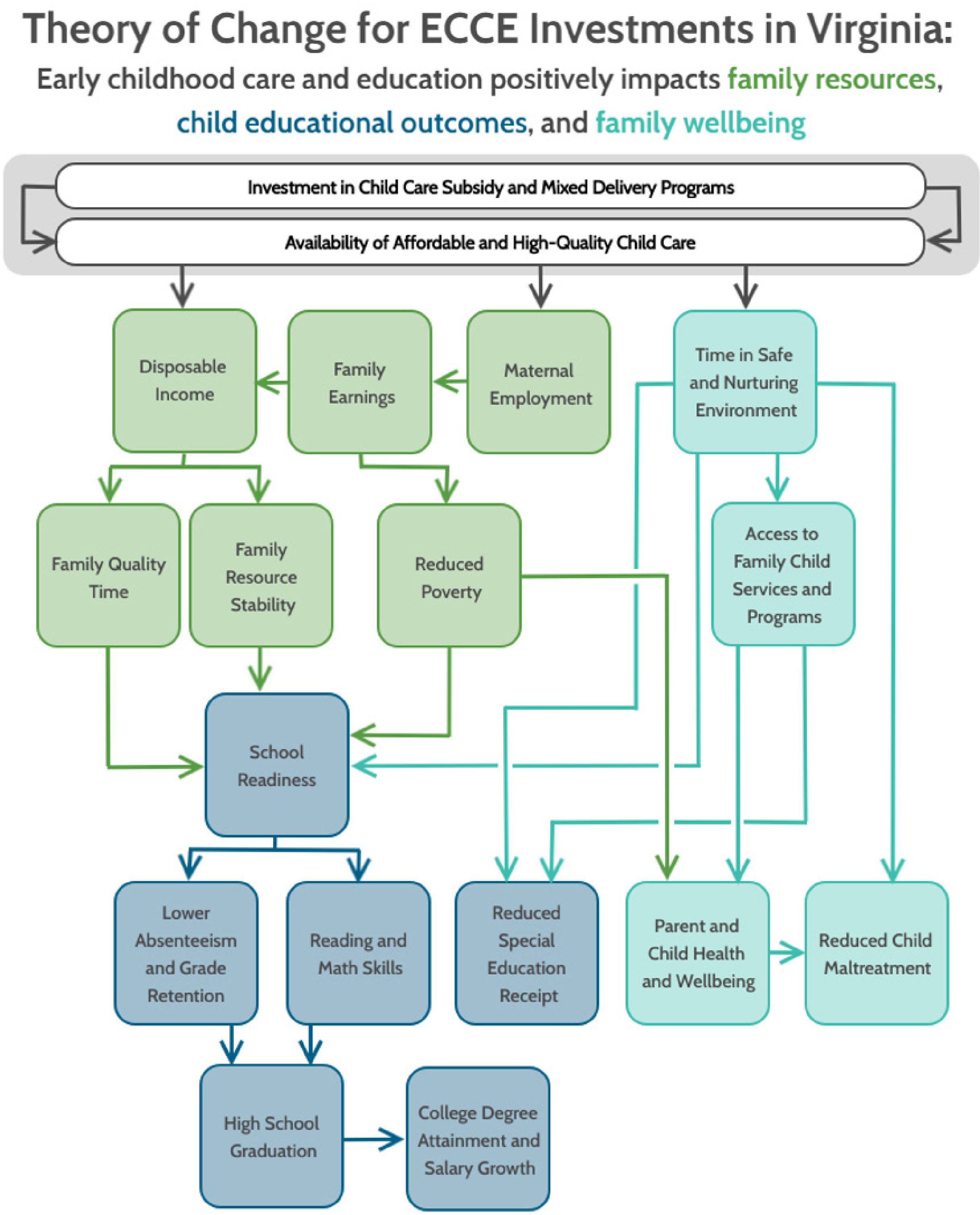
The theory of change (see Figure 1) developed by the Prenatal-to-3 Policy Impact Center demonstrates how Virginia's investments in ECCE lead to positive outcomes for children at every stage of life through two distinct pathways. The **family resources pathway** shows how access to affordable child care can increase household income, lift children out of poverty, and improve child and family wellbeing. The **high-quality early childhood care and education pathway** demonstrates the direct impacts of a child spending time in safe, nurturing, responsive and stimulating child care, and how investment in early learning can set children up for success throughout the rest of their lives.

These two pathways intersect and overlap, and by supporting children to get what they need early in development, when children are most vulnerable and the opportunity for intervention is greatest, access to affordable high-quality ECCE can launch a cascade of positive impacts that build on one another and can be felt for decades following a child's time in high-quality, affordable ECCE.

In Chapter 7, we share more details about how affordable, high-quality ECCE impacts each outcome of interest, but here we provide an overview of the pathways that lead from early investment to positive outcomes throughout the life course.

FIGURE 1:

Theory of Change for Effects of Virginia's ECCE Investments on Children



Access to Affordable, High-Quality ECCE Positively Shapes Early Childhood Experiences

The time between birth and the start of kindergarten can set the trajectory for the rest of a child's life. Children's brains develop rapidly during this period, learning and growing in response to their environment.[48] Young children who spend time in nurturing, responsive, and enriching environments—at home or elsewhere—are more likely to start school ready to learn,[49],[50] and children who start kindergarten behind often remain behind throughout their education.[51] This means that though kindergarten may be the start of a child's formal education, their ability to succeed in school—and beyond—relies on learning and development that occurs before a child ever sets foot into a K-12 school.

Nurturing, responsive, and enriching environments that promote healthy child development do not happen by accident. Families need resources such as money, time, and mental wellbeing to support child development at home, and they need safe and nurturing environments where they can leave their children when they go to work to support their families, so that healthy child development can continue even when the child is outside of the home.[52]

Child care is a critical resource for families with the potential to support healthy child development along both of these pathways. If child care is both available and affordable, parents can balance their ability to work and care for their children, raising the economic resources of the household. Additionally, if that child care is also high-quality, it means that when parents go to work, their children continue to receive nurturing and responsive care that promotes lifelong learning and development. Virginia's SFY23 investment increases parent choice to decide the child care that best meets family needs, including making it possible for parents to choose the highest-quality care available for their child.

Virginia's investments, which increase the availability of affordable, high-quality early childhood care and education first influence families by increasing family resources. Access to affordable child care can make it possible for parents, particularly mothers, to return to work.[53] Higher maternal employment leads to increased family earnings, lifting children and families out of poverty.[54] Even among families in which parents already work, receiving a child care subsidy or Mixed Delivery slot can drastically reduce child care expenses without sacrificing child care quality, increasing a family's disposable income while ensuring the child experiences high-quality care.

Increased family resources—because of increased earnings or reduced expenses—support healthy child development in a range of ways. Family resource stability allows parents to invest more resources into caring for their child, such as providing nutritionally-balanced meals, purchasing books or other materials to support child learning, and providing stable housing.[55] Additionally, raising family economic resources can allow for more family quality time, allowing parents to participate in more early learning activities with their children.[56]

More economic family resources also lead to poverty reduction. Childhood poverty affects lifelong health and development, through both the associated deficits in material wellbeing, as well as the chronic stress that poverty imparts on children and families.[57,58] Reducing family poverty, then, can improve both parent and child health and wellbeing.[59] Poverty reduction not only increases family access to material goods needed for health and wellbeing (e.g., food, housing, healthcare) but it can also decrease child and parent stress, reduce family conflicts, and increase positive parenting and nurturing parent-child relationships. This combination of lower parental stress, positive family dynamics, and improved financial situations can ultimately lead to reduced child maltreatment, protecting children from harm and neglect, and keeping families together.[60,61]

This cascade of positive outcomes comes specifically from the increase in family resources associated with receiving affordable child care, but when that child care is also high-quality, while parents are at work, children spend time in safe and nurturing environments. Time in safe and nurturing environments supports child wellbeing and development in a number of ways, starting with simply providing a safe place for children to go while their parents are at work. When parents can afford and choose safe, high-quality alternatives to unsafe or informal care arrangements, it means that children remain safe, even when their parents go to work (contributing to reduced child maltreatment).

Further, when the care children receive is also nurturing, responsive, and stimulating, the early learning opportunities that children take part in while receiving ECCE services can help shape children's rapidly developing brains to support a lifetime of learning. Even beyond the learning that takes place in the classroom, high-quality ECCE can support child development by improving access to family and child services and programs that meet children's needs. For example, child care programs provide nutritious meals to children, often through the Child and Adult Care Food Program (CACFP), which can help limit the effects of material deprivation and food insecurity related to poverty.[62] Additionally, if the early childhood educators in the child care program are knowledgeable about child development, they may even be able to identify children who are behind developmentally, supporting referral for early intervention services which can help children catch up to their peers.[63]

Together, the effects of increasing family resources and increasing time spent in high-quality early childhood care and education can reduce material deprivation and family stress that can disrupt brain and body development, improve parent and child relationships, and increase access to learning opportunities both at home and in child care. Ultimately, this can result in better school readiness for young children, setting them up to start kindergarten ready to succeed in K-12 school settings.[64,65,66]

Early Childhood Experiences Influence Outcomes Across the Life Course

Increases in family resources and early learning opportunities in children's early years shape child development in long-lasting ways. Children who start school with appropriate school readiness skills often have an easier time learning.[67] When child care attendance makes children more school ready, it can also promote a smoother transition into school, which can lead to lower absenteeism, and provide children with more consistent learning opportunities.[68] Additionally, supportive environments early in a child's life that promote child learning and development, paired with referrals to services when needed, can shift child development in ways that help children catch up with their peers early, such that fewer children need special education services once they reach school age, and therefore decrease special education receipt.[69]

Combined, school readiness, a decreased need for special education services, and better school attendance build on top of the healthy child development that occurred in the first few years of life and contribute to better reading and math skills for children who attended high-quality child care.[70],[71],[72] Children's academic achievement contributes directly to their academic progression, and so these same factors also contribute to decreased grade retention,[73] and ultimately lead to higher rates of high school graduation and college degree attainment,[74,75,76] and more salary growth for adults who attended high-quality child care as children.[77]

By supporting healthy child development in children's earliest years, through both increased family resources and high-quality early learning opportunities, Virginia's investments in affordable, high-quality child care support families and children in significant ways. Increasing the availability of affordable, high-quality child care reduces poverty, promotes parent and child health and wellbeing, and prepares children for school and beyond. In this way, Virginia's investments in early childhood care and education are an investment in families, and help children and families thrive while also supporting the economy.

CHAPTER 6:

The Impact of Virginia's Investments on Individual Families

Child Care Supports Working Families: How Virginia's Investment in ECCE Changes Lives

The first pathway through which access to affordable high-quality child care promotes positive outcomes in children begins when parents receive access to affordable child care, allowing them to work, or freeing up economic resources that were previously used to pay for child care.

To illustrate the range of ways Virginia's ECCE investments support families along the family resources pathway, we first follow the experiences of three hypothetical families who are eligible for the Child Care Subsidy Program (CCSP) and Mixed Delivery. These three families have different family structures and different financial situations, therefore the impact of access to affordable child care is different for each family. In all cases, however, the end result is the same: access to affordable child care increases resources for the entire family.

There are countless types of families in Virginia, all with different employment and economic situations, and different child care needs. These three stylized families are meant only to illustrate how access to affordable child care can dramatically shift resources for a family.

Family A: A Single Mother who is Unemployed and Her Two Children

This family of three includes a single mother and her two children—an 8-month old infant and a 4-year old preschooler. The mother is currently unemployed, because she cannot afford child care, and does not have a safe place to leave her children while she is job-hunting. In Virginia, this family receives $587 per month in TANF benefits, and $740 per month in SNAP benefits, providing a total of $1,327 per month in family resources.[78] This family is living in poverty, which puts them at risk for a host of negative outcomes, including both food and housing insecurity, as well as high stress and poor mental and physical health.[79]

As a direct result of changes to CCSP policy that allow parents to receive subsidies while looking for work, both children in this family are eligible for child care subsidies, and her older child is also eligible for Mixed Delivery (both children may be eligible for Mixed Delivery if they live in a region offering expanded Mixed Delivery services to infants and toddlers). The mother applies for and receives a child care subsidy that allows her to enroll her infant in a high-quality child care center near her home. This center is also participating in Mixed Delivery, and her preschooler is able to receive full-time, high-quality ECCE in the same child care center where her infant attends, allowing her to save time and money transporting her children to and from care.

When this family first receives care through CCSP and Mixed Delivery, the care is provided at no cost to the family. Mixed Delivery is always free for eligible families, and because the family is below 100 percent of the FPG the CCSP copayment is also $0 per month. This family does not have to pay any fees to the child care program because the CCSP reimbursement rate covers the full cost of her children's care.

Access to affordable child care allows the mother in this family to afford to work. Knowing that if she becomes employed, her whole paycheck won't be spent on child care, this mother applies for several jobs and is able to attend interviews while her children are safe at child care, and because her children are already in care, she is ready to start working as soon as she finds employment. She receives a job that pays her $14.57 per hour, the state median wage for subsidy-eligible mothers.

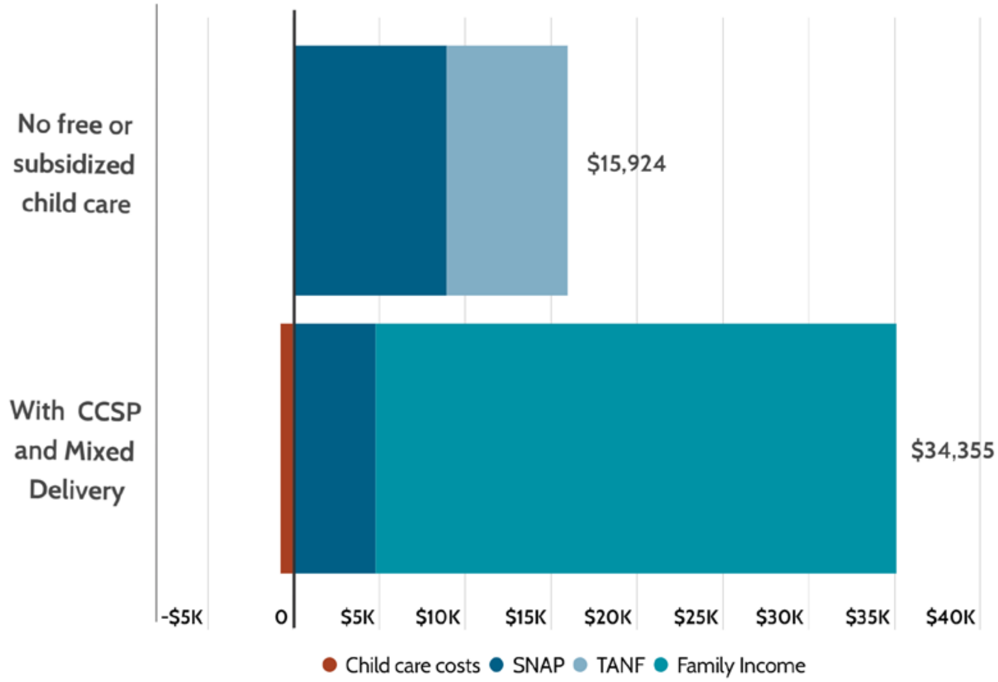
Working full-time, this mother now earns $30,306 per year. This income raises the family above the federal poverty line. Because this family continues to qualify for both child care subsidies and Mixed Delivery at their new income level, the mother now pays a copayment of $60 per month for her infant, and $0 for her 4-year old.[iv] This family continues to qualify for SNAP, with a benefit of $397 per month, and no longer qualifies for TANF.

Altogether, because the child care benefits allowed this mother to seek and begin working, this family now has access to $2,863 per month in combined family earnings and SNAP—an increase of $1,536 per month. In other words, because of receipt of a child care subsidy and Mixed Delivery, monthly family resources more than doubled despite receiving $930 less per month in TANF and SNAP. The mother can invest these increased family resources into healthy food, stable housing, and resources that support child development (e.g., books, toys, learning opportunities).

[iv] Mixed Delivery copayments are always $0/month per child, but CCSP copayments are based on family income. We present family A's CCSP copayment based on their new family income to demonstrate the long-term financial situation for this family, but copayments are only updated at redetermination (12 months after initial eligibility). During the first 12 months of CCSP participation this family's copayment would be based on income at initial eligibility, meaning they would pay $0/month per child for the first 12 months of care.

FIGURE 2:

Impact of Affordable Child Care for a One-Parent Family



Note: Total values at the end of each bar represent net annual family resources—that is, sum of positive family resources (SNAP, TANF, and Family Income) minus total child care costs.

Family B: Two Parents who are Employed and their Two Children

This family of four includes a set of married parents and their two children—an 8-month old infant and a 4-year old preschooler. Both parents are employed at jobs that earn the state median wage by gender of subsidy-eligible parents (the mother earns $14.57/hour and the father earns $18.75/hour). The mother works full-time, while the father works 20 hours per week, for an annual family income of $49,806, which puts them at 166 percent of the FPG. This family is not eligible for TANF.

If this family paid the average price of child care in Virginia, it would cost $24,930 per year—approximately half of their total family income.[80] Instead, one parent works part-time, to stay home and watch the children 2 days per week, and they pay for the cheapest care they can find for the other 3 days per week. In total, this family spends 9.6 percent of their family income on child care—or approximately $4,781 per year ($398 per month), consistent with the average child care costs of families in their income bracket.[81] This family receives $246 per month in SNAP benefits.

Virginia investments that expand eligibility for and availability of CCSP allow this family to receive state-funded child care. This family uses child care subsidies to send both of their children to a high-quality home-based child care program.

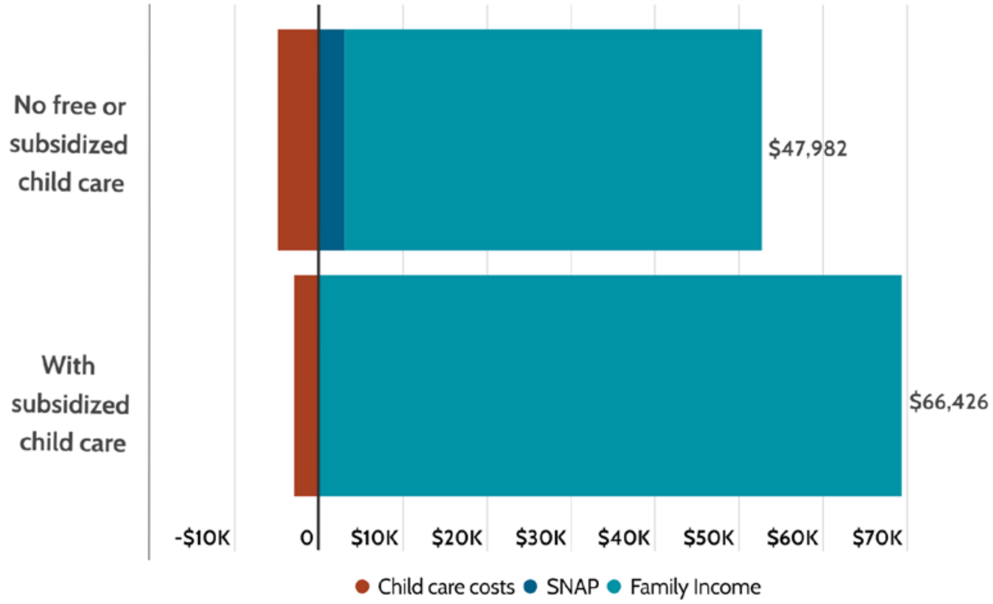
Although both parents were already working, receipt of CCSP can also impact this family's work experiences. Mothers who receive subsidies are less likely to report experiencing problems related to work hours (e.g., being unable to pick up a shift, or working fewer hours than they'd like to)[82], and mothers in states with more generous subsidy eligibility are more likely to work full-time.[83] Inadequate access to child care can disrupt employment, cause parents to quit or be fired, and can get in the way of parents' career progression.[84] In Family B, having the option to access full-time, high-quality child care allows the parent working part-time to increase the number of hours he works, from 20 hours per week up to 40 hours per week, increasing family income by $19,500 per year.[v]

Along with increased family earnings, this family also now has lower child care expenses. Instead of $398 per month, this family now pays only a $120 monthly copayment for each child (total of $240 per month) for full-time, high-quality child care.[vi]

All together, this family has $1,537 more per month than they did prior to the receipt of affordable child care despite no longer receiving SNAP benefits and sending their children to safe, high-quality care that supports their development. The family can invest this money in healthy food, stable housing, and resources that support child development (e.g., books, toys, learning opportunities).

FIGURE 3:

Impact of Affordable Child Care for a Two-Parent Family with Low Income



Note: Total values at the end of each bar represent net annual family resources; that is, sum of positive family resources (SNAP and Family Income) minus total child care costs.

[v] Full-time child care is offered when a family's schedule requires it (for work, education, or job searching). In the case of Family B, they may receive part-time care while one parent is working part-time, but would be eligible for full-time care once both parents were working full time.

[vi] We present family B's CCSP copayments based on their new family income to demonstrate the long-term financial situation for this family, but copayments are only updated at redetermination (12 months after initial eligibility). During the first 12 months of CCSP participation this family's copayment would be based on income at initial eligibility, meaning they would pay $60/month per child ($120/month total) for the first 12 months of care.

Family C: Two Parents who Are Employed Full-Time and their Two Children

This family of four includes a set of married parents and their two children—an 8-month old infant and a 4-year old preschooler. Both parents are employed full-time, earning a total family income of $85,000, or roughly 300 percent of the FPG. This family is not eligible for SNAP or TANF.

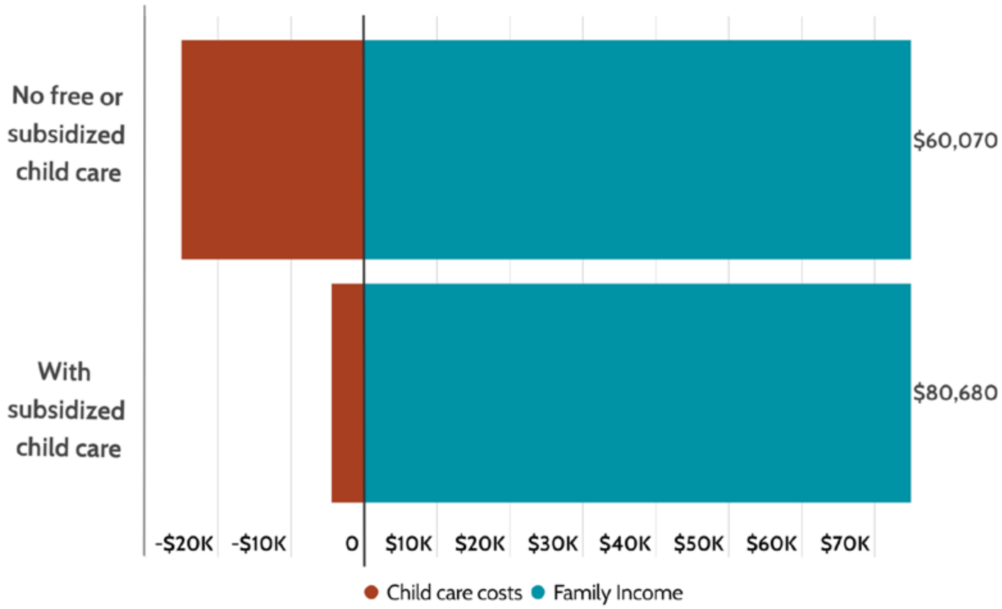
This family sends both of their children to center-based care, and pays the average price of child care in Virginia, which costs them $2,078 per month, or $24,930 per year—approximately one third of their total family income.[85]

Virginia's investments that expand eligibility for and availability of CCSP allow this family to receive affordable child care through CCSP. This family uses child care subsidies to send both of their children to the same high-quality center-based child care program they already attended. Instead of $2,078 per month, this family now pays only a $180 monthly copayment for each child (total of $360 per month) for full-time, high-quality child care.

Although this family's earnings have not changed, this family has $1,718 more per month than they did prior to the receipt of affordable child care, despite continuing to access the safe, high-quality child care of their choice. This family can invest this money in healthy food, stable housing, and resources that support child development.

FIGURE 4:

Impact of Affordable Child Care for a Two-Parent Family with Moderate Income



Note: Total values at the end of each bar represent net annual family resources; that is, sum of positive family resources (SNAP and Family Income) minus total child care costs.

Affordable Child Care Increases Family Resources

As the three stylized examples in this section make clear, access to affordable child care makes a huge difference in family resources for individual families. When families have access to affordable child care, they can go to work or increase their working hours, resulting in increased family earnings. When child care is affordable, parents also spend a lower percentage of their earnings on child care, leaving more money to invest in family health and wellbeing.

Affordable access to child care increases family resources despite simultaneously decreasing family reliance on other state and federal benefits, like SNAP and TANF. Although these three stylized families are only examples, in the following section we will demonstrate how positively impacting individual families can culminate in a huge return on investment for the state.

CHAPTER 7:
Statewide Benefits of Virginia's ECCE Investments

In this chapter, we detail the range of impacts expected from the additional $309 million (which includes $275 million of expiring federal funding) Virginia invested in early childhood care and education in SFY23. We both describe and, where possible, estimate the specific impact caused by this additional $309 million on children under the age of 5, their families, and the state economy.

To describe the overall value of the SFY23 investments, first we estimate and describe the impacts on family economic resources that occur as a result of the additional $309 million invested in ECCE in SFY23. Next, we estimate and describe how increased family resources and the provision of high-quality child care influence the 11,151 children under age 5 who received affordable, high-quality child care in SFY23. Finally, we discuss the statewide fiscal impacts for Virginia associated with the positive outcomes identified throughout the chapter.

On average, 11,151 more children under the age of 5 receive child care each month as a result of the additional $309 million Virginia invested in ECCE in SFY23. We estimate the effects of this investment on children under the age of 5, but the full value of the investment also serves children through the age of 12. Because the full $309 million invested serves more than just children under age 5, this chapter should be considered only the impact of the investment on children under the age of 5, and may underestimate the full impact of Virginia's investment (which provides child care to children through age 12).

Virginia's Investments in ECCE Increase Family Economic Resources

The receipt of affordable child care can make a huge difference in the economic experience of each affected family, but the scale of Virginia's new investments mean that those impacts are also felt at the state level. Statewide impacts on family economic resources resulting from Virginia's new investments are discussed in this section; for detailed methods, see Appendix A.

Maternal Employment

When children receive access to affordable, high-quality child care, parents—especially mothers—can go back to work, positively impacting families and the economy. An analysis of national CCDF expenditures found that a 10 percent increase in per-child CCDF expenditures among all children under age 13 in the state predicts a 0.7 percent increase in employment among subsidy-eligible mothers of children under 4 years of age.[86] We apply this finding to estimate the change in maternal employment for mothers with children under the age of 5 that results from investments in CCDF and Mixed Delivery.

Statewide, the increased investments in CCSP and Mixed Delivery in SFY23 is predicted to increase the maternal employment rate among subsidy-eligible mothers with at least one child under the age of 5 by 6 percentage points (from 58.1% to 64.1%).

» Statewide, we estimate that new SFY23 investments in ECCE will result in 10,710 newly employed mothers of children under the age of 5.

Family Earnings

Within the 10,710 households in which a mother becomes employed as a result of access to affordable child care, we estimate increased family earnings using both the median ($14.57/hour) and mean ($19.81/hour) hourly wages for subsidy-eligible mothers in Virginia (see Appendix A). We estimate that family income will increase by between $30,306 and $41,205 per year.

Importantly, family earnings may increase even within families with already-employed parents. Receipt of reliable, consistent child care can allow parents to increase their working hours or improve work attendance in ways that promote career advancement and job stability.[87] We are unable to estimate the economic impact of increased work hours and job stability on families, and so we are underestimating the total impact of Virginia's investments on family earnings.

Children in Poverty

As families are able to work because they have access to child care, their increased income may lift them out of poverty. Childhood poverty affects lifelong health and development, through both the associated deficits in material wellbeing, as well as the chronic stress poverty imparts on children and families.[88] In Virginia, more than 68,000 children under the age of 5 were living in poverty in 2021, and poverty disproportionately affects children from families of color.[89] We estimate a range for the number of children under age 5 who will be lifted out of poverty based on the median ($14.57/hour) and mean ($19.81/hour) hourly wages for subsidy-eligible mothers in Virginia (see Appendix A).

» Statewide, we estimate that new investments in ECCE will lift between 5,528 and 5,757 children under the age of 5 out of poverty.

Of note, although we only look at the effect of investments on families with at least one child under the age of 5, many of those young children have older siblings. When a family is lifted out of poverty, all children in the family are lifted out of poverty. As a result, even when we restrict our analyses to families with at least one child under the age of 5, the total impact of the investment is broader, lifting more than 8,000 children under the age of 18 out of poverty (see Table 6).

TABLE 6:

Estimated Number of Children Lifted Out of Poverty

	CHILDREN UNDER AGE 5 LIFTED OUT OF POVERTY	CHILDREN UNDER AGE 18 LIFTED OUT OF POVERTY
Low-end estimate	5,528	8,900
High-end estimate	5,757	9,311

Family Disposable Income

New or increased employment as a result of child care benefits drives a large part of the expected increases to family economic resources as a result of Virginia's ECCE investments, but receipt of free or subsidized child care can also increase the disposable income for families who were previously paying for child care. Money that families previously spent on child care can instead be spent on other necessities such as healthy food, stable housing, and resources that support child development (e.g., books, toys, learning opportunities).[90]

How much an individual family's disposable income will increase depends on how much they previously spent on child care and the age of their children, but on average, in SFY19, CCSP increased annual family disposable income by approximately $1,233 per-child for participating families. Thanks to increased availability and reduced copayments, we estimate that in SFY23, participation in Mixed Delivery or CCSP increases annual family disposable income by approximately $2,466 per child on average.

Virginia's Investments in ECCE Improve Family Wellbeing and Child Educational Outcomes

Increases to family earnings and disposable income associated with access to affordable child care work alongside high-quality child care to positively influence child health and development in the earliest years of life, and across the life course. In this section, we discuss how increased family resources and high-quality early childhood care and education work together and separately to promote child wellbeing and educational success.

Though affordable and high-quality early childhood care and education are vital to families across Virginia and across the country in all economic and social circumstances, the social and financial costs of the COVID-19 pandemic created a particular need for early childhood care and education programs today. In the wake of a pandemic in which young children faced high levels of food insecurity, family stress, and child maltreatment, investments that help families and children thrive are particularly critical. At the end of 2020, parents reported higher levels of social-emotional problems in their 3- and 4-year old children compared to national normative data,[91] and the high levels of stress experienced by mothers who were pregnant during the pandemic may impact the socio-emotional, cognitive, and behavioral health of their children for years to come.[92]

Additionally, between high inflation and a slow economic recovery, many families are still struggling to recover following the pandemic. A household survey in March of 2023 found that 75 percent of

Virginia households with children reported some difficulty paying their usual household expenses, and 18 percent said it was very difficult.[93] Increasing the availability, affordability, and quality of early childhood care and education may help children and families recover following the pandemic by raising household resources and supporting child socioemotional development.[94,95]

In the following section, we describe how Virginia's increased investments in ECCE may positively impact a range of outcomes and behaviors for children in Virginia.

Parent and Child Health and Wellbeing

The family resources gained through access to affordable child care can positively impact both parent and child health and wellbeing. The most rapid period of growth for the human brain occurs in the earliest years of life, and young children are especially vulnerable to the conditions in their lives and their interactions with key caregivers during these youngest years. Adversity during this time period—including insufficient material resources (e.g., food, housing), familial stress, or exposure to unsafe or nonnurturing environments—can permanently alter the physiological, emotional, and neurological development of children in ways that have far reaching consequences.[96],[97]

A study conducted in 2010 used a national sample of children who were followed from birth until adulthood to examine the effects of poverty in the first 6 years of life.[98] This study found that compared to children from families with incomes higher than 200 percent of the federal poverty level, adults who spent their childhood in poverty:

- completed fewer years of education
- earned lower incomes as adults
- reported poorer physical and mental health
- if male, were more likely to experience incarceration
- if female, were more likely to experience unintended pregnancy

Safe, stable, stimulating, loving interactions between a child and a parent or caregiver promote optimal brain and body development in the first few years of life.[99] To meet the substantial challenges that parenting brings, parents who have sufficient family resources, social connections, limited stress, and good physical and mental health are in a better position than parents who struggle to make ends meet, feel isolated or overwhelmed, or have poor mental health.[100],[101],[102] Increases to family earnings and disposable income can promote positive, nurturing relationships between parents and their children by reducing parent stress and improving parent mental and physical health.[103]

Increasing family resources through the mechanism of access to affordable child care, then, can impact the entire family. Parents can experience lower stress and better health and wellbeing, which can allow for more nurturing and responsive relationships with their children, and decrease risk of child maltreatment.[104] Families can also invest new resources into goods that are necessary for wellbeing like food, housing, and medical care. Children born to families in poverty are more likely to experience adverse pregnancy outcomes, like preterm birth, meaning that improving family economic status has the potential to improve outcomes even for children who have not yet been born to these families.[105]

Child Maltreatment

Children are more likely to experience abuse and neglect during the first three years of life than at any other age.[106] Child maltreatment is associated with long-lasting, adverse impacts on mental and physical health, behavior, and even school achievement.[107,108] High levels of stress are associated with parents' increased risk of perpetrating child maltreatment,[109] and children in poverty are at an increased risk for experiencing parental neglect.[110] Child care instability is also associated with an increased risk of child maltreatment among working mothers with low incomes, likely because of child care instability's associated stressors.[111]

Virginia's investments in early childhood care and education may help protect children in Virginia from experiencing child maltreatment in two ways. First, by increasing both family resources and reliable access to child care, investments may reduce parent stress, decreasing the risk of child abuse and neglect. Second, by increasing the availability of affordable, high-quality care, Virginia's investments provide parents with safe child care options. When families with low incomes have to pay for child care themselves, they may have to enroll their child in informal or low-quality arrangements, if those are the only options in their budget. By contrast, CCSP and Mixed Delivery make it possible for parents to enroll their children in safe, high-quality child care where children can remain safe even when parents go to work.

A study of subsidy receipt in Illinois found that receipt of a child care subsidy was associated with a significantly lower risk of both physical abuse and neglect.[112] Additionally, a recent analysis of longitudinal administrative child welfare data found that raising income eligibility for child care subsidies by one standard deviation (approximately $700) is associated with significant decreases in investigations for both abuse (3.7%) and neglect (2.8%).[113] In Virginia, a $700 increase in income eligibility, then, would predict 133 fewer investigations of abuse and 360 fewer investigations of neglect, resulting in 19 fewer substantiated cases of abuse and 45 fewer substantiated cases of neglect. In reality, Virginia has expanded CCSP so significantly that its new income eligibility cutoff lies well above the range of data used to create that model—an increase of almost $3,500 for children under the age of 5—and so we cannot use the model to generate a reliable estimate for a reduction in maltreatment investigations, but we expect that reductions in both physical abuse and neglect associated with Virginia's SFY23 investments to be substantial.

School Readiness

High-quality early childhood care and education may also help prepare children for school. School readiness—sometimes called kindergarten readiness—can be assessed in a multitude of ways, but in general it is understood as the combination of knowledge, skills, and behaviors that promote a child's success when transitioning into K-12 school.[114] Children may have an easier time learning if they start school with a foundation of academic skills they can build on (e.g., recognizing letters and numbers, pattern recognition, etc.), and when they have the skills and socioemotional behaviors that promote classroom learning (e.g., attention, listening, self-regulation, cooperation). Research has connected school readiness scores with academic achievement throughout elementary school, such that children who start kindergarten with better learning-related skills continue to outperform other students in reading and math in later grades.[115],[116]

In Virginia, kindergarten readiness assessments include an evaluation of academic, self-regulation, and social skills.[117] Children from low-income households are at particular risk of starting school without developmentally appropriate skills, and in Virginia, fewer than half of children from low-income households meet the benchmark for school readiness.[118] Evidence links high-quality early childhood care and education—particularly high-quality preschool—to better school readiness for children from low-income households, especially improving academic preparedness for school.[119],[120],[121]

To predict the impacts of high-quality child care on Virginia children, we use data from Virginia itself. Assessments from the start of the 2022-2023 school year found that among families with low-incomes, 53 percent of children who attend preschool are categorized as school ready, compared to only 35 percent of children who do not attend preschool.[122]

For every 1,000 more children who receive access to high-quality child care, we estimate that 180 more children will enter school ready to learn than if they had not received access to high-quality child care.

» Statewide, the additional SFY23 investment in ECCE provides 11,151 more children access to high-quality child care; therefore in total we estimate that 2,007 more children will enter kindergarten ready to learn.

Of note, the Virginia Department of Education is collaborating with a higher education partner to strengthen and revise the state supported pre-K – 3rd grade literacy screener. The updated screener will provide a more comprehensive understanding of individual student's learning needs and will include vertical scaling so that growth can be measured over time. Virginia will transition to the updated screener in the 2024-2025 school year, which will impact overall estimates of school readiness rates. However, we expect that general trends (higher kindergarten readiness associated with participation in high-quality child care) will hold true.

Special Education Receipt

High-quality early childhood care and education support healthy child development in ways that may reduce the need for special education services. First, child care programs may identify and meet the needs of young children who are facing issues such as food insecurity, child maltreatment, or developmental delays and help connect children to needed services that promote wellbeing.[123],[124] Second, by providing children with responsive and nurturing care throughout their development, high-quality ECCE may act as the intervention itself, providing children the support they need to catch up with their peers early on.

Special education services in public schools support children with different learning needs to thrive in educational settings. The cost of special education provision, however, can be significant, and many children accessing special education continue to perform well below their peers academically despite additional supports.[125] Instead of providing educational support only once a child has started K-12 public school, intervening earlier may both set the child on a better trajectory and be more cost-effective.

Results of a meta-analysis of 22 experimental and quasi-experimental studies of high-quality early childhood education indicate that participation in high-quality early childhood care and education leads to an 8.1 percentage point decrease in special education placement.[126] This means that in Virginia, for every 1,000 more children who receive access to high-quality child care, we estimate that 81 fewer children will require special education placement than if they had not received access to high-quality child care.

» Statewide, the additional SFY23 investment in ECCE provides 11,151 more children access to high-quality child care, and so in total we estimate that this prevents 903 children from being placed in special education.

This estimate may be an underestimate, as poverty is also a risk factor for developmental disability,[127] and Virginia's investments in lift children out of poverty. Therefore, the combination of reduced poverty combined with access to high-quality ECCE may have a bigger preventative impact on special education receipt than ECCE alone.

Chronic Absenteeism

Children who are chronically absent from school—defined as being absent two or more weeks per school year—miss out on learning opportunities that can impact academic achievement. Chronic absenteeism in kindergarten is associated with worse academic performance in first grade in both reading and math.[128] Children from families that are poor or low-income (under 200 percent of the federal poverty level) are more likely to be chronically absent from school,[129] potentially because of inconsistent access to resources (e.g., transportation, clothing) and supports needed to make it to school every day.[130]

Increasing family resources, then, may decrease chronic absenteeism among children from low-income households in Virginia. Additionally, expanding access to high-quality early childhood care and education may better prepare children for the transition to kindergarten, also promoting lower levels of chronic absenteeism. A 2015 study using a nationally representative sample of children found that children who attended center-based care for prekindergarten had 20 percent lower odds of chronic absenteeism in kindergarten.[131] Another recent study of subsidy receipt in Illinois found that children who received subsidies and used them to attend licensed child care had lower rates of absenteeism in seventh and eighth grade compared to eligible non-recipients.[132]

We do not have a baseline for chronic absenteeism in kindergarten among children who do not receive high-quality child care, and so we do not estimate the expected reduction in chronic absenteeism as a result of Virginia's investments, however we expect that rates of chronic absenteeism would be reduced among children who receive access to high-quality ECCE.

Academic Achievement

Early childhood education can help children start school ready to succeed, and reduce the need for special education services, and these factors—paired with better socioemotional skills and more adequate family resources—may better equip children to succeed in school across multiple domains.

There is significant variability in the research connecting high-quality early childhood care and education with academic outcomes, such as reading and math skills. This variability may be a result of variation in the quality of care studied, and in part because differences in reading and math directly caused by early childhood education may fade out over time.[133] However, there is some evidence that high-quality early childhood care and education is associated with better math and reading skills beyond kindergarten.

- A study of a high-quality early childhood education program in Chicago found that children who participated in high-quality preschool had significantly higher reading and math scores at ages 12 and 14.[134]
- A study using a large sample of children recruited at birth found that participation in high-quality child care was associated with better cognitive and academic achievement at age 15.[135]
- A meta-analysis of early childhood education programs found that both boys and girls benefit from participation in high-quality early childhood education programs, resulting in slightly higher cognitive and achievement outcomes.[136]

Importantly, research has shown that increasing family economic resources can also increase academic achievement. An analysis of seven studies conducted in the 1990s found that a $1,000 increase in family annual income increases child achievement—measured through math, vocabulary, and reading assessments—by 5 to 6 percent of a standard deviation.[137] As a result, the combined impacts of early childhood leaning opportunities paired with increased family resources may have a bigger impact on childhood literacy and academic achievement than either pathway would alone.

Grade Retention

Child academic achievement is directly related to on-time grade progression. Children who cannot meet the basic expectations for a grade may have to repeat that year of education. Grade retention can help children catch up to their peers, at least temporarily,[138] but can also negatively impact child social relationships and increase the likelihood of dropping out of school,[139],[140] while also raising the costs for the school division and the state economy.[141]

Results of a meta-analysis of 22 experimental and quasi-experimental studies of high-quality early childhood education indicate that participation in high-quality early childhood care and education leads to an 8.3 percentage point decrease in grade retention.[142] This means that in Virginia, for every 1,000 more children who receive access to high-quality child care, we estimate that 83 fewer children will experience grade retention than if they had not received access to high-quality child care.

» Statewide, the additional SFY23 investment in ECCE provides 11,151 more children access to high-quality child care, therefore, in total we estimate that this will prevent 926 children from experiencing grade retention.

High School Graduation

High-quality early childhood care and education impact educational attainment from school entry, influencing a range of factors—school readiness, absenteeism, literacy, grade retention—which combined, can shape a child's educational experience. Participation in high-quality child care may happen 15 years before a child graduates high school, but because high-quality early learning opportunities paired with sufficient family resources work together to support a child throughout their education, participation in high-quality early childhood care and education can increase a child's likelihood of graduating high school.

Results of a meta-analysis of 22 experimental and quasi-experimental studies of high-quality early childhood education indicate that participation in high-quality early childhood care and education leads to an 11.4 percentage point increase in high school graduation.[143] This means that in Virginia, for every 1,000 more children who receive access to high-quality child care, we estimate that 114 more children will graduate high school than if they had not received access to high-quality child care.

» Statewide, the additional SFY23 investment in ECCE provides 11,151 more children access to high-quality child care, and so in total we estimate that this will result in 1,271 more children graduating from high school.

Importantly, children from families in poverty graduate high school at significantly lower rates compared to children from families who have never experienced poverty.[144] In Virginia's class of 2022, 92 percent of students graduated high school, but among those who did not, almost 60 percent came from economically disadvantaged families.[145] Virginia's investments, then—which also increase family access to resources and lift children out of poverty—may have an even bigger impact on high school graduation than access to high-quality early childhood care and education can have alone, meaning this may be an underestimate.

Adult Educational Attainment and Income

The impacts of high-quality early childhood care and education do not end once a child has completed their formal education. Instead, those early experiences—and the trajectory they started a child on—continue to shape outcomes into adulthood.

A longitudinal study found that children who attended Boston's public pre-K program as children enrolled in college directly after high school at a rate 8.3 percentage points higher than children who were not offered Boston's public pre-K program.[146] Another recent study using prospective, longitudinal data from an economically and geographically diverse sample found that although children who grew up in low-income households graduated college at lower rates compared to those in higher-income households, attending high-quality ECCE reduced disparities in college graduation rates.[147] Children from low-income households who spent 2 years in high-quality early childhood care and education graduated college at rates that were not statistically different from their higher-income peers.

The same study found that sustained attendance in high-quality early childhood care and education was also associated with higher wages in adulthood.[148] At age 26, individuals who grew up in higher-income households earned, on average, more than $12,000 more per year than individuals who grew up in low-income households. Months spent in high-quality child care, however, shrink this gap. Each 12-month period that children who grew up in low-income households spent in high-quality ECCE predicted an increase of $4,525 to annual salary, and after 2 years in high-quality ECCE, adult salaries are not statistically different between children who grew up in low- and high-income households.

We do not attempt to estimate adult outcomes in this report because there is limited consensus evidence, and because predicting income 26 years from now would rely on assumptions about inflation and the economy that we are unprepared to make. However, current evidence suggests that Virginia's investments in early childhood care and education have the potential to reduce disparities between children from low- and high-income households into adulthood, increasing the likelihood that children from low-income households will grow up to be adults with sufficient economic resources. Not only can this mean increased state tax revenue for Virginia, but it also means more children may be born in economically stable households. In this way, Virginia's investments in the children of this generation may positively impact the next generation of children.

Fiscal Impacts for Virginia from SFY23 Investments in ECCE

We estimate that the increase in investments to ECCE made in SFY23 will lead to 10,710 newly employed mothers of children under the age of 5, lift between 5,528 and 5,757 children under the age of 5 out of poverty, and improve child outcomes at every level of a child's education, helping children and families thrive. These positive impacts on individuals also generate fiscal impacts at the state level. For detailed methods, see Appendix A.

State Taxable Income

Within the 10,710 households in which a mother becomes employed as a result of access to affordable, high-quality child care, we estimate that family income will increase by between $30,306 and $41,205 per year. Statewide, increased family earnings will translate to higher state taxable income.

» In total, we estimate that new investments in ECCE will generate between $324.6 million and $441.3 million more in annual state taxable income.

TABLE 7:

Estimated New State Taxable Income

	NEW STATE TAXABLE INCOME
Low-end estimate	$324,585,088
High-end estimate	$441,319,875

Importantly, this estimate only includes new state taxable income from higher maternal employment. Actual increases to state taxable income may be even higher, because we cannot account for increases to family income that result from increased working hours, or that may result from career advancement related to more reliable and focused work attendance, as a result of consistent access to reliable child care.[149] We cannot estimate the economic impact of increased hours or work stability, therefore this increase in state taxable income should be considered an underestimate.

Statewide Disposable Income

Receipt of free or subsidized child care increases the disposable income for families who were previously paying for child care. Money that families previously spent on child care can instead be spent on other necessities such as healthy food, stable housing, and resources that support child development (e.g., books, toys, learning opportunities).

» Statewide, we estimate the new investments in ECCE increase annual family disposable income by $39,712,635.

Increased disposable income not only supports families and children, but it also contributes to the state economy (see State Tax Revenue below).

State Tax Revenue

Statewide, the increase in taxable income as a result of newly employed mothers is estimated to be between $324.6 million and $441.3 million per year. Given Virginia's income tax structure,[150] we can estimate increased state income tax revenue from newly employed mothers.

» In total, we estimate that new investments in ECCE will generate between $15.9 million and $22.6 million in annual state income tax revenue.

Newly employed mothers will also spend their earnings in ways that contribute to Virginia's sales tax revenue, as will families with new disposable income. Individuals with low income typically spend approximately 75 percent of their income on items subject to sales tax,[151] and therefore given Virginia's minimum sales tax rate of 5.3 percent,[152] we estimate an increase to state sales tax revenue from increased family earnings and disposable income.

» In total, we estimate that the new investments in ECCE will generate between $14.5 million and $19.1 million in annual sales tax revenue.

TABLE 8:

Estimated Increase to State Tax Revenue

	NEW STATE INCOME TAX REVENUE	NEW STATE SALES TAX REVENUE	TOTAL NEW STATE TAX REVENUE
Low-end Estimate	$15,905,715	$14,480,834	$30,386,549
High-end Estimate	$22,617,965	$19,121,042	$41,739,007

» Combined, we estimate that the new investments in ECCE will generate a total of between $30.4 and $41.7 million in new annual sales and income tax revenue.

Cost Savings from Child Poverty Reduction

We estimate that the increase in maternal employment that results from access to affordable child care will lift between 5,528 and 5,757 children under age 5 out of poverty. The average lifetime economic burden of childhood poverty in Virginia is estimated to be $1.8 million per child,[vii] because of the combined effects of disrupted development, poorer health, and the costs associated with increased crime, child homelessness, and child maltreatment.[153],[154]

Children who are lifted out of poverty because of Virginia's SFY23 investment still experience poverty early in development (prior to the investment), and we cannot predict whether children lifted out of poverty because of Virginia's investments remain out of poverty for the rest of their lives. Because Virginia's investment creates the potential for parents to remain employed and for children remain out of poverty, however, the economic impact of the SFY23 investment related to poverty reduction could be immense.

Cost Savings from Child Maltreatment Reduction

Although the literature does not provide clear enough data to estimate the extent to which child maltreatment will be reduced because of Virginia's investments in ECCE, we expect both child abuse and neglect to decrease. Reductions in child maltreatment would improve the mental and physical wellbeing of children in Virginia, while also reducing state costs. In 2021, there were 16,430 investigated and 2,124 substantiated cases of maltreatment among children under 5 in Virginia, with an estimated lifetime economic burden of $830,928 per-child.[155],[156]

Cost Savings from Special Education

We estimate that the access to high-quality early childhood care and education provided with the SFY23 investment will prevent the need for special education for 903 children. In Virginia, the average per-child special education cost is $4,359 per year.[157] We use this number to estimate the cost savings of preventing one year of special education receipt. Many children remain in special education for more than one year, therefore this cost avoidance reflects the per-year cost savings for prevention of special education receipt.

[vii] Per child cost of poverty was calculated by the Prenatal-to-3 Policy Impact Center using the Virginia statewide poverty cost estimate generated by Eppard et al. (2021), the number of births in 2019 in Virginia from CDC WONDER birth data, and the percentage of children under age 5 in poverty according to the 2019 American Community Survey (ACS).

TABLE 9:

Estimated Cost Avoidance of Lower Special Education Receipt Per Year

	NUMBER PREVENTED	TOTAL COSTS AVOIDED
Per 1,000 children	81	$353,073
Total new investment (11,151 children)	903	$3,936,105

Cost Savings from Grade Retention

As stated previously, we estimate that the access to high-quality early childhood care and education provided with the SFY23 investment will prevent grade retention for 926 children. In 2020, Virginia public schools spent an average of $12,905 per student.[158] To estimate the cost savings to the state for each prevented instance of grade retention, we use this value to calculate cost avoidance, however it is important to note that children who are held back enter the workforce later, resulting in additional losses to state tax revenue, and therefore this estimate may be an underestimate.[159]

TABLE 10:

Estimated Cost Avoidance from Lower Grade Retention

	NUMBER PREVENTED	TOTAL COSTS AVOIDED
Per 1,000 children	83	$1,071,115
Total new investment (11,151 children)	926	$11,950,030

Statewide Economic Benefit of High School Graduation

We estimate that the access to high-quality early childhood care and education provided with the SFY23 investment will result in 1,271 children graduating from high school who otherwise would not have graduated. Rigorous research demonstrates that the net benefit to the public of each high school graduate is $313,000.[160] This estimate considers the impacts of education on greater productivity, higher earnings and taxes paid, lower public assistance receipt, lower crime involvement, and other social benefits.

TABLE 11:

Estimated Benefits from Higher High School Graduation Rates

	ADDITIONAL GRADUATES	TOTAL BENEFIT
Per 1,000 children	114	$35,682,000
Total new investment (11,151 children)	1,271	$397,823,000

Statewide Economic Benefit of Higher Adult Salary Attainment

We expect higher income attainment among adults who attended high-quality early childhood care and education, which would lead to increased state tax revenue for any children who continue to live and work in Virginia.

Economic Impact of a Stable Child Care Industry

Without consistent access to safe and reliable child care, parents miss work, turn down promotions, and even leave the workforce entirely. Nationwide, 26 percent of parents reported quitting a job because of child care issues in 2022.[161] When parents cannot go to work, businesses face lower revenues, extra costs related to hiring and absenteeism, and state tax revenues drop.

Virginia's investments in ECCE support children and families, but they also support child care programs. Higher reimbursement rates help keep child care program doors open, and teacher incentives improve early childhood educator retention. Combined, these initiatives maximize the child care slots available for Virginia families, providing reliable child care that enables parents to go to work. The Virginia economy cannot function without a stable child care industry, and ensuring there is a child care system that can meet family demand is necessary for continued economic growth and stability in Virginia.

We cannot reliably estimate the economic impact that this investment will have on the economy through child care industry stabilization, but in Virginia, the sum loss to the economy because of insufficient infant and toddler care is estimated to be $3.1 billion per year, and that loss represents only a portion of the total burden of insufficient child care for children under age 5.[162] Investments made in SFY23 may not be enough to fully stabilize Virginia's child care industry, but by supporting early childhood educators to remain in the field, and adequately reimbursing child care programs for their services, Virginia's investments expand access to child care beyond CCSP and Mixed Delivery in ways that will allow parents to remain employed, businesses to remain fully staffed, and help Virginia's economy continue to grow.

Economic Impact from Care for School-Age Children Provided by SFY23 Investment

Estimates derived from higher maternal employment for mothers of children under age 5 (e.g., state tax revenue, child poverty) are based on the full $309 million additional investment in SFY23, but other estimates in this report are calculated using the 11,151 children under the age of 5 who access high-quality care because of this increased investment. Importantly, however, this $309 million investment also provides new access to care for a monthly average of 3,939 children age 5 and older.

The care those children receive is paid for using a portion of the $309 million investment, but because the focus of this report is on young children—who we expect to have the greatest need for care and be most significantly impacted by high-quality care—we do not estimate return on investment related to school-age children in this report. Child care provided to school-age children through the SFY23 investment supports working parents, stabilizes child care program revenue, and provides safe, high-quality care for children.

Because we do not subtract the cost of care for school-age children from the full investment discussed in this report or calculate positive outcomes related to care for school age children, we can consider the return on investment calculated in this report to be an underestimate.

Summary of Benefits to Children, Families, and the Economy

Virginia's new investments in early childhood care and education in SFY23 provide affordable, high-quality child care to more than 11,100 children under the age of 5. Through increased family resources and high-quality early learning opportunities, these investments positively impact children, families, and the state economy. A summary of the estimated benefits and cost savings is found in Table 12.

In SFY23, Virginia invested an additional $309 million in child care, and we estimate that in the following year, the Virginia economy will see a return on investment of at least $364.3 million from increased family earnings and disposable income, of which at least $30.4 million will go directly back to the state in the form of new state tax revenue. Although we estimate this return on investment only for a single year, these mothers may stay employed, and may even advance in their careers to the point where they no longer need CCSP or Mixed Delivery to pay for child care, continuing to contribute to the economy and to state tax revenue every year.

Critically, however, early investment can shift the trajectory of a child's life, improving health and development in positive ways that generate returns well beyond the time children spend in care. Over the rest of a child's life, we estimate that the $309 million invested in SFY23 will return $15.9 – $63.1 million in cost savings from prevention of grade retention and special education receipt, and $397.8 million in economic benefit from increased high school graduation.

We cannot reliably estimate the total cost savings related to reductions in child poverty or child maltreatment, but we know that reductions in both are associated with better mental and physical health for the rest of a child's life, at huge cost savings to the state.

Summing only the cost savings and economic benefits that we can reliably estimate, the additional $309 million invested in ECCE in SFY23 generates at least $778.0 million in combined cost savings and economic benefits over the lifetime of the 11,151 children under age 5 who receive access to affordable, high-quality care in SFY23 as a result of Virginia's investments. We expect this is an underestimate, because it does not include the enormous cost savings from poverty reduction and child maltreatment, the economic benefits of a stable child care system, or the economic impact of the investment on school-age children.

Because this investment occurs early in a child's life, it's not just an investment in child care. It's an investment in healthy child development, and the additional $309 million spent in SFY23 contributes to 11,151 more children under age 5 spending their earliest years healthy, safe, and with the nurturing and stimulation they need to learn and thrive. The development that happens during this time supports wellbeing and educational success that will persist throughout the rest of their lives.

TABLE 12:

Summary of Estimated Benefits and Cost Savings from Virginia's SFY23 Investments in ECCE

	EXPECTED OUTCOME	ESTIMATED ECONOMIC IMPACT
Maternal employment	10,710 more employed mothers	$324.6 - $441.3 million more in annual income
Children in poverty	Between 5,528 and 5,757 children under age 5 lifted out of poverty	Lifetime cost savings of $1.8 million per child permanently lifted out of poverty*
Disposable income	Families have more disposable income	$39.7 million per year more disposable income
State tax revenue	More sales and income tax revenue	$30.4 - $41.7 million more in state tax revenue
Health and wellbeing	Better child and family wellbeing	*
Child maltreatment	Lower rates of abuse and neglect	Lifetime of cost savings of $830,928 per child prevented from experiencing maltreatment*
School readiness	2,007 more children enter school ready to succeed	*
Special education receipt	903 fewer children receive special education services	$3.9 million in cost savings *per year*
Chronic absenteeism	Lower rates of chronic absenteeism	*
Academic achievement	Better reading and math skills	*
Grade retention	926 fewer children retained a grade	$12.0 million in cost savings
High school graduation	1,271 more children graduate high school	$397.8 million in societal benefit
College graduation	More children graduate from college	*
Income at age 26	Higher income at age 26 for individuals who attended high-quality ECCE	Positive impact on state economy from increased tax revenue*
Child care industry stabilization	More child care programs remain open, lower educator turnover, more parents who need care can access it	Positive impact on state businesses and increased state tax revenue*
Child care for school-age children	3,939 children 5 and older receive access to high-quality child care	Positive impact on families, children, and economy*

Note: *Reliable estimate for total cost savings/benefit cannot be calculated; May be missing information for either number of individuals impacted or cost savings/benefit per individual.

Estimated Impacts on Educational Attainment for Increase in Children Enrolled

Throughout this chapter, we present estimates for educational impacts based on the 11,151 more children under age 5 who attend high-quality ECCE services each month through CCSP or Mixed Delivery in SFY23 compared to SFY19. Mixed Delivery does not separately track attendance and enrollment, but in CCSP, the number of children who attend high-quality child care represents only a portion of the children who are enrolled. Although only a small percentage of children who are enrolled in care do not attend each month, the full number of children enrolled represents Virginia's commitment to meeting family demand for care. In SFY23, a monthly average of 12,184 more children were enrolled in CCSP and Mixed Delivery compared to SFY19.

A child may not attend care in a given month for any number of reasons (e.g., the child or a family member may be sick, they may have transportation difficulties, the family may experience a job change and not need care that month, etc.), but because Virginia has committed to meeting family demand for care, the receipt of a subsidy provides them with the option of attending child care. If all children who were enrolled in Mixed Delivery and CCSP attended child care every month, the estimated educational impacts would be even higher that what is shown in Tables 9 - 12. We share estimates derived from the increase in children enrolled in CCSP and Mixed Delivery from SFY19 to SFY23 in Table 13.

TABLE 13:

Estimated Benefits & Cost Savings for Educational Outcomes; Increase in Children Enrolled, SFY19 to SFY23

	EXPECTED OUTCOME	ESTIMATED ECONOMIC IMPACT
School readiness	2,193 more children enter school ready to succeed	*
Special education receipt	987 fewer children receive special education services	$4.3 million in cost savings *per year*
Chronic absenteeism	Lower rates of chronic absenteeism	*
Academic achievement	Better reading and math skills	*
Grade retention	1,011 fewer children experience grade retention	$13.1 million in cost savings
High school graduation	1,389 more children graduate from high school	$434.8 million in societal benefit
College graduation	More children graduate from college	*
Income at age 26	Higher income at age 26 for individuals who attended high-quality ECCE	Positive impact on state economy from increased tax revenue*

Note: *Reliable estimate for total cost savings/benefit cannot be calculated; May be missing information for either number of individuals impacted or cost savings/benefit per individual.

Estimated Impacts on Educational Attainment for Total Children Enrolled

In this report, we focus primarily on calculating the increase in positive outcomes from increasing the investment in ECCE. In total, however, Virginia provided free or subsidized child care to a monthly average of 22,871 children under the age of 5 through CCSP and Mixed Delivery—as well as 15,313 children age 5 and older—using the full $520 million investment in SFY23. Table 14 shows the full expected impact of the investments in child care on educational outcomes for all children under 5 enrolled in CCSP or Mixed Delivery, with the presumption that all children enrolled in care attend high-quality care.

TABLE 14:

Estimated Benefits and Cost Savings for Educational Outcomes; Total Children Enrolled in SFY23

	EXPECTED OUTCOME	ESTIMATED ECONOMIC IMPACT
School readiness	4,117 more children enter school ready to succeed	*
Special education receipt	1,853 fewer children receive special education services	$8.1 million in cost savings per year
Chronic absenteeism	Lower rates of chronic absenteeism	*
Academic achievement	Better reading and math skills	*
Grade retention	1,898 fewer children experience grade retention	$24.5 million in cost savings
High school graduation	2,607 more children graduate from high school	$816.0 million in societal benefit
College graduation	More children graduate from college	*
Income at age 26	Higher income at age 26 for individuals who attended high-quality ECCE	Positive impact on state economy from increased tax revenue*

Note: *Reliable estimate for total cost savings/benefit cannot be calculated; May be missing information for either number of individuals impacted or cost savings/benefit per individual.

CHAPTER 8:

High-Quality ECCE as a Tool to Reduce Disparities

Throughout this report, we share how high-quality early childhood care and education (ECCE) can improve outcomes for young children and their families, lifting families out of poverty, improving health and wellbeing for parents and children, and setting children on a successful academic trajectory. By substantially increasing access to ECCE for children across the state through CCSP and the Mixed Delivery Program in SFY23, Virginia has set more than 11,100 additional children up for success.

Across the United States, historically and presently, access to high-quality early learning opportunities has not been shared equally across the population. Current research suggests that children in families with low incomes are less likely to be enrolled in formal, center-based child care, or in high-quality care than their counterparts with higher incomes.[163] Similarly, Black, Hispanic, and non-English-speaking children have lower rates of access to high-quality ECCE than their White and English-speaking counterparts, respectively.[164]

Correspondingly, both children from families with low incomes and children of color (who are also disproportionately from families with low incomes) have worse outcomes in many domains than children who are White and/or from families with higher incomes.[165] In Virginia, Black and Hispanic children have lower rates of reading and math proficiency,[166] high school graduation,[167] and college attendance compared to White children.[168]

Access to high-quality education improves outcomes for children—but, can access to high-quality ECCE close persistent gaps in outcomes for children that are associated with race or poverty? To address this question, we share the research on the extent to which child care has been shown to reduce disparities, first, and then examine who receives access to ECCE through Virginia's CCSP and Mixed Delivery Program to assess the overall potential for Virginia's investments in ECCE to improve outcomes for all children, while also specifically closing outcome gaps for children from marginalized groups.

Does Participation in High-Quality ECCE Reduce Disparities in Outcomes?

Some research suggests that child care subsidies may facilitate greater access to formal child care settings,[169] but subsidies are not consistently associated with improvements in the quality of care that low-income children receive, likely in part because reimbursement rates historically have been too low.[170],[171] Given that Virginia has increased child care subsidy reimbursement rates to the true cost of quality and Virginia is implementing new quality monitoring and accountability measures through VQB5, Virginia's investments have the potential to provide children across the state with new access to high-quality early learning and care.

No experimental studies have directly assessed the ability of child care subsidies to close gaps in indicators of child and family wellbeing by race or ethnicity. However, as we have demonstrated throughout this report, both increased family resources and access to high-quality ECCE positively impact children. For this reason, despite limited evidence to date that child care subsidy participation reduces disparities, there is reason to believe that Virginia's investments in affordable and high-quality child care may help reduce disparities in educational outcomes among children who participate. Virginia's ECCE investments present an important opportunity to build the evidence base in what works to reduce disparities in wellbeing outcomes across race and ethnicity groups by rigorously evaluating the impact of state ECCE investments.

Who Participates in CCSP and Mixed Delivery?

Though limited research exists to directly demonstrate that high-quality child care reduces disparities in academic, economic, or wellbeing outcomes, we know that high-quality ECCE promotes positive outcomes, and therefore another approach to reducing disparities is to target services specifically to children from marginalized groups.

CCSP and the Mixed Delivery Program both serve families with household incomes below the state median income, with eligibility cutoffs of 85 percent SMI ($81,444 per year for a family of three) and 200 percent of the FPG ($49,720 per year for a family of three), respectively. By definition, then, these programs have the potential to reduce disparities in outcomes between children from families with low incomes and children from families with higher incomes.

In SFY23, more than 60 percent of children under age 5 who enrolled in CCSP identify as Black (see Table 15), despite Black families making up only 20 percent of Virginia's population.[172] Mixed Delivery collects race/ethnicity information using different categories than CCSP, but the pattern is similar, with more than half of children enrolled identifying as Black or Hispanic (see Table 16). Because Black and Hispanic children are more likely to be from families with low incomes and Black and Hispanic families have been historically underserved by high-quality ECCE, serving a greater proportion of children who are Black or Hispanic than the proportion of Black or Hispanic children in the overall population provides the opportunity for Virginia's investments to reduce disparities in outcomes.

TABLE 15:

Race/Ethnicity of Children Under Age 5 Enrolled in CCSP in SFY23

	PERCENT OF ENROLLED
American Indian/Alaska Native	0.7%
Asian	2.5%
Black, non-Hispanic	59.9%
Black, Hispanic	2.7%
Native Hawaiian/Pacific Islander	0.5%
White, non-Hispanic	27.1%
White, Hispanic	6.2%
Unknown/Missing	0.2%

Note: Native Hawaiian/Pacific Islander, Asian, and American Indian/Alaska Native groups include children who identified both as Hispanic and not Hispanic.

TABLE 16:

Race/Ethnicity of Children Enrolled in Mixed Delivery in SFY23

	PERCENT OF ENROLLED
American Indian/Pacific Islander	0.1%
Asian/Native Hawaiian/Pacific Islander	2.9%
Black	41.2%
Hispanic	9.1%
White	41.7%
Multiracial	4.9%

Note: Mixed Delivery race/ethnicity data are presented separately from CCSP because the two programs collect race/ethnicity using different categories.

Program Implementation Decisions Affect Access

Research highlights important variation in how key aspects of the child care subsidy application process are enacted by local agencies that can affect who has access, which in turn impacts the potential of these programs to reduce disparities. Reducing administrative burdens in providing social services has been identified as a key strategy for promoting equal access given the long-standing disproportionate impact of such burdens on immigrant communities and racial/ethnic minoritized groups.[173],[174],[175]

The child care subsidy system can play an active role in addressing the impacts of opportunity gaps experienced by families of color and immigrant families, providing economic support and promoting child development.[176] Virginia has taken a number of best-practice steps identified by previous research toward a system that can reduce disparities, including setting a higher income eligibility threshold and ensuring that the child care provided to all families is high quality. Other steps Virginia can take to make child care more accessible and equitable include:

» Providing a range of flexible options for connecting families with affordable child care,

» simplifying application, reporting, and verification requirements,

» actively and directly engaging with parents, providers, and caseworkers to identify barriers in the subsidy system,

» better coordination and alignment between subsidy programs and other support programs (e.g., Medicaid), and

» collecting data and use data to make informed decisions moving forward.

Overall, Virginia's investments in ECCE target families with low incomes and serve a high proportion of Black and Hispanic children, representing key groups that have been historically underserved by high-quality child care and persistently have worse outcomes across economic, health, and academic domains than their peers.[177] Previous research has not fully evaluated child care as an evidence-based strategy for reducing racial and ethnic disparities in child outcomes, however, Virginia's implementation of relatively new strategies for ensuring child care is high quality presents an opportunity to leverage child care as a tool to improve outcomes for all children while also reducing disparities in outcomes for children.

CHAPTER 9:

Sustaining and Building on Virginia's Investments in ECCE

Durable Impacts Require Sustainable Funding

The estimates discussed in this report are based on the total of $309 million additional funds invested into CCSP and Mixed Delivery in SFY23. Of this, $275 million comes from emergency federal funding which will begin to expire in 2023. The human impact of this investment is huge—thousands of children lifted out of poverty and set on trajectories that result in improved outcomes at every step of education and beyond—but the children and families of Virginia will only see those impacts if Virginia maintains the current level of investment. This means Virginia needs to identify $275 million per year in funding to simply maintain the same level of access to affordable to high-quality child care and benefit from the accompanying return on investment, while continuing current state investments in ECCE. If the investment is not maintained and grown, children, families, and the state economy will suffer.

Importantly, a growing economy means growing demand for child care. Federal investments have allowed the state to address more of the parental demand for child care in SFY23, but as the economy continues to be restored and thrive, the demand for affordable child care will continue to grow. CCSP and Mixed Delivery enrolled a monthly average of 22,871 children under the age of 5 in SFY23 in affordable child care, more than double the number enrolled in SFY19, but they were only funded to enroll approximately 9 percent of potentially eligible children. For Virginia to support the continued growth of the economy, additional investment will be needed to ensure all families who need child care can afford it, and to ensure that the child care children receive is high quality.

Ongoing Data Collection Can Support Successful Implementation

Virginia's investment in ECCE positively impacts children, families, and the economy, and maintaining—and even growing—the current level of investment will continue to support children and families while also promoting economic growth for the state economy. Our estimates indicate that investing in ECCE is a sound investment. The return on investment estimated within this report is based on the strongest available evidence, but the realized returns in Virginia may differ from these estimates because of the wider range of ages served, the length of time children spend in publicly funded care, the quality of child care in Virginia, or because of other factors specific to the Virginia landscape.

To identify the true, ongoing return on investment in Virginia, ongoing data collection and analysis should be carried out to assess both the implementation of the reforms, as well as the associated outcomes. Understanding the true impact on children, families, and the economy can provide additional justification for investing in affordable, high-quality ECCE at rates that match parent demand for care, and can help Virginia's child care system to be responsive to new and shifting needs.

In Virginia's comprehensive ECCE data system, LinkB5, the foundation has been set to tie students' early experiences and the quality of interactions in early childhood classrooms to long-term outcomes. As of the 2022-2023 school year, LinkB5 contains data on over 2,600 sites, 8,000 classrooms, 16,600 teachers, and 14,000 CLASSTM observation scores; this allows Virginia to link a student with the experiences in that classroom. VDOE assigns every student a unique ID upon entry into VPI or public Kindergarten that follows them throughout their entire K-12 career and beyond. In most cases, unique IDs are not assigned in non-public school settings, but probabilistic matching can be performed to retroactively connect a child's early experiences, using LinkB5 data, to their K-12 school records, tying a child's early education experience to school outcomes like grade repetition and special education receipt. Using Virginia's longitudinal data system (VLDS), education data can then be linked at the individual-level to long-term outcomes, such as higher education involvement, workforce participation, or SNAP/TANF recipiency. In 2024, entering classroom lists with student data will be mandatory for all publicly funded ECCE sites, furthering Virginia's ability to draw connections between early education and long-term outcomes for tens of thousands of students across the commonwealth.

A data collection system that links children and their outcomes to the child care program they attended can provide Virginia with valuable information about its investments. For example, if VDOE assigns a unique identifier to a child who attended CCSP or Mixed Delivery and maintains that identifier through high school graduation or even through attendance to public college, Virginia would be able to assess how the quality of the child care a child receives—and how long a child receives that care—influences outcomes throughout the rest of a child's education.

Data collection that interfaces with the LinkB5 system is already underway through the Mixed Delivery Program, but expanding data collection to all children in publicly funded care could allow Virginia to measure the full impacts of their ECCE investment. The child care industry is a blend of public and private organizations working together to care for children and families, and to best support monitoring of the system, it is necessary to develop data systems that can bridge both the public and private sector.

By collecting and tracking data starting in early childhood—including the details of a child's experience in publicly funded ECCE—and continuing data collection through the rest of a child's education, Virginia could evaluate the direct impacts of their investments on children and the state. We recommend that Virginia collect and evaluate the following indicators:

TABLE 17:

Recommendations for Ongoing Data Collection

INDICATORS RELATED TO CHILD CARE AVAILABILITY, AFFORDABILITY, AND QUALITY	
Subsidy/Mixed Delivery Unmet Demand	Waitlist for CCSP and Mixed Delivery (note that waitlists differ across programs, so evaluating waitlists from both programs at set timepoints, e.g., quarterly, may be most effective)
Subsidy/Mixed Delivery Supply	» Number and characteristics of child care programs participating in CCSP and/or Mixed Delivery » Number of children enrolled in CCSP/Mixed Delivery » Proportion of operational capacity taken up by CCSP/Mixed Delivery
Subsidy/Mixed Delivery Takeup	Proportion of potentially eligible children in Virginia who use CCSP or Mixed Delivery
Cost of quality	» Annually update the cost estimation model to ensure Cost of Quality estimates remain up-to-date » Affordability of high-quality child care (i.e., what percentage of income would a family at state median income spend paying for care at the Cost of Quality?)
Child care quality	» Number of child care programs participating in VQB5 » VQB5 results » CLASS observation scores (obtained during VQB5 rating) and growth over time (e.g., average CLASS score for a child care program, each time the program is assessed) » Early childhood educator wages and access to benefits by program type and educator experience/education
Child care industry stability	» Early childhood educator turnover/retention » Current operating capacity (number of children child care programs are staffed for and able to serve, as measured through LinkB5) versus licensed capacity for publicly funded programs (collected annually, point in time) » Rate of child care program opening/closure
INDICATORS RELATED TO CHILD OUTCOMES	
School readiness	School readiness across all current Virginia metrics, linked to quality and time spent in ECCE
Special education receipt	Special education evaluation and receipt, linked to quality and time spent in ECCE
Grade retention	Grade retention (yes, no) and which grade retained (first through 12th grade), linked to quality and time spent in ECCE
Academic achievement	Academic achievement on state standardized tests and assessments, linked to quality and time spent in ECCE
High school graduation	High school graduation (yes, no) linked to quality and time spent in ECCE

Note: This table represents a complete list of data collection recommendations, as such it includes many data elements already collected by Virginia.

TABLE 17:

Recommendations for Ongoing Data Collection

INDICATORS RELATED TO CHILD CARE AVAILABILITY, AFFORDABILITY, AND QUALITY	
Subsidy/Mixed Delivery Unmet Demand	Waitlist for CCSP and Mixed Delivery (note that waitlists differ across programs, so evaluating waitlists from both programs at set timepoints, e.g., quarterly, may be most effective)
Subsidy/Mixed Delivery Supply	» Number and characteristics of child care programs participating in CCSP and/or Mixed Delivery » Number of children enrolled in CCSP/Mixed Delivery » Proportion of operational capacity taken up by CCSP/Mixed Delivery
Subsidy/Mixed Delivery Takeup	Proportion of income-eligible children in Virginia who use CCSP (under 85% SMI)/ Mixed Delivery (under 200% FPG)
Cost of quality	» Annually update the cost estimation model to ensure Cost of Quality estimates remain up-to-date » Affordability of high-quality child care (i.e., what percentage of income would a family at state median income spend paying for care at the Cost of Quality?)
Child care quality	» Number of child care programs participating in VQB5 » VQB5 results » CLASS observation scores (obtained during VQB5 rating) and growth over time (e.g., average CLASS score for a child care program, each time the program is assessed) » Early childhood educator wages and access to benefits by program type and educator experience/education
Child care industry stability	» Early childhood educator turnover/retention » Current operating capacity (number of children child care programs are staffed for and able to serve, as measured through LinkB5) versus licensed capacity for publicly funded programs (collected annually, point in time) » Rate of child care program opening/closure
INDICATORS RELATED TO CHILD OUTCOMES	
School readiness	School readiness across all current Virginia metrics, linked to quality and time spent in ECCE
Special education receipt	Special education evaluation and receipt, linked to quality and time spent in ECCE
Grade retention	Grade retention (yes, no) and which grade retained (first through 12th grade), linked to quality and time spent in ECCE
Academic achievement	Academic achievement on state standardized tests and assessments, linked to quality and time spent in ECCE
High school graduation	High school graduation (yes, no) linked to quality and time spent in ECCE

Note: This table represents a complete list of data collection recommendations, as such it includes many data elements already collected by Virginia.

Given the scale of Virginia's intervention, in addition to targeted data collection, it may be possible to assess the impact of sustained investment at the population level. For this reason, we also recommend that Virginia track the following statewide indicators in relation to income eligibility and number of children served:

TABLE 18:

Recommendations for Tracking Statewide Indicators

STATEWIDE INDICATORS	
Maternal employment	Maternal employment rate by income level
Child poverty	Child poverty rate
Child maltreatment	Rates of investigation and substantiation for both abuse and neglect

We estimated the impacts shared throughout this report based on Virginia's current level of investment and the current state of CCSP and Mixed Delivery programs. As such, the continued relevance of these estimates relies on maintaining the program enhancements made to CCSP and Mixed Delivery which expand availability, affordability, quality, and choice of child care for Virginia families. In Table 19, we list specific programs and policies that are central to maintaining the positive impacts discussed in this report.

TABLE 19:

CCSP and Mixed Delivery Program Policies to Maintain ROI

PROGRAM POLICY	DETAILS OF CURRENT IMPLEMENTATION
Expanded income-eligibility	Income eligibility at 85 percent SMI for CCSP (for children under age 6) and 200 percent FPG for Mixed Delivery
Affordable copayments for families	Reduced or eliminated copayments - $0 for Mixed Delivery, and capped at 7% family income for CCSP ($0 for families under 100% FPG)
Reimbursement rates that adequately compensate programs for quality care	Reimbursement rates for both CCSP and Mixed Delivery set using a cost estimation model that considers the cost of delivering quality child care
Meeting family demand for care	Elimination of CCSP waitlist, funding all slots needed to meet parent demand for affordable care
Provider-friendly payment practices	In Mixed Delivery, child care programs paid for care based on enrollment, rather than attendance
Quality improvement	Child care quality initiatives that include financial incentives to increase educator retention and mandatory participation in VQB5,
Expand access to care for infants and toddlers	Enhancements to Mixed Delivery Program allowed Mixed Delivery care to be offered to infant and toddlers; CCSP expanded access to affordable care for infants and toddlers by eliminating the waitlist and funding all eligible family demand for infant/toddler care

Data Can Inform Future Changes to Virginia's Child Care Programs

Ongoing data collection provides insight into how Virginia's investments impact children, families, and the economy, but data can also provide useful information about whether or not additional program changes are needed to ensure sufficient access to high-quality care for families and a stable child care industry for the state.

Raising income eligibility for CCSP to 85 percent SMI for children under age 5—and funding all eligible slots—were historic expansions, and they still might not be enough. The child care system is a balancing act between early childhood educator wages, family income, and child care program revenue, and to ensure that children receive high-quality care and the child care industry continues to operate will require Virginia to be responsive as the economy and the child care industry continue to evolve. To meet ongoing parent demand for affordable child care and to ensure family choice, Mixed Delivery may need to have the same eligibility criteria as CCSP, and both may need a higher income eligibility threshold.

Improving child care program quality requires high-quality early childhood educators who will only remain in the field if they are competitively compensated. If child care programs raise wages for early childhood educators in the absence of expanded income eligibility for CCSP and Mixed Delivery, more families may be priced out of the market. On the other hand, if educator wages remain low, Virginia may need to increase RecognizeB5 financial incentives or find other ways to raise early childhood educator wages to ensure child care programs remain fully staffed. In either case, additional funding—beyond the $309 million that is the focus of this report—may be needed to ensure a stable child care system that can support the Virginia economy.

Virginia's SFY23 investments expand access to child care for eligible families, but they are also designed to create a stable, high-quality child care industry in Virginia. The investments support industry stability by ensuring child care programs are paid adequately for the services they provide, that programs have what they need to invest in child care quality, and by promoting the hiring and retention of high-quality early childhood educators. These efforts work together to ensure that child care programs can remain open, offer high-quality care, and are staffed at levels to provide child care to all children in Virginia who need it, whether families participate in CCSP, Mixed Delivery, or pay for child care out-of-pocket.

For industry stabilization to occur, each lever used by Virginia has to work as intended: true cost of quality reimbursement rates must be adequate, and a significant percentage of child care slots offered by a child care program must pay the true cost of quality—either through subsidy or Mixed Delivery reimbursement, or private pay—to ensure sufficient program revenue and to ensure that educator wages are high enough to promote hiring and retention. Virginia can track indicators related to child care industry stability such as early childhood educator wages and retention, the difference between licensed capacity and operating capacity, and the rate of child care program opening/closure to assess if the investments are adequately supporting industry stability. Using data as a guide, Virginia can then adjust policies and programs as needed (e.g., raising true cost of quality reimbursement rates, expanding eligibility, etc.).

The child care industry is a system of balanced parts, and as both the industry and family needs evolve over time, Virginia should keep a close eye on the data and implement new program changes in response to state and family needs. By implementing multiple strategies, tracking their progress, and being responsive to state needs by relying on changes in strategy and increased funding when necessary, Virginia can achieve a stable child care industry that supports children, families, and businesses.

CHAPTER 10:
Conclusion

Key State Investments Expand Availability of Affordable, High-quality Child Care in Virginia

Using a combination of new state and federal funding, Virginia invested $309 million into increasing the availability, affordability, and quality of child care for Virginia families, while also providing parents with choice to select care that best meets family needs. These investments expanded CCSP and Mixed Delivery, providing affordable, high-quality child care to 11,151 new children under age 5 in SFY23.

Through these investments, Virginia more than doubled the number of children served by these two programs in SFY19, and more than doubled funding for these programs to serve these additional children. Additionally, through reimbursement rates that support the true cost of quality and increase provider revenue, and a quality improvement program that both increases program quality and supports teacher retention, these investments may raise child care quality and availability for all children in Virginia.

Continued State Investment is Needed to Maintain Positive Impacts on Children, Families, and the Economy

Virginia's new investments support children, families, and the economy, but they are also temporary. $275 million of the $309 million investment comes from temporary pandemic funds, which will begin to expire in 2023. To maintain and grow the parent-driven enhancements to CCSP and Mixed Delivery, the state will need to grow its current state investments in ECCE to ensure that access to affordable, high-quality child care continues to meet family demand.

Access to Affordable to High-Quality Child Care Benefits Children and Families in Virginia

Investments in affordable, high-quality early childhood care and education increase family resources and expand access to early learning opportunities for children, promoting healthy child development and setting children up for better outcomes across the rest of their life.

We estimate that Virginia's investments in SFY23 will lead to 10,710 more employed mothers, lift as many as 5,757 children under the age of 5 out of poverty, and improve child and family wellbeing. Because of the SFY23 investment in children's early education, we also estimate that 2,007 more children will enter school with the skills to succeed, and this will kick off a cascade of better outcomes across children's lives including reduced need for special education, lower chronic absenteeism, better math and reading, lower grade retention, better high school and college graduation rates, and higher salaries in adulthood.

Child Care is a Good Investment

Child care is a good investment: It promotes positive outcomes in children and families, while also supporting the economy. The investment made this year to provide access to high-quality ECCE for 11,151 children under age 5 will continue to benefit those children and families—and as a result, benefit the economy—for years. Parents may continue working at the jobs they started because of affordable child care, and children will succeed in every level of education, saving the state money at every step until they enter the workforce as adults with more skills and a higher salary. In this way, the SFY23 investment will continue to positively benefit the Virginia economy even decades from now.

We estimate the additional $309 million invested in SFY23 will generate a return on investment of at least $364.3 million in the next year from increased family earnings and disposable income, of which at least $30.4 million will go directly back to the state in the form of new state tax revenue. Because early investment in family resources and high-quality early learning opportunities supports health child development, we estimate that the new SFY23 investment will return at least an additional $15.9 million in cost savings and $397.8 million in economic benefit across the rest of a child's life.

These estimates indicate that the return on investment from the $309 million invested in SFY23 will substantially exceed the initial investment. It is important to remember that these conservative estimated returns may be an underestimate, because they do not account for the impact on child health and wellbeing, positive benefits to school-age children, or even the positive impact this investment can have on the child care industry, which are significant but outside the scope of this study. In addition to supporting children and families served by CCSP and Mixed Delivery, the changes implemented by both programs raise wages for early childhood educators and increase revenue for child care programs, expanding access to high-quality child care for all families in Virginia.

Available, affordable, and high-quality early childhood care and education promotes healthy child development and supports a lifetime of positive outcomes for children and families. If Virginia maintains the full $309 million annual investment—including continuing the expiring federal investment with $275 million per year in state funds—or even grows the investment further to track with parental demand, that money will act as an investment in the economy, paid back with increased tax revenue, a stable child care industry that supports the workforce, and children and families who thrive across the life course.

APPENDIX A:

Methods

Quantifying Virginia's Additional Investment in ECCE

To estimate the impacts of Virginia's additional SFY23 investment, we quantify the additional investment in two ways:

- To estimate the economic impact of access to affordable child care, we quantify the additional investment as the increased funding put toward the Child Care Subsidy Program (CCSP) or Mixed Delivery in SFY23 ($520.4 million) compared to SFY19 ($211.0 million). The total additional investment made in SFY23 is $309 million.
- To estimate the impact on child outcomes of participation in high-quality ECCE, we quantify the additional investment as the increase in the monthly average of children under age 5 served in SFY23 (21,058) compared to SFY19 (9,907). The total increase in children under age 5 served by Mixed Delivery and CCSP is 11,151.

Because affordable, high-quality child care through CCSP or Mixed Delivery should impact families and children in similar ways, we do not estimate outcomes separately for CCSP or Mixed Delivery. Instead, we look at the total combined investment put toward CCSP and Mixed Delivery ($309 million) and the total increase in children under age 5 served (11,151) to estimate outcomes for Virginia's additional investments in ECCE as a whole.

Estimating the Economic Impact of Access to Affordable Child Care

Data Set

To estimate the economic impact of child care received through CCSP and Mixed Delivery, we used data from the U.S. Census Bureau's 2019 and 2021 American Community Survey (ACS) 1-Year PUMS files. ACS data are collected nationwide each year, sampling over 3.5 million households, whose responses are weighted to estimate the complete national and state populations in the US.[178] The data are often used to allocate public funding and understand the need for government services and programs across the country. The ACS collects a range of demographic and economic characteristics from each respondent.[179,180]

The most recent ACS data available are from 2021. Because it is the most recent data available, we use the 2021 ACS data when estimating impact in 2023.

Determining Subsidy Eligibility

Defining Families

In Virginia, subsidy eligibility is determined at the family level. The 2023 subsidy manual mandates that a family unit should include all "parents" defined as "biological parents including the father of a child born out-of-wedlock, if paternity can be established; adoptive parents; stepparent; legal guardian(s); adult(s) standing in loco parentis for children under age 18; and persons cohabiting with the natural or adoptive parent of a child under age 18," and all parents' children under age 18.

ACS data are collected at the household level, which may contain multiple families, and the person level. To identify subsidy-eligible families in the ACS data, we used the 2019 and 2021 ACS 1-Year PUMS data files from the U.S. Census Bureau and constructed likely family units by linking children to their parents using family interrelationship variables developed by the University of Minnesota's IPUMS USA group.[181,182]

Within that family unit, we count how many members are in the family, how many children under age 5 are in the family, and their family income as used to determine subsidy eligibility.

Defining Countable Family Income

A family is eligible for child care subsidies if their total countable income is less than or equal to 85 percent of the state median income (SMI) based on their family size. According to the 2023 subsidy manual, countable family income includes "all gross earned and unearned income received by the family unit" except 28 types of disregarded income.[183]

The ACS data include eight categories of income which do not perfectly map to the categories of included and disregarded income for determining subsidy eligibility. To best approximate a family's countable income in the ACS data, we summed all adult family members' income from wages or salary, self-employment, Social Security or Railroad Retirement, and retirement or disability pensions, and the ACS category of "other" income, which includes child support payments.

Identifying Eligibility Cutoff (85% SMI)

In accordance with the Virginia subsidy manual, we used the state median income estimates published by the Administration for Children and Families to determine whether a family was at or below 85 percent SMI. Because we use the 2019 and 2021 ACS data, we compare a family's income against 85 percent of the 2019 and 2021 SMI, respectively, to determine if the family meets the income eligibility requirements. For a four-person family in Virginia in 2019, 85 percent of the 2019 SMI was $82,283,[184] and 85 percent of the 2021 SMI was $88,954.[185] We adjusted the SMI for different family sizes and considered families with countable income at or below 85 percent of SMI to be "subsidy-eligible." Income eligibility for CCSP is higher than for Mixed Delivery (200 percent of the FPG), and so in identifying all CCSP eligible families, we simultaneously identify all Mixed Delivery eligible families. Only eligible families with at least one child under the age of 5 were included in these analyses.

The 2019 ACS data include 178,285 subsidy-eligible families in Virginia with a child under the age of 5, containing 261,578 children under age 5; in the 2021 ACS data, there are 186,448 subsidy eligible families containing 245,887 children under age 5.

Estimating Economic Outcomes

Newly Employed Mothers

Access to reliable and affordable child care can increase employment for all parents. Here, we use the strongest literature available to predict the increase in employment for subsidy-eligible mothers. A report from Enchautegui et al (2016) shows that a 10 percent increase in per-child CCDF expenditures among all children under age 13 in the state predicts a 0.7 percent increase in the employment rate among subsidy-eligible mothers of children under age 4.

In the ACS data, we look at mothers of a child under age 5 whose family income makes them eligible for CCSP. When we identify all families who are income eligible for CCSP, it includes all families who are eligible for Mixed Delivery. We consider a mother to be employed if she is identified as employed in the ACS data. All mothers eligible for the labor force (at least 16 years old) who are not employed are considered unemployed. The employment rate of subsidy-eligible mothers of a child under age 5 in Virginia is 58.13 percent in the 2019 ACS data, with 103,725 mothers employed out of a total of 178,437 labor force eligible mothers.

Between state fiscal year 2019 and state fiscal year 2023, Virginia increased their total expenditures on CCSP and the Mixed Delivery Program from $210,973,292 to $520,395,334. Using the total number of children under age 13 in Virginia in 2019 (1,334,895)[186] and 2021 (1,330,331),[187] the most recent Census population data available, Virginia's per-child subsidy expenditures increased from $158.0 in 2019 to $391.2 in 2023. We adjust the expected percent increase in the maternal employment rate to reflect Virginia's 147.5 percent increase in per-child expenditures and expect the adjusted maternal employment rate to be 10.3 percent higher than the baseline maternal employment rate. We apply this new maternal employment rate to calculate the number of newly employed mothers of a child under age 5.

Increased Earnings

Each mother newly employed because of access to reliable and affordable child care contributes earnings to her family and tax revenue in Virginia. In the 2021 ACS data, the median hourly wage among all employed, subsidy-eligible mothers of a child under the age of 5 is $14.57 and the mean hourly wage is $19.81. Assuming full-time, year-round employment, a newly employed mother may earn $30,306 at the median wage or $41,205 at the mean wage. We assign the wages derived from the 2021 ACS data to all newly employed mothers as an estimate of what mothers employed between 2019 and 2023 may earn. We estimate the range for new state taxable income using median wage as the low-end estimate and mean wage as the high-end estimate.

Children Out of Poverty

Newly employed mothers may lift their household out of poverty with their new earnings. To estimate how many children may be lifted out of poverty because of increased maternal employment, we check whether a mother's new income using the median or mean wage would lift her household out of poverty. We conduct this analysis with the ACS data at the family level because official poverty estimates are generated by looking at total family income and number of related family members.

We first see whether the families containing an unemployed, subsidy-eligible mother are under the corresponding 2019 federal poverty threshold given their family income and family size.[188] Next, we add the median annual income and the mean annual income of the newly employed mother to the base family income to find the new family income. We then check if the family would move out of poverty with the new maternal earnings by comparing their new family income to the relevant 2021 federal poverty threshold.[189]

Although we check if new maternal employment will move each family with an unemployed, subsidy-eligible mother out of poverty, we know not all unemployed, subsidy-eligible mothers will become employed with access to child care. We calculate a probability of a mother becoming employed, and therefore potentially lifting her family out of poverty, by taking into account two factors: 1) we expect 10,710 mothers to become newly employed out of a total of 74,712 unemployed, subsidy-eligible mothers, and 2) a 2007 report from the HHS shows that, on average, 89 percent of children receiving subsidies in 2004 were from single parent families and the remaining 11 percent were from dual parent families.[190]

Because our analysis focuses on new maternal employment directly from access to child care through subsidies or Mixed Delivery, we assume that mothers in a single parent family are more likely to be employed than mothers in a dual parent family, because single parent families make up a larger portion of those receiving subsidies. We use these probabilities to estimate how many children would be lifted out of poverty if 10,710 subsidy-eligible mothers become employed.

Assigning the median hourly wage of $14.57 to all newly employed mothers, we estimate that the additional SFY23 investment lifts 5,528 children under the age of 5 out of poverty, reducing the poverty rate of children under age 5 in Virginia down to 12.9 percent from 14.0 percent in 2019.[191] With the mean hourly wage of $19.81, 5,757 children under the age of 5 would be lifted out of poverty, bringing the poverty rate down to just under 13 percent.

Disposable Income

Using the 2021 ACS data, we estimate the base child care expenses of subsidy-eligible families based on their household income, using published estimates of the average child care cost for households in each income bracket.[viii,192]

Families pay $0 for Mixed Delivery, but a family's subsidy copayment is based on the ratio of their family income to the federal poverty guidelines. To estimate family copayment, we compared a family's countable income against the 2019 and 2021 federal poverty guidelines.[193,194] Based on the number of children under age 5 in the family and the sum of family income countable toward subsidy eligibility, we assign an estimated child care expense to the family according to the copayment they would owe for each child.[195,196]

In 2019, monthly subsidy copayments ranged from 5 percent to 10 percent of family income, while they range from $0 to $180 in 2023. We calculate the family's new child care expenses by multiplying their copayment by the number of children under age 5 in the family. We estimate a family's increase in disposable income by calculating the difference between their base child care expenses and new child care expenses (copayments).

[viii] In 2019, households with income ranging from $0-$20,000 spent 13.7 percent of their income on child care, while households with income ranging from $20,000-$50,000, $50,000-$75,000, $75,000-$99,000, and $100,000+ spent 9.6 percent, 6.9 percent, 6.6 percent, and 5.5 percent of their income on child care, respectively. In 2021, households in the same income brackets spent 12.9 percent, 9.6 percent, 7.6 percent, 6.4 percent, and 5.1 percent of their income on child care.

We then calculate the probability of a child receiving free or subsidized child care through CCSP or Mixed Delivery. To do this, we compare the number of children served by CCSP or Mixed Delivery (monthly average) to the number of eligible children in the state (according to ACS data), and consider whether the child is in a single or dual parent family.

We multiply a family's increase in disposable income by the probability they will receive free or subsidized child care either through CCSP or Mixed Delivery to create an expected increase in disposable family income. Adding each family's expected increase in disposable income in the 2019 and 2021 ACS data provides an estimate of the statewide disposable family income because of child care from CCSP and Mixed Delivery in SFY 2019 ($12,220,913) and SFY 2023 ($51,933,548).

Tax Revenue

Given Virginia's income tax structure,[197] we expect that a newly employed mother earning the median or mean wage would contribute $1,485 or $2,112 to Virginia's annual income tax revenue, respectively. Across all newly employed mothers, Virginia's annual income tax revenue could increase by $15,905,715 if all mothers earn the median wage or $22,617,965 if all mothers earn the mean wage.

In addition to income tax revenue, newly employed mothers will contribute to Virginia's sales tax revenue. Assuming that individuals with low income spend approximately 75 percent of their income on items subject to sales tax,[198] and given Virginia's minimum sales tax rate of 5.3 percent,[199] if all mothers earn the median wage, Virginia's sales tax revenue could increase by $12,902,257, or by $17,542,465 if all mothers earn the mean wage.

Estimating Reductions in Child Maltreatment

We do not include specific estimates for reductions in child maltreatment because of limitations in the data. We do, however, estimate the reduction in abuse and neglect associated with a smaller increase in income eligibility for CCSP than what occurred in Virginia. To generate this estimate, we used the 2021 National Child Abuse and Neglect Data System (NCANDS) to identify the number of investigations for neglect or physical abuse for children under 5 in Virginia, as well as how many of those investigations were substantiated. We use those numbers to predict the decrease in investigations associated with a $700 increase in income eligibility (2.8% reduction in neglect investigations, 3.7% reduction in abuse investigations).[200,201]

The analyses presented in this publication were based on data from the National Child Abuse and Neglect Data System (NCANDS). These data were provided by the National Data Archive on Child Abuse and Neglect at Cornell University, and have been used with permission. The data were originally collected under the auspices of the Children's Bureau. Funding was provided by the Children's Bureau, Administration on Children, Youth, and Families, Administration for Children and Families, US Department of Health and Human Services. The collector of the original data, the funding agency, NDACAN, Cornell University, and the agents or employees of these institutions bear no responsibility for the analyses or interpretations presented here. The information and opinions expressed reflect solely the opinions of the authors.

Estimating Child Outcomes from Participation in High-Quality ECCE

The total increase in children under age 5 served by Mixed Delivery and CCSP between SFY19 and SFY23 is 11,151. We estimate the impact of access to high-quality child care on the following outcomes:

» School readiness,

» Special education receipt,

» Grade retention, and

» High school graduation.

For each of these outcomes, we present two estimates: one for every 1,000 children who have access to high-quality child care, and one for the number of additional children served by CCSP and Mixed Delivery in SFY23 compared to SFY19.

For example, results from a meta-analysis show that participation in high-quality early childhood education leads to an 11.4 percentage point increase in high school graduation. We take a hypothetical group of 1,000 children and estimate that 114 more of them will graduate high school if they attend high-quality child care as a young child than if those same 1,000 children did not attend high-quality child care. Next, we estimate the impact given the actual number of additional children served by CCSP or Mixed Delivery in Virginia. We estimate that if the 11,151 children attend high-quality child care, 1,271 more of these children will graduate high school than if the same 11,151 children did not attend high-quality child care.

We apply the same methodology to each of the child outcomes.

At the end of chapter 7, we also briefly estimate the same outcomes based on increase in children under age 5 enrolled (12,184) and total children under age 5 enrolled (22,871).

Estimating Fiscal Benefits

When possible, we assign fiscal benefits to the child outcomes. Based on Virginia's data, the state spends approximately $4,359 per student in special education and $12,905 per student in public school. We consider these to be per-child costs avoided if access to child care reduced the number of children placed in special education or children repeating a grade. Similarly, research shows that the net benefit to the public of each high school graduate is at least $313,000. We consider this to be the per-child benefit to the public of each additional student who graduates high school because of access to child care.

Limitations

In this report, we look at the new investments made in SFY23 and estimate the lifetime impact on the 11,151 children under age 5 served as a result of that investment. Some of these children may receive 5 years of high-quality care, whereas others may receive only a few months. The research available does not allow us to take this into account, and instead offers estimates of the reduction in special education placement and grade retention and the increase in high school graduation based simply on whether a child had access to high-quality child care as a young child.

If Virginia maintains the same level of investment in SFY24, some of the impacts on children and families may grow significantly, if the effects accumulate the longer a child is in care. On the other hand, some impacts may not increase in scale as children continue in care. For this reason, the estimates in this report should be interpreted as the lifetime impact of the SFY23 investment for the 11,151 children under age 5 who received care as a result of SFY23 investment.

Additionally, across the report we estimate statewide fiscal impacts for one year, for example the state tax revenue from one year of parental employment, or the cost savings of one year of special education. The lifetime fiscal impact of employing a parent or avoiding special education, however, may be much higher. If parents keep their job for multiple years, they will contribute to the tax base over multiple years. Similarly, if a child who is prevented from needing special education services would have needed special education for their entire education, the per-year cost savings are only a fraction of the true cost savings generated by participating in affordable, high-quality ECCE during SFY23. For this reason, when considering the return on investment of the $309 million invested in SFY23, it's necessary to consider the economic benefits and cost savings holistically, with an understanding that the fiscal impacts that result from this year of investments multiply across the life course in unpredictable ways, and extend much further than we can currently estimate.

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RESEARCH FOR ACTION AND OUTCOMES

The Prenatal-to-3 Policy Impact Center at Vanderbilt University Peabody College of Education and Human Development translates research on the best public investments into state policy actions that produce results for young children and society.