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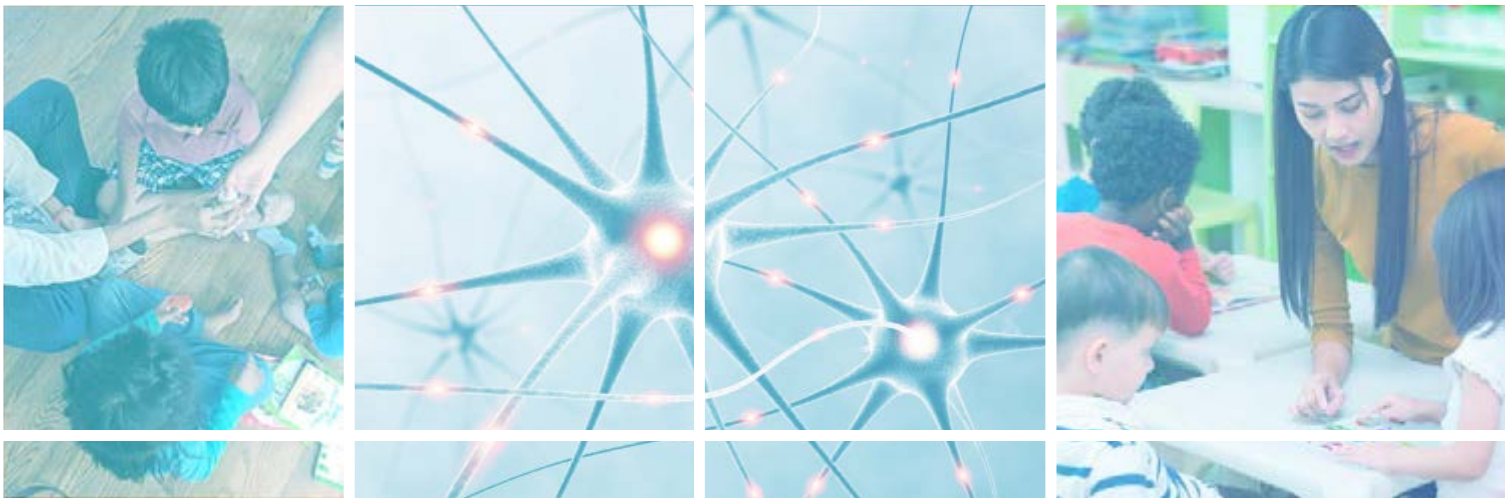
Report to the Governor and the General Assembly of Virginia

Improving Virginia's Early Childhood Development Programs

2017



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JLARC Report 502

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Summary: Improving Virginia's Early Childhood Development Programs

WHAT WE FOUND

One-third of all Virginia kindergartners may not be fully ready for school

Although many of Virginia's young children do not need state-supported early childhood development programs, data indicates that about one-third start school lacking the social, self-regulation, literacy, or math skills needed for kindergarten. Certain factors, such as poverty, low birth weight, and maternal substance abuse, place a child's healthy development at risk and can strongly influence whether a child is ready for school.

The state's information about readiness and children at risk of poor developmental outcomes is not sufficient for identifying children and families at risk and assisting them through the state's early childhood development programs.

WHY WE DID THIS STUDY

In 2016 the General Assembly directed JLARC to identify and review state-supported early childhood development programs to determine the best strategy for future early childhood investments.

ABOUT EARLY CHILDHOOD DEVELOPMENT

The brain develops most rapidly during the earliest years of a child's life. The development (or "wiring") that occurs as a result of early experiences, whether positive or negative, sets the foundation for future success. High-quality early childhood development programs improve children's odds of success in school and life. However, careful attention is needed to whether programs are well designed, implemented as designed, and perform effectively. Virginia has 13 "core" early childhood development programs, which include seven voluntary home visiting programs, the Virginia Preschool Initiative, the Child Care Subsidy Program, and two Individuals with Disabilities Education Act programs.

Virginia's voluntary home visiting programs are generally effective

Virginia's seven voluntary home visiting programs demonstrate effective performance, are generally well designed, and have strong quality assurance mechanisms to ensure they are implemented as intended. Participants often have better outcomes than those who do not participate, both nationwide and in Virginia. For example, participants in Virginia's home visiting programs for pregnant women are more likely than nonparticipants to carry their pregnancies to full term, which is associated with positive developmental outcomes. Virginia's voluntary home visiting programs also feature the key components that experts generally agree are necessary to be effective.

However, these programs lack adequate administrative infrastructure to ensure effective coordination, evaluation, and planning across programs. The funding for voluntary home visiting programs in Virginia is unstable and difficult to predict each year, and this instability hinders the ability of the programs to operate consistently and strategically over time.

VPI improves literacy, but its impact on kindergarten readiness is unknown, and it needs stronger assurances of program quality

The Virginia Preschool Initiative (VPI) improves children's literacy skills, but literacy is recognized as a narrow measure of kindergarten readiness. The state lacks sufficient data to determine whether VPI is effective at improving other important skills, such as social skills and self-regulation skills, that children need to be ready for kindergarten.

There are a number of design and implementation concerns about the VPI program. Implementation of VPI is local, and at the state level, minimal staffing resources are available to administer the program. Further, the program has few features to ensure the program is providing high-quality pre-K experiences statewide. For example, despite the critical importance of high-quality teacher-child interactions, VPI has few assurances that they are occurring in VPI classrooms. In addition, the state has minimal effective controls over the quality of the curricula used by VPI providers. Many agency staff and experts expressed concern about the quality of curricula used by providers. JLARC staff identified eight VPI providers that reported using curricula that (1) do not appear to be research-based or (2) are not actual curricula.

Currently, the Appropriation Act directs the Virginia Department of Education (VDOE) to establish standards for kindergarten readiness and directs school divisions to certify that their VPI programs follow these standards. However, the Act does not direct VDOE to take any meaningful actions to monitor or ensure the quality of the program's implementation. VDOE is not required to facilitate individualized professional development or provide support to programs most in need of technical assistance. Consequently, and in part because of limited staffing resources, VDOE mostly defers to local school divisions to design, implement, and assess their own VPI programs. Ensuring that VPI provides a quality pre-K experience statewide will require VDOE to take a more meaningful role moving forward.

Child care subsidy includes few features to promote or incentivize high-quality child care

Like many child care programs nationwide, Virginia's Child Care Subsidy Program was initially created to enable parents to maintain employment or obtain an education or training. However, the federal government and states, including Virginia, increasingly recognize the potential of using child care subsidies to promote healthy brain and skills development in young children, and many are taking action to improve the quality of child care supported through public funds.

Virginia's Child Care Subsidy Program has only recently added a goal to promote brain and skills development in young children through improvements to the quality of child care. Therefore, it is not surprising that most subsidy policies and the state's monitoring activities still focus primarily on compliance with state health and safety standards rather than the quality of children's experiences in subsidized child care settings.

Improving program quality usually involves additional costs for curriculum materials, training, and higher staff salaries. Current subsidy reimbursement rates are likely too low to incentivize child care providers to spend additional resources to improve the quality of experiences they provide to children. Several other states offer higher subsidies to providers that demonstrate higher levels of quality, with the quality level determined through assessments using state quality rating and improvement systems.

Individuals with Disabilities Education Act programs are mostly effective at improving skills, but their data needs improvement

The state's two Individuals with Disabilities Education Act programs, which are intended to improve the skills of young children with disabilities, can generally demonstrate they are effective. Nearly all children in the Early Childhood Special Education program demonstrated improvement in their social-emotional, cognitive, and self-care skills (92 percent, 94 percent, and 92 percent, respectively). A smaller proportion, but still a majority, of children in the Early Intervention program improved their skills (64 percent, 68 percent, and 71 percent, respectively). Evidence suggests, though, that the validity of scores could be improved for both programs. For example, some local practitioners reported that they did not fully understand the skill categories used to assess children's progress.

Opportunities exist to improve Virginia's early childhood development programs

This report includes recommendations and options to improve the design, quality, and performance of the state's early childhood development programs. Many of the recommendations would require no additional appropriations by the General Assembly, and several others would require less than $250,000. The remaining recommendations and options, however, would likely require some additional one-time or annual appropriations to implement.

To fund these improvements to early childhood development programs, the state could eliminate a minimally effective child care tax deduction. Virginia's Child and Dependent Care Expenses Tax Deduction was created in 1977 to help parents maintain full-time employment by reducing the cost of child care. Virginia's deduction is a separate tax incentive from the nonrefundable federal credit, which can be as much as $1,050 for one child and $2,100 for two or more children.

Despite the substantial financial commitment that the state makes to the deduction ($28.9 million per year), the benefit to individual Virginia families ($141 per year, on average) is too low to have much effect on parents' ability to afford child care and maintain full-time employment—the purpose of the deduction. Placed in context, the $141 average reduction in annual tax liability would cover only about one percent of the annual average cost of child care—less than one week of care.

RECOMMENDATIONS

- Require more comprehensive assessments of kindergarten readiness and more useful data about children at risk for poor developmental outcomes.
- Improve the design, quality assurances, and performance data of early childhood programs to ensure efficient and effective use of funds.
- Require and provide sufficient resources for the Virginia Department of Education to have a more meaningful role in ensuring the quality of VPI implementation.

OPTIONS

- Implement a pilot program to provide higher child care subsidy reimbursement rates for providers that demonstrate higher-quality care.
- Eliminate the minimally effective state tax deduction for child care, and use funding to improve (or potentially expand) programs that serve the youngest children at risk of poor developmental outcomes.

The complete list of recommendations and options is available on page v.

Recommendations and Options: Improving Virginia's Early Childhood Development Programs

RECOMMENDATION 1

The General Assembly may wish to consider amending Title 22.1 of the Code of Virginia to require all school divisions to participate in the Virginia Kindergarten Readiness Program. The purpose of participation would be to administer a multi-dimensional kindergarten readiness assessment to all kindergartners in Virginia public schools. The requirement could be phased in over a three-year period. The General Assembly may wish to consider appropriating sufficient funding. (Chapter 2)

Recommendation 1	
Category	Cost
	$175K (annually)

RECOMMENDATION 2

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Health, with the assistance of the Departments of Social Services, Behavioral Health and Developmental Services, Education, and the University of Virginia, to develop a plan to improve the state's information on at-risk children and families. The plan should be submitted to the House Appropriations and Senate Finance Committees by July 1, 2019. (Chapter 2)

Recommendation 2	
Category	Cost
	TBD

RECOMMENDATION 3

The General Assembly may wish to consider including language in the Appropriation Act to direct the Department of Behavioral Health and Developmental Services, Department of Health, and Department of Social Services to transform Project LINK into an evidence-based, well-designed, consistently implemented home visiting program to improve child development outcomes by reducing maternal substance abuse. The General Assembly may wish to consider appropriating sufficient funding. (Chapter 3)

Recommendation 3	
Category	Cost
	$3.3M* (annually)
*Cost savings generated through improved Project LINK expected to cover added costs.	

RECOMMENDATION 4

The General Assembly may wish to consider including language in the Appropriation Act to designate Early Impact Virginia as the lead entity to (i) determine and systematically track key outcomes; (ii) conduct systematic needs assessments; and (iii) support continuous quality improvement, training, and coordination across state-supported voluntary home visiting programs. The General Assembly may wish to consider appropriating sufficient funding. (Chapter 3)

Recommendation 4	
Category	Cost
	$600K (annually)

RECOMMENDATION 5

Recommendation 5	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct Early Impact Virginia to identify potential additional sources of funding for Virginia's voluntary home visiting programs. The assessment should consider other states' approaches and funding sources, including but not limited to Medicaid, Temporary Assistance for Needy Families, lottery funds, and other dedicated sources of revenue. The assessment should consider the effect on funding stability and the advantages and disadvantages of each potential revenue source identified. Early Impact Virginia should report its findings and recommendations to the House Appropriations and Senate Finance Committees by July 1, 2019. (Chapter 3)

RECOMMENDATION 6

Recommendation 6	
Category	Cost
	Minimal

The Virginia Department of Education and the University of Virginia's Center for Advanced Study of Teaching and Learning should use the results of multi-dimensional kindergarten readiness assessments to determine how well the Virginia Preschool Initiative promotes readiness in all key developmental domains. (Chapter 4)

RECOMMENDATION 7

Recommendation 7	
Category	Cost
	$250K (annually)

The General Assembly may wish to consider including language in the Appropriation Act to require all Virginia Preschool Initiative provider classrooms to have the quality of their teacher-child interactions assessed through a rigorous and research-based classroom observational instrument (such as the CLASS observational instrument) at least once every two years. The General Assembly may wish to consider appropriating sufficient funding. (Chapter 4)

RECOMMENDATION 8

Recommendation 8	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education to establish a statewide minimum acceptable threshold for the quality of teacher-child interactions for the Virginia Preschool Initiative. The threshold should be established with the assistance of the University of Virginia's Center for Advanced Study of Teaching and Learning, using a rigorous and research-based classroom observational instrument (such as the CLASS observational instrument). (Chapter 4)

RECOMMENDATION 9

Recommendation 9	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education to (i) work with the University of Virginia's Center for Advanced Study of Teaching and Learning to develop a list of approved research-based early learning curricula that align with the state's early learning standards; (ii) update the list at least every three years; and (iii) require providers to select and use curricula from the list of approved curricula as a condition of receiving funding through the Virginia Preschool Initiative program. (Chapter 4)

RECOMMENDATION 10

The General Assembly may wish to consider including language in the Appropriation Act to require all Virginia Preschool Initiative teachers to annually receive individualized professional development from professional development specialists to support quality teacher-child interactions and effective curriculum implementation. The Virginia Department of Education should work with the Virginia Early Childhood Foundation and the University of Virginia's Center for Advanced Study of Teaching and Learning to hire and train specialists to provide this professional development. Professional development resources should be targeted to providers as identified through formal classroom observation (using an observational instrument such as CLASS). The individualized professional development should count toward existing requirements. The General Assembly may wish to consider appropriating sufficient funding. (Chapter 4)

Recommendation 10	
Category	Cost
	$926K to $1.4M* (annually)
*Depends on extent and duration of professional development provided.	

RECOMMENDATION 11

The General Assembly may wish to consider amending Title 22.1 of the Code of Virginia to require the Virginia Department of Education (VDOE) to ensure that high-quality preschool is provided through the Virginia Preschool Initiative (VPI). On an ongoing basis, VDOE should (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) report to the General Assembly on the extent to which VPI funding supports high-quality pre-K experiences across the state. (Chapter 4)

Recommendation 11	
Category	Cost
	None

RECOMMENDATION 12

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education (VDOE) to develop a plan to ensure high-quality preschool is provided through the Virginia Preschool Initiative (VPI). The plan should detail how VDOE will (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) provide the General Assembly with useful information about how VPI funding supports quality pre-K experiences for children across the state. The plan should include details on the number of staff and additional funding needed to carry out these new responsibilities. VDOE should submit its proposal to the House Appropriations and Senate Finance Committees by November 1, 2018. (Chapter 4)

Recommendation 12	
Category	Cost
	TBD

RECOMMENDATION 13

The Virginia Department of Social Services and the University of Virginia's Center for Advanced Study of Teaching and Learning should use the results of a multi-dimensional kindergarten readiness assessment to assess how well the Child Care Subsidy Program promotes readiness in all key developmental domains. (Chapter 5)

Recommendation 13	
Category	Cost
	Minimal

RECOMMENDATION 14

Recommendation 14	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Social Services and the University of Virginia's Center for Advanced Study of Teaching and Learning to develop a list of research-based, age-appropriate curricula to be available as a resource for child care providers participating in the Child Care Subsidy Program. (Chapter 5)

RECOMMENDATION 15

Recommendation 15	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Social Services to develop, publish, and maintain a list of professional development courses and providers to be available as a resource for child care professionals participating in the Child Care Subsidy Program. (Chapter 5)

RECOMMENDATION 16

Recommendation 16	
Category	Cost
	Minimal

The General Assembly may wish to consider amending § 2.2-5304 and § 22.1-214 of the Code of Virginia to require the Department of Behavioral Health and Developmental Services and Virginia Department of Education to develop and implement a plan to (i) ensure all Early Intervention and Early Childhood Special Education practitioners receive initial and ongoing training on the programs' scoring processes; (ii) regularly assess the validity of ratings through systematic and documented analyses; and (iii) use results of these analyses to improve technical assistance and systematically target assistance to programs that need it. (Chapter 6)

RECOMMENDATION 17

Recommendation 17	
Category	Cost
	Minimal

The General Assembly may wish to consider amending § 22.1-214 of the Code of Virginia to direct the Virginia Department of Education to develop and implement a process to regularly and systematically collect information about the use of evidence-based practices in local Early Childhood Special Education programs. The Virginia Department of Education should use this information, together with data on inclusion and outcomes, to identify low-performing local programs and systematically target technical assistance to those in need of assistance. (Chapter 6)

RECOMMENDATION 18

The General Assembly may wish to consider including language in the Appropriation Act to direct the Secretary of Education and the Secretary of Health and Human Resources to convene a working group to (i) identify and assess the key barriers to serving Early Childhood Special Education participants in inclusive settings and (ii) develop a plan to increase the percentage of Early Childhood Special Education participants served in inclusive settings. Members of the working group should include state agency administrators of early learning programs, including the Virginia Preschool Initiative, Virginia Preschool Initiative Plus, Child Care Subsidy Program, and the Virginia Head Start State Collaboration Office. The working group should include representatives of other stakeholder groups, as appropriate. The findings of the workgroup should be submitted in a written report to the House Committee on Education, House Appropriations Committee, Senate Committee on Education and Health, and Senate Finance Committee by November 1, 2019. (Chapter 6)

Recommendation 18	
Category	Cost
	Minimal

OPTION 1

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning to provide training to school divisions on how to effectively use Virginia Kindergarten Readiness Program data to improve instructional practices. Training should be prioritized for the school divisions that would most benefit from state assistance. The General Assembly could appropriate sufficient funding. (Chapter 2)

Option 1	
Category	Cost
	$100K (annually)

OPTION 2

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning to incorporate a research-based assessment of physical and motor skills in the Virginia Kindergarten Readiness Program assessment. The General Assembly could appropriate sufficient funding. (Chapter 2)

Option 2	
Category	Cost
	$500K (one-time)*
*To develop and incorporate new physical and motor skills assessment.	

OPTION 3

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning (UVA CASTL) to design and implement a two-year pilot of a comprehensive research-based curriculum for the Virginia Preschool Initiative (VPI). The goal would be to offer the curriculum to localities free of charge. UVA CASTL could submit a report to the House Appropriations and Senate Finance Committees on the (i) results of the pilot and (ii) feasibility and costs to the state of offering the curriculum to VPI providers statewide. The General Assembly could appropriate sufficient funding. (Chapter 4)

Option 3	
Category	Cost
	<$3.7M* (one-time)
*Estimated costs include two-year pilot.	

Option 4	
Category	Cost
	$910K to $6M* (annually)
*Depends on design of pilot and ability of providers to reach higher quality levels	

OPTION 4

The General Assembly could include language in the Appropriation Act to direct the Virginia Department of Social Services to establish and administer a pilot program to provide higher child care subsidy reimbursement rates for providers that demonstrate higher-quality care. The General Assembly could provide the Department of Social Services with additional funding for the pilot. The Virginia Department of Social Services should submit a report on the results of the pilot, along with options to modify and expand it, to the House Appropriations and Senate Finance Committees. (Chapter 5)

OPTION 5

The General Assembly could repeal § 58.1-322.03(3) of the Code of Virginia to eliminate the Virginia Child Care and Dependent Expenses Deduction. Available revenue could then be used to (i) fund improvements to state-supported early childhood development programs and (ii) serve additional families through effective voluntary home visiting programs and subsidize care for children 12 months or younger currently on the Child Care Subsidy Program waiting list. (Chapter 7)

1 Early Childhood Development Programs

SUMMARY Decades of scientific research show that a tremendous amount of learning and brain development occurs before a child enters kindergarten. As a result, a child's early experiences, both positive and negative, have profound effects on future learning and behavior. Virginia has 34 early childhood development programs that received $144 million in state funding in FY16. Virginia has 13 "core" programs intended to improve children's brain and skills development that fall into one of four categories: voluntary home visiting, pre-kindergarten, child care, and Individuals with Disabilities Education Act programs. National research has shown that high-quality early childhood development programs improve a child's odds of success in school and life. Research also shows, though, that not all programs will be equally effective and that careful attention is needed to determine whether programs are well designed, implemented as designed, and perform effectively.

In 2016 the General Assembly directed JLARC to identify and review state-supported early childhood development programs for children younger than school age (prenatal through age four) in order to determine the best strategy for future early childhood investments. The mandate also directs JLARC staff to assess the alignment of programs with kindergarten readiness, to identify best practices in Virginia and other states, and to propose ways to improve early childhood development programs in Virginia. (See Appendix A for the mandate for this study.)

To address the mandate, JLARC staff conducted a variety of research activities. Staff reviewed program documentation, policies, and practices, and collected and analyzed data on program spending, outcomes, and kindergarten readiness. Staff reviewed research literature on early childhood development. Staff also conducted more than 200 interviews with federal, state, and local agency staff, national and Virginia subject-matter experts, interest groups, and staff in other states. (See Appendix B for research methods used in this study.)

Brain science has shown that the foundation for future success is set in early childhood

Decades of scientific research have shown that the brain develops most rapidly during the earliest years of a child's life, and that the development (or "wiring") that occurs as a result of early experiences, whether positive or negative, sets the foundation for future success. It is easier to affect the human brain, and consequently human behavior, during early childhood than any other period of life. The brain's ability to change

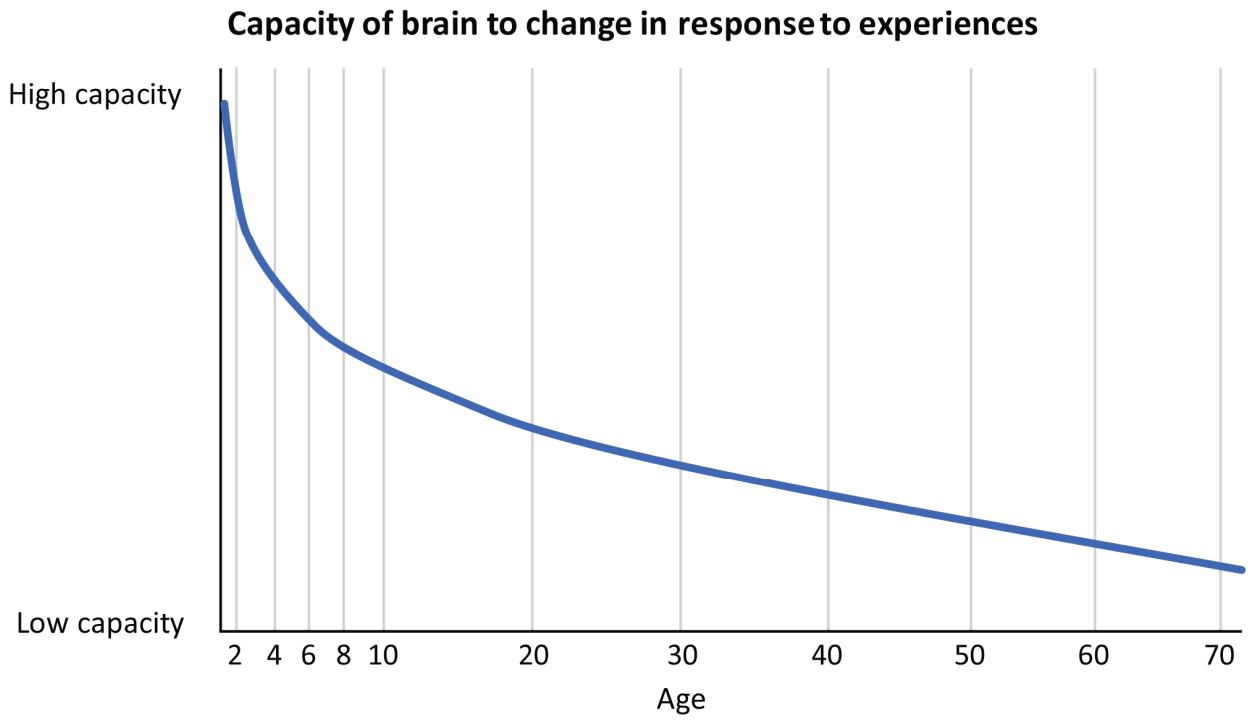
> *"Although windows of opportunity for specific skill development and behavioral adaptation remain open for many years, trying to change behavior or build new skills on a foundation of brain circuits that were not wired properly from the beginning requires more effort—for both individuals and society."*
>
> **– Harvard Center on the Developing Child 2009**

in response to new experiences decreases with age, and does so rapidly during early childhood (Figure 1-1).

Rapid brain development means that early childhood is a time of great opportunity, but also great vulnerability, for a child's development. Early childhood experiences can have positive, negative, or minimal effects on brain and skills development. Children learn in whatever environment they are placed, and it is not a question of *whether* a child's environment affects brain and skills development; it is a question of *what* effect that environment has.

For example, research is clear that secure, responsive attachments between children and caregivers are key to healthy child development. When young children experience reciprocal, positive, high-quality interactions with adults, areas of the brain related to learning and memory are activated and reinforced, and these changes support future learning. Conversely, children who experience chronic stress and adverse conditions (such as maternal substance abuse during pregnancy, neglect, abuse, or poverty) are less likely to have these areas of the brain activated and reinforced, and future learning may be hindered.

FIGURE 1-1
Brains have a far greater capacity to change, and require less effort to change, during early childhood



SOURCE: Adapted with permission from the Center on the Developing Child at Harvard University. Original graphic published in *From Best Practices to Breakthrough Impacts: A Science-Based Approach to Building a More Promising Future for Young Children and Families* (2016).

This scientific reality has profound implications for effective public policy. Very young children who grow up in—or are regularly exposed to—safe, language-rich, and healthy environments, with caregivers who support their curiosity and learning, are likely to enter school ready to learn. Conversely, children not exposed to such environments are less likely to be ready for school and are more likely to be held back, enrolled in special education classes, and perform poorly in later grades. Those same students are more likely than their peers to commit crimes, become teen parents, and rely on public assistance as they grow older, according to research literature. Each of these outcomes can carry significant financial costs to government, including the state.

Early childhood development programs are intended to improve brain and skills development

With the assistance of subject-matter experts and state agency staff, JLARC staff identified four categories of early childhood development programs in Virginia:

- voluntary home visiting;
- pre-kindergarten (pre-K);
- child care; and
- Individuals with Disabilities Education Act (IDEA) programs.

All four types of programs are intended, in some way, to improve the likelihood that a child will experience healthy development before birth and/or during early childhood. Ultimately, these programs are intended to improve the likelihood that children will have the skills they need to be ready for kindergarten, successful in school, and independent contributors to society.

Programs such as foster care, child protective services, and housing vouchers, although important to healthy development and overall well-being of children, are not typically considered early childhood development programs and are excluded from this report.

Voluntary home visiting programs intend to prevent or address key risk factors to healthy brain and skills development as early as possible in a child's life, including before birth, by building the knowledge and skills of the child's parents or caregivers and connecting families to resources in the community.

Pre-K and child care programs intend to support young children's healthy brain and skills development by providing safe and nurturing environments that foster curiosity, learning, and language development. Subject-matter experts and policymakers at the federal, state, and local levels increasingly recognize that a tremendous amount of learning occurs even before a four-year-old child enters pre-K and that very young children learn in whatever environment they are placed.

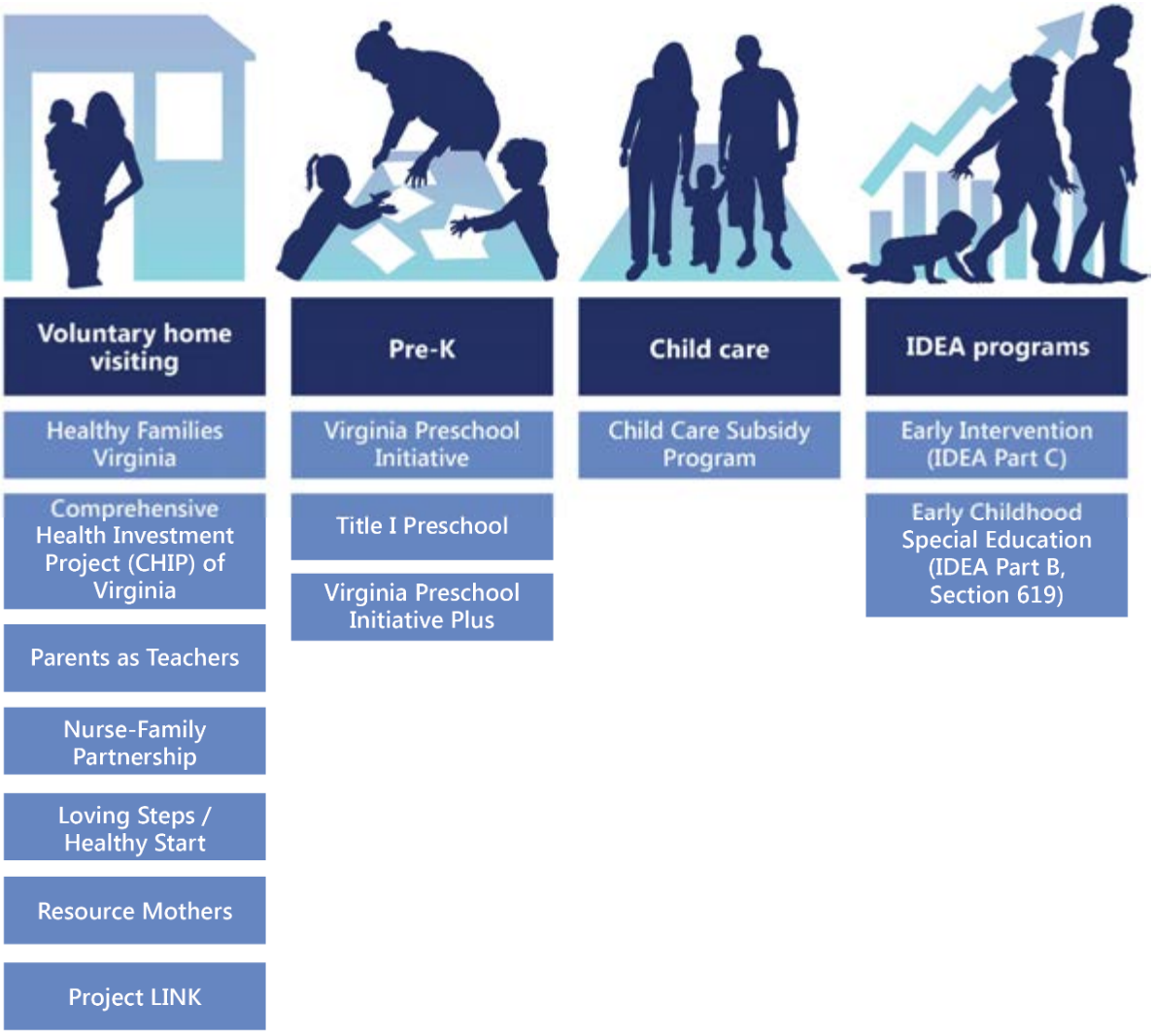
Individuals with Disabilities Education Act programs intend to promote healthy brain and skills development among children with (or at risk of) disabilities. These programs intend to help children's families adapt to support their development, and to facilitate greater independence later in life. The Early Intervention program serves infants and toddlers (birth through age two), while the Early Childhood Special Education program serves children who are closer to school age (ages three through five,

and certain two-year-olds). Underscoring the importance of integration, children participating in Early Intervention and Early Childhood Special Education programs are also served by other state early childhood development programs, such as the Child Care Subsidy Program and the Virginia Preschool Initiative.

Virginia administers 13 "core" early childhood development programs

Virginia has 34 state-supported early childhood development programs, 13 of which are "core" programs that receive 94 percent of total early childhood development funding. The 13 core programs include seven voluntary home visiting programs, three pre-K programs, one child care program, and two Individuals with Disabilities Education Act programs (Figure 1-2 and Table 1-1).

FIGURE 1-2
State administers 13 core early childhood development programs



These core programs are administered by the Virginia Departments of Education, Social Services, Behavioral Health and Developmental Services, or Health. The remaining 21 programs (directly or indirectly) seek to support the 13 core programs by, for example, assessing Virginia children's readiness for kindergarten or improving coordination across voluntary home visiting programs. (See report supplement, *Early Childhood Development Program Inventory*, for information on these 34 programs.)

The state does not provide services directly through any of the 13 core programs. Rather, state programs *fund* services provided at the local level. Funding is provided through various mechanisms, including grants to school divisions for the Virginia Preschool Initiative (VPI), payments to community services boards for Early Intervention services, and subsidies to child care providers.

The state's 13 core programs serve children and their parents, but the number of people served by each program varies widely (Table 1-2). For example, the Child Care Subsidy Program served 18,561 children younger than age five in FY16. In contrast, Project LINK served 316 children that same year.

TABLE 1-1
Primary purposes of Virginia's early childhood development programs vary

Category	Program	Primary purpose
Voluntary home visiting	Healthy Families Virginia	Promote positive parenting, improve child health & development, and reduce child abuse and neglect
	Comprehensive Health Investment Project (CHIP) of Virginia	Improve child and family health
	Parents as Teachers	Improve parenting skills and detect developmental / health issues
	Nurse-Family Partnership	Improve birth outcomes and parenting skills
	Loving Steps / Healthy Start	Improve birth outcomes, reduce infant mortality, and promote positive parenting
	Resource Mothers	Improve birth outcomes, reduce infant mortality, and promote positive parenting for children born to teen mothers
	Project LINK	Provide intensive case management for pregnant and parenting women abusing or at risk of abusing substances
Pre-K	Virginia Preschool Initiative	Provide preschool programs for at-risk four-year-olds not served by the federal Head Start program
	Title I Preschool	Fund preschool in localities with a high percentage of low-income students
	Virginia Preschool Initiative Plus	Improve preschool access, quality, & impact for at-risk four-year-olds
Child care	Child Care Subsidy Program	Facilitate (a) parent employment, education, or training and (b) child development by funding a portion of child care expenses
IDEA programs	Early Intervention (IDEA Part C)	Provide early intervention services to children with disabilities
	Early Childhood Special Education (IDEA Part B, Section 619)	Serve educational needs of children with disabilities

SOURCE: Code of Virginia, Appropriation Acts, and state agency documents; interviews with state agency staff and subject-matter experts.
NOTE: Despite their identical acronyms, the Comprehensive Health Investment Project (CHIP) of Virginia, a voluntary home visiting program, is distinct from the federal Children's Health Insurance Program.

Producing reliable, cross-program calculations about participation is methodologically challenging. It is likely that the state's 13 core programs served between 36,195 and 90,561 children in FY16. This extremely wide range reflects the uncertainty about how many children are served by multiple programs. This uncertainty is largely due to the lack of comprehensive information state agencies maintain about participants and the lack of sufficiently integrated state agency information systems.

Placing the number of program participants in context is also methodologically challenging. By making a number of assumptions, it is possible to estimate that there may be up to about 200,000 children who could be eligible to be served by at least one of the state's programs. This estimate is derived using the federal poverty level (a common eligibility criterion for many state early childhood development programs). (See Appendix B on the methodology used to estimate number of eligible children.)

TABLE 1-2
Programs serve both children and their parents and vary substantially in the number of participants served in FY16

Category	Program	Children	Parents
Voluntary home visiting	Healthy Families Virginia	3,562	5,782
	Comprehensive Health Investment Project (CHIP) of Virginia	2,557	2,288
	Parents as Teachers	749	791
	Nurse-Family Partnership	220	265
	Loving Steps/Healthy Start	227	308
	Resource Mothers	461	461
	Project Link	316	784
	TOTAL	**8,092**	**10,679**
Pre-K	Virginia Preschool Initiative	18,356	--
	Title I Preschool	2,754	--
	Virginia Preschool Initiative Plus	2,804	--
	TOTAL	**22,340**	--
Child care	Child Care Subsidy Program	18,561	--
IDEA programs	Early Intervention	17,839	--
	Early Childhood Special Education	22,155	--
	TOTAL	**39,994**	
	CROSS-CATEGORY TOTAL	**36,195–90,561**	**10,679**

SOURCE: Code of Virginia, Appropriation Acts, and state agency documents; interviews with state agency staff and subject-matter experts.
NOTE: Cross-category total includes likely duplication in participants across programs. Therefore, 90,561 is the *maximum* (but unlikely) number of children served while 36,195 is the *minimum* (but also unlikely) number of children served. Duplication is most likely across pre-K, child care, and IDEA programs.

Virginia early childhood development programs received $144 million in state funds in FY16

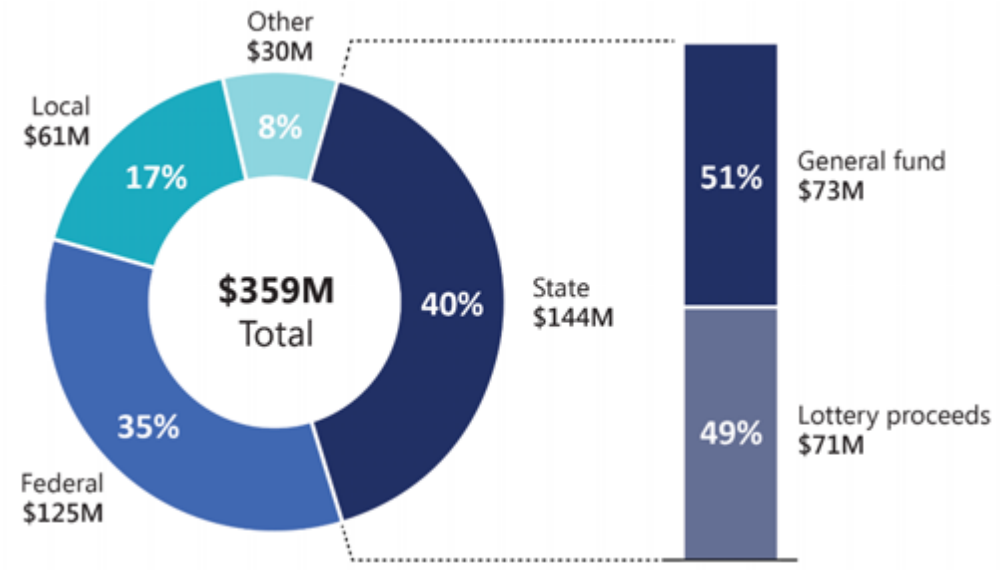
An estimated $359 million in total funding—federal, state, local, and other—was distributed to early childhood development programs in Virginia in FY16. The state contributed the largest portion, approximately $144 million, consisting of general and lottery funds. All $71 million in lottery funds supported VPI. Eighteen programs received a combined $73 million in state general fund dollars. The federal government contributed the next largest portion, $125 million, followed by local governments, $61 million, and other funding sources such as private foundations, $30 million (Figure 1-3).

The state has some discretion over how it uses federal block grant funds, such as Temporary Assistance for Needy Families (TANF) and Child Care and Development Block Grant funding. For example, multiple early childhood development programs meet the statutory goals of the TANF block grant, so the state can move TANF funding from program to program, or even to the Child Care and Development Block Grant, depending on the state's priorities. The state does not have such discretion over how it uses some other federal grants, such as Maternal, Infant, and Early Childhood Home Visiting funding (MIECHV), which can only be applied to certain pre-approved home visiting programs.

Excluded from this report: federal Head Start programs that operate in Virginia. The state does not have monetary or administrative discretion over the operation of Head Start programs.

JLARC staff were directed to focus on programs that are supported with state assistance. (See Appendix A, mandate for this study.)

FIGURE 1-3
Federal, state, and local governments and other funders contributed $359 million to Virginia early childhood development programs in FY16



SOURCE: JLARC analysis of program funding data for all early childhood development programs submitted by state agencies, higher education institutions, and nonprofit entities.
NOTE: Figure does not include local and certain federal funding sources for Early Childhood Special Education because this data is unavailable.

Pre-K and child care programs, such as VPI and the Child Care Subsidy Program, received approximately 61 percent of state and total early childhood development funding in FY16. Programs for children with disabilities received about 38 percent of state funding and 32 percent of total funding. Home visiting programs received one and five percent of state and total funding, respectively.

High-quality early childhood development programs improve children's odds of success in school and life

National research is clear that high-quality early childhood development programs improve the odds that children will be ready for kindergarten, be successful in school, and, ultimately, become independent contributors to society:

> The general question of whether early childhood development programs can make a difference has been asked and answered in the affirmative innumerable times. This generic query is no longer worthy of further investigations. (National Research Council and Institute of Medicine, 2000)

> A half-century of program evaluation research has demonstrated repeatedly that effective early childhood services can improve life outcomes for children facing adversity, produce important benefits for society, and generate positive returns on investments. (Harvard University Center on the Developing Child, 2016)

Research literature also makes it clear that just because a program focuses on early childhood development does not guarantee that it will be effective (or as effective as other programs) at promoting healthy development, school readiness, and positive longer-term outcomes. In order to be confident in the effectiveness of programs, careful attention is needed as to whether programs (1) are appropriately designed to achieve their intended goals, (2) have quality assurances that they are implemented as designed and with a reasonable degree of consistency across sites, and (3) have valid and useful performance information. Programs that meet these three criteria are more likely to be effective.

Skepticism about the positive effects of some early childhood development programs has grown across the nation in recent years. This skepticism stems from some recent, rigorous reviews of programs, which have found that not all early childhood development programs are equally effective and that programs are often implemented inconsistently. As states, including Virginia, continue to fund these programs, it will be important to ensure that funding is paired with appropriate assurances of quality and consistency.

This report assesses Virginia's state-supported early childhood development programs and presents recommendations and options to improve effectiveness, both of individual programs and across programs. The assessments and any resultant recommendations or options use the same three criteria key for states to be confident in program effectiveness.

Throughout the report, each recommendation and option is accompanied by a sidebar that indicates the category of improvement and estimated cost to the state.

Three categories of recommendations and options

	Purpose of recommendation or option
 **Design**	Increase likelihood that program effectively promotes healthy development and school readiness
 **Quality assurance**	Develop or strengthen assurances that program is implemented as designed and with consistency statewide
 **Performance and data**	Develop or strengthen measures of program outcomes and data used to inform program design and implementation

2 Kindergarten Readiness and Risk Factors

SUMMARY Many of Virginia's young children arrive at kindergarten ready to learn without having received services from state-supported early childhood development programs. Other children, though, are not ready for kindergarten. According to a 2014 assessment, an estimated one-third of children in Virginia enter kindergarten without the social, self-regulation, literacy, and/or math skills needed to be ready. Certain factors, such as poverty, low birth weight, and maternal substance abuse, place a child's healthy development at risk. The state's information about kindergarten readiness and children at risk of poor developmental outcomes is not sufficiently useful to effectively identify children and families at risk, and assist them through the state's early childhood development programs.

Kindergarten readiness, as a measure of development, provides insight into the need for and relative success of Virginia's early childhood development programs. Children who are not ready for kindergarten are more likely to be held back in school, to be enrolled in special education classes, and to perform poorly in later grades. These same students are more likely than their peers to commit crimes, become teenage parents, and rely on public assistance as they grow older.

For a number of years, the state has been developing the Virginia Longitudinal Data System, which is intended to help understand the health, social, educational, employment, and other outcomes of Virginians. To date, the Virginia Longitudinal Data System has focused on K-12 and higher education, but has not collected information to fully understand (1) how ready Virginia children are for kindergarten and (2) the risk factors to which Virginia children are exposed. However, the state does have some information about kindergarten readiness, which can provide insight into the need for early childhood development programs.

Sample found two-thirds of children kindergarten ready, but no statewide comprehensive data exists

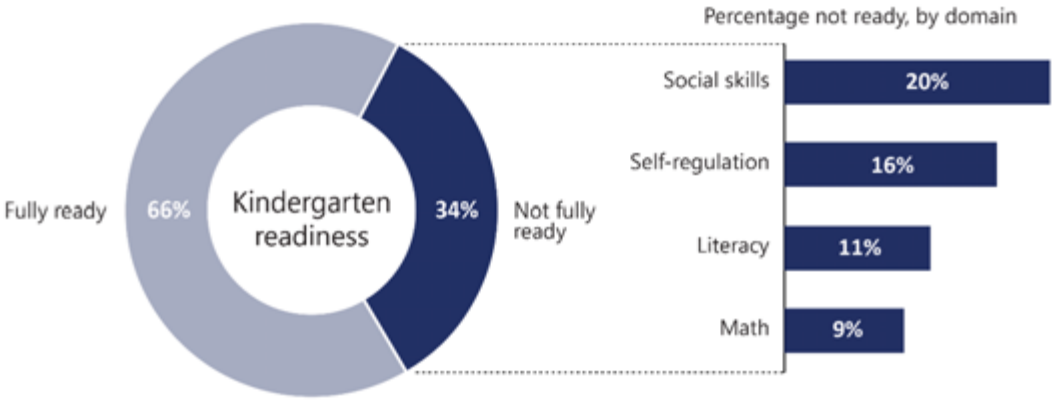
Children need a variety of mutually reinforcing skills to be successful in kindergarten and future grades. While skills such as literacy are important for success, children find it difficult to learn in kindergarten and subsequent grades if they lack the ability to sit still, listen to their teacher, regulate their emotions, or have constructive and positive interactions with other students. Although there is not consensus on every specific skill a child needs to be successful in school, researchers emphasize the importance of using a multi-dimensional readiness assessment that captures the broad range of skills a child needs to succeed.

One-third of all Virginia kindergartners may not be fully ready

According to the Virginia Department of Education, a **school-ready child** is "prepared socially, personally, physically, and intellectually, within the developmental domains of literacy, mathematics, science, history and social science, physical and motor development, and personal and social development."

In 2014, a multi-dimensional assessment of a representative sample of children in Virginia estimated that about two-thirds of children were ready for kindergarten in four key domains: social skills, self-regulation, literacy, and math. The remaining one-third of assessed children were estimated to not be ready in at least one of the above domains. Twenty percent lacked sufficient social skills; 16 percent lacked sufficient self-regulation skills; 11 percent lacked sufficient literacy skills; and nine percent lacked sufficient math skills (Figure 2-1). The assessment was designed and administered by the Virginia Kindergarten Readiness Program (VKRP), a state-funded initiative.

FIGURE 2-1
One-third of Virginia children assessed through VKRP were identified as not fully ready for kindergarten in at least one domain



SOURCE: VKRP assessment of a representative sample of Virginia kindergartners in Fall 2014.

Virginia does assess the literacy of all kindergartners, but literacy is only one domain of kindergarten readiness. All school divisions except for Fairfax County assess kindergartners using the Phonological Awareness Literacy Screening for Kindergarten (PALS-K). The purpose of PALS-K is to identify students in need of remedial literacy support and ultimately provide that support through the Early Intervention Reading Initiative. In 2016, PALS-K identified 15 percent of kindergartners as needing additional literacy support.

State should assess every child's kindergarten readiness in multiple domains

The 2014 VKRP results, which showed that up to one-third of children were not fully ready for kindergarten, are from a statewide representative sample of children. More recent assessments, however, are not from a statewide representative sample. As of 2017, only 63 of Virginia's 132 school divisions were participating in VKRP. Without statewide participation, it is not possible to know whether each child is ready, or in what domains each child needs to improve to be successful in kindergarten.

Virginia should join the increasing number of states that assess multiple dimensions of kindergarten readiness of all children. Eighteen states, including Maryland, North Carolina, South Carolina, and Kentucky, now assess the readiness of all kindergartners across multiple readiness domains. VKRP provides a strong foundation on which Virginia could follow suit.

Knowing the specific domains in which many children are not ready for kindergarten can help inform professional development for pre-K teachers and child care professionals. For example, if data indicates that many Virginia children in one area of the state lag behind in their self-regulation skills, the state could adapt its early childhood development programs and/or professional development offerings to increase their focus on improving self-regulation skills prior to kindergarten.

VKRP is administered by the Center for Advanced Study of Teaching and Learning (CASTL) at UVA's Curry School of Education. CASTL staff estimate that it could, within three years, administer its assessment to all kindergartners in the state. Over this three-year period, VKRP could add about 20 additional school divisions each year.

Administering the VKRP assessment to all students is estimated to cost about $1,075,000 annually but would not require substantial additional state funds. Existing appropriated funds that have been used to develop and test the assessment tools could now be used to help expand the assessment into more divisions. The General Assembly appropriated $900,000 in FY16 and FY17 to develop and administer VKRP. An additional $100,000 would allow VKRP to expand the program statewide, with the exception of costs for certain assessment materials. UVA CASTL staff estimate the additional materials would cost, on average, $20 per classroom—adding about $75,000 per year to the total cost of the program.

As part of the statewide rollout of VKRP, **PALS-K would continue to be used to assess kindergarteners' literacy skills.** VKRP would be used to assess math, self-regulation, and social skills.

VDOE staff indicate that some school divisions not currently participating in VKRP would likely require some additional resources to allow their teachers to administer and complete the assessment during class hours (e.g., to pay for substitute teachers or teaching aides), but this does not appear to be a substantial barrier to participation. As of 2017, almost half of Virginia's school divisions have been able to voluntarily integrate the additional assessments without additional state funds.

RECOMMENDATION 1

The General Assembly may wish to consider amending Title 22.1 of the Code of Virginia to require all school divisions to participate in the Virginia Kindergarten Readiness Program. The purpose of participation would be to administer a multi-dimensional kindergarten readiness assessment to all kindergartners in Virginia public schools. The requirement could be phased in over a three-year period. The General Assembly may wish to consider appropriating sufficient funding.

Recommendation 1	
Category	Cost
	$175K (annually)

Some teachers would need assistance to provide differentiated instruction based on readiness assessments

VKRP assessment results can be especially useful for kindergarten teachers and school divisions. Kindergarten teachers can use the results to differentiate and improve their instruction for individual students. Division staff can use the results to target additional instructional resources and support. Accordingly, as part of the statewide rollout, the state could ensure that teachers and divisions are well equipped to use the VKRP assessment results to differentiate instruction and provide targeted supports in kindergarten.

Currently, not all teachers are equally prepared to use assessment results to adjust their instruction appropriately. To help teachers use assessment results, UVA CASTL staff provide online resources for teachers to address the readiness challenges identified in the assessment. However, CASTL staff report that divisions currently participating in VKRP vary substantially in their ability to support their teachers' use of readiness data. The lack of adequate support for differentiated instruction in some divisions was also identified in JLARC's 2015 *Review of Efficiency and Effectiveness of K-12 Spending*.

The General Assembly could appropriate funds for UVA CASTL to provide additional training to the school divisions that would most benefit from state assistance. According to CASTL staff, the cost of such training would be about $100,000 per year.

OPTION 1

Option 1	
Category	Cost
	$100K (annually)

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning to provide training to school divisions on how to effectively use Virginia Kindergarten Readiness Program data to improve instructional practices. Training should be prioritized for the school divisions that would most benefit from state assistance. The General Assembly could appropriate sufficient funding.

State could expand VKRP to also assess kindergartners' physical and motor skills

Physical and motor skills are important for kindergarten readiness, but these skills are not currently part of the VKRP assessment. The Virginia Department of Education, U.S. Department of Education, and Centers for Disease Control and Prevention agree that these domains should be part of a comprehensive assessment of kindergarten readiness, and the Code of Virginia requires schools to assess kindergarten students' motor skills within 60 days of enrollment. However, neither the state nor school divisions aggregate and report the results of this assessment in a way that would allow for an assessment of physical and motor skills readiness across the state.

To incorporate data on physical and motor skills into VKRP, the General Assembly could direct UVA CASTL staff to review existing assessments used by school divisions and, if necessary, develop a new assessment to provide more comprehensive, reliable,

and comparable data to replace existing assessments. According to UVA CASTL staff, the cost of developing a research-based assessment of physical and motor skills, and then incorporating it into VKRP, could be up to $500,000 in one-time funding.

OPTION 2

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning to incorporate a research-based assessment of physical and motor skills in the Virginia Kindergarten Readiness Program assessment. The General Assembly could appropriate sufficient funding.

Option 2	
Category	Cost
	$500K (one-time)*
*To develop and incorporate new physical and motor skills assessment.	

Many Virginia children are at risk for poor development outcomes, but data gaps exist

Chronic stress and adversity can derail healthy early childhood development. National research shows that children in poverty are at higher risk for poor developmental outcomes and are less likely than their peers to enter kindergarten with the necessary skills. Poverty itself does not undermine healthy development, but it increases the likelihood that children are exposed to certain risk factors that national research has shown can substantially undermine healthy development:

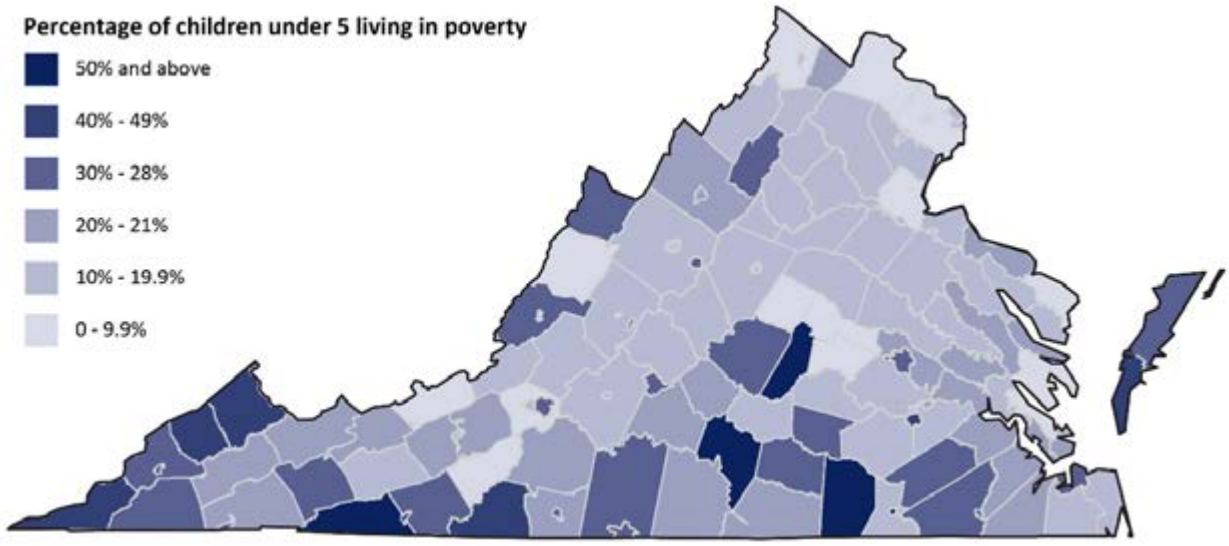
> Research has shown that it is not simply the presence of financial hardship that affects children's outcomes, but that it may possibly be more a matter of the timing in the life of the child. For some long-term outcomes, particularly those related to cognitive development and achievement skills, poverty in the early years may be especially harmful. (Center on the Developing Child at Harvard University, 2016)

The U.S. Census defines **poverty** according to the federal poverty level. The Virginia Department of Education defines "**economically disadvantaged**" as eligible for TANF, free or reduced-price lunch, or Medicaid. As such, VDOE's definition includes children from families earning incomes higher than the federal poverty level.

This holds true in Virginia. VKRP assessments in 45 school divisions show that economically disadvantaged children were less likely to be ready for kindergarten than their peers (48 percent vs. 32 percent). About 17 percent of Virginia children younger than age five live in poverty, according to U.S. Census Bureau estimates. The proportion of Virginia children younger than age five who live in poverty varies substantially across the state. High poverty rates tend to be concentrated in the southern and particularly southwestern regions of the state (Figure 2-2). These children in poverty are less likely to be ready for kindergarten than their peers in more affluent divisions.

In addition to poverty, other factors can hinder healthy development in early childhood. Some of these risk factors are evident at birth: premature birth, low birth weight, or prenatal exposure to substances such as alcohol and opioids. Other risk factors are associated with mothers: children of mothers who are under age 20, unmarried, or smoke during pregnancy are at greater risk for poor development outcomes. Virginia ranks better than or about the same as the national average for many of these risk factors, but there are still many children at risk (Table 2-1). Rates of some risk factors are increasing; for example, Virginia's rate of premature births reached a seven-year high in 2016.

FIGURE 2-2
Proportion of children younger than five living in poverty varies substantially across the state



SOURCE: U.S. Census Bureau, American Community Survey (2015).

"The greater the number of adverse experiences in childhood, the greater the likelihood of health problems later in life."

– Harvard Center on the Developing Child, 2010

TABLE 2-1

Risk factor	Virginia
Children, born prematurely (2015)	9.3%
Children, born at low birth weight (2015)	7.9%
Children, born with neonatal abstinence syndrome (2014)	0.6%
Children, born with congenital anomalies (2013)	0.6%
Mothers, reported smoking during pregnancy (2014)	7.8%
Mothers, unmarried when gave birth (2015)	3.4%
Mothers, teenage when gave birth (2015)	1.7%

SOURCE: Centers for Disease Control and Prevention and Virginia Department of Health.
NOTE: Most of the above risk factors are interrelated, and therefore the percentages cannot be summed. For example, substance-abusing pregnant women are more likely to give birth to children at a lower birth weight than non-substance-abusing pregnant women. Examples of congenital anomalies include heart malfunction, Down syndrome, and cleft palate.

Currently, data limitations hinder the state's ability to effectively identify and assist children at risk of not being ready for kindergarten. Knowing which children and families face which risks is necessary to fully understand how to best deploy limited early childhood development program resources. Often, risk factors during early childhood are root causes of multiple problems and strongly predictive of challenges a child will

face during his or her lifetime. Having sufficiently detailed, valid data about children at risk is essential to efficiently and effectively use limited early childhood development program resources.

In many cases, state agencies lack sufficiently detailed or valid data to help make decisions about programs. For example, information included in the Pregnancy Risk Assessment Monitoring System is based on samples and estimates that are not detailed enough to know exactly which mothers face which risks. This data cannot be used, therefore, to identify and assist at-risk mothers. Similarly, information about a mother's risk for depression is available, but the information is not collected in the same way using the same definitions statewide. This information cannot be used with confidence to identify parts of the state with mothers most at risk for depression that could benefit from services such as voluntary home visiting programs.

More broadly, the state does not systematically know which children receive services from which early childhood development programs. This prevents knowing whether children who are potentially at risk are actually being served.

> *"If you're not making decisions based on good information, you've put yourself behind in terms of health, education, service delivery, everything. If there's no data, there's just no problem, and no way to make a case for change."*
>
> **– Staff, California Department of Public Health**

Other states have improved their data to help them identify and assist families at risk. For example:

CASE STUDY
California's use of data about pregnant mothers

California collects data on maternal behaviors and experiences before, during, and after pregnancy at the regional and county levels. This data is then used to inform and target state maternal and child health policies and resources. For example, data on immunization rates during pregnancy informed the state's strategy to increase vaccination rates across the state. The data is collected through the Maternal and Infant Health Assessment, which is an annual survey of a representative sample of women who give birth in California.

CASE STUDY
Iowa's use of data about multiple risk factors

Iowa collects data about eight different risk factors, then uses the indicators to identify the counties with the highest proportion of children or families at risk. Iowa uses this data to develop a baseline of need and then determine how to best use its early childhood programs to most efficiently help those at risk. The data is collected on behalf of the Iowa Early Childhood Advisory Council by the state's Child and Family Policy Center.

Virginia has a foundation from which to improve its data so that it can more effectively identify children and families at risk, then support them through the state's early childhood development programs. Several executive-branch initiatives (e.g., the Governor's

Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Children's Cabinet) or collaborative efforts, such as Virginia's Plan for Well-Being, have been focused on cross-agency attention to early childhood. In addition, VDH has begun an effort called the Health Opportunity Index, designed to identify challenges across Virginia localities and regions based on the social determinants of health (sidebar).

VDH should be tasked with leading a cross-agency initiative to improve the state's information on risk (and protective) factors, such as poverty, maternal substance abuse, birth weights, child abuse, homelessness, and school readiness. Because of the complexity involved, VDH should work with other agencies as needed to develop a plan to obtain sufficiently detailed and valid data, then ensure that the data can be used by agencies to more effectively deploy early childhood development program resources (including knowing whether children and families have received services). The plan should include an estimate of the resources that would be required to develop and maintain the information, as well as a timeline and key milestones for completion. The initiative should ultimately be coordinated with ongoing efforts to expand the Virginia Longitudinal Data System.

VDH's experience with the Health Opportunity Index, existing focus on using data, and current responsibility for data on pregnancy-related risk factors and birth outcomes make it a logical agency to lead the effort. Other agencies have data that would be relevant as well, including the

- Department of Social Services, which collects data on child neglect and maltreatment;
- Departments of Behavioral Health and Developmental Services and Education, which collect data on developmental disabilities and early childhood mental health disorders; and
- University of Virginia, which collects data on kindergarten readiness.

RECOMMENDATION 2

Recommendation 2	
Category	Cost
	TBD

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Health, with the assistance of the Departments of Social Services, Behavioral Health and Developmental Services, Education, and the University of Virginia, to develop a plan to improve the state's information on at-risk children and families. The plan should be submitted to the House Appropriations and Senate Finance Committees by July 1, 2019.

3 Voluntary Home Visiting Programs

SUMMARY Virginia has seven voluntary home visiting programs with the goal to improve birth and child development outcomes and parenting skills. Collectively, these programs served approximately 10,700 families and 8,100 children in FY16. Participants in voluntary home visiting programs often have better outcomes than those who do not participate, both nationwide and in Virginia. For example, women who participate in Virginia's programs are more likely than comparable women to carry their pregnancies to full term, which is associated with better child development outcomes than preterm births. Virginia's voluntary home visiting programs are also generally well designed and implemented, featuring the key components that experts agree are necessary to be effective. However, these programs lack adequate administrative infrastructure to ensure effective coordination, evaluation, and planning across programs. The funding for voluntary home visiting programs in Virginia is unstable and difficult to predict each year, and this instability hinders the ability of these programs to operate in a consistent, strategic manner over time. The state can better support these programs and by doing so improve the likelihood that Virginia's at-risk children will have better early childhood development outcomes.

Virginia's voluntary home visiting programs are intended to improve early childhood development outcomes by building parents' knowledge, skills, and abilities and connecting families to needed community resources. These programs are distinct from home visitation that occurs in the context of the child welfare system (sidebar). Voluntary home visiting programs are typically highly structured, tailored to the needs of individual families, and staffed by skilled public health nurses, community health workers, or trained parent educators. Home visitors work with parents early in a child's life, including before birth, to prevent or address key risk factors, such as substance abuse and maternal depression, that can undermine a child's development. Home visitors also help parents form secure and nurturing attachments with their infants and toddlers. These secure attachments are "widely recognized as foundational for healthy development," according to the National Research Council and Institute of Medicine.

Individual programs differ in terms of their target population, goals, and curriculum, but they share a common emphasis on voluntary home visitation as the primary intervention strategy. All of the programs promote healthy child development through efforts to reduce child maltreatment and improve parent-child interactions. Home visitors typically have caseloads of approximately 20 families with whom they meet individually, on a regular schedule, for at least an hour per meeting.

Voluntary early childhood home visiting services are distinct from programs intended to protect children from active child maltreatment, such as Child Protective Services. Parents who participate in voluntary home visiting programs do so of their own volition. Families can choose to discontinue home visiting services at any time.

A growing body of research points to the effectiveness and cost-effectiveness of voluntary home visiting programs for promoting healthy child development. In general, effective models have demonstrated improvement in key areas such as birth outcomes (e.g., full-term pregnancy and healthy birth weight), maternal and child health, and parental behaviors, and reduction in child maltreatment. In addition, effective home visiting programs have been shown to generate cost savings even in the short term, particularly through reduction in emergency room visits in the first year of a child's life and reduction in cases of child maltreatment.

Home visiting programs served more than 10,000 families but were not available in all localities

In total, Virginia's seven voluntary home visiting programs served 10,679 families and 8,092 children in FY16 (Table 3-1). Families are eligible based on criteria that include poverty and parental characteristics and behaviors, such as teen pregnancy, depression, substance abuse, and low levels of education.

The federal Early Head Start program serves low-income families with young children (prenatal through age three) throughout Virginia. Early Head Start provided services to families in 43 Virginia localities in FY16. JLARC staff did not assess Early Head Start for this study due to the lack of state involvement in the program's funding, administration, and implementation.

TABLE 3-1
Total state and federal funding for state-supported voluntary home visiting programs was $15.9 million in FY16

	Funding $M FY16			Participation FY16	
Program name	**Total**	**Fed**	**State**	**Children**	**Families / parents**
Healthy Families Virginia	$6.6	$6.6		3,562	5,782
Comprehensive Health Investment Project (CHIP) of Virginia	2.2	1.4	0.8	2,557	2,288
Parents as Teachers	2.9	2.9		749	791
Nurse-Family Partnership	1.1	1.1		220	265
Loving Steps / Healthy Start	1.1	1.1		227	308
Resource Mothers	1.1	1.1		461	461
Project LINK	0.85	0.6	0.25	316	784
All state-supported programs	$15.9	$14.85	$1.05	8,092	10,679

SOURCE: Data formally submitted by VDH, VDSS, DBHDS, and CHIP of Virginia.
NOTE: FY16 is latest year for which funding and participation data was available. The Comprehensive Health Investment Project (CHIP) of Virginia is distinct from the federal Children's Health Insurance Program. The $6.8M in federal funding for Healthy Families Virginia, CHIP of Virginia, and Resource Mothers is federal TANF dollars allocated by the state. Total funding for Healthy Families Virginia includes federal TANF dollars (VDSS) and federal MIECHV funding (VDH). Includes $0.54M in federal MIECHV funding supporting implementation fidelity monitoring and quality assurance for Healthy Families, Parents as Teachers, and Nurse-Family Partnership; does not include $0.8M in federal MIECHV funding supporting promising practices research, continuous quality improvement, and training. Does not include local and private sources of funding.

The Comprehensive Health Investment Project (**CHIP) of Virginia home visiting program** was created by a Roanoke pediatrician in 1988. It is distinct from the federal Children's Health Insurance Program.

The state's seven voluntary home visiting programs received a total of $15.9 million in state and federal funding in FY16. The General Assembly substantially increased its allocation of funding to these programs from FY16 to FY17, nearly doubling total appropriations, primarily by increasing the allocation of Temporary Assistance for Needy Families (TANF) dollars to Healthy Families Virginia. Still, the investment in state-supported voluntary home visiting programs in Virginia, both in terms of the increased budgetary allocation and funding overall, remains mostly federal (sidebar).

Most of the funding for Virginia's state-supported home visiting programs **derives from federal sources**, particularly TANF and MIECHV. Federal sources accounted for **93%** and **95%** of total state and federal funding for home visiting in FY16 and FY17, respectively.

Voluntary home visiting programs in Virginia receive state support other than funding, including staff time and some administrative infrastructure. For example, all programs are monitored, at least to some extent, by staff at the Virginia Department of Health (VDH), Virginia Department of Social Services (VDSS), or the Virginia Department of Behavioral Health and Developmental Services (DBHDS). Further, some programs' local providers are housed within local health departments. One program, Project LINK, is located at nine community services boards throughout the state. Three of the seven programs—Healthy Families Virginia, Parents as Teachers, and Nurse-Family Partnership—are formally affiliated with, monitored by, and receive technical assistance and quality assurance from national program models through state or regional offices funded by the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) grant.

It is likely that there are families and children in Virginia who would benefit from, but have limited or no access to, voluntary home visiting programs. The availability of programs across Virginia varies widely, and in some localities, programs are not available at all. For example:

- The Resource Mothers program, which is specifically designed to support pregnant and parenting teens, was not available in nearly 70 percent of Virginia localities with a teen pregnancy rate higher than the state median in 2015.
- Project LINK—the only state-supported program specifically targeted to pregnant and parenting women experiencing substance abuse—was not available in 14 of the 24 Virginia localities where the rates of neonatal abstinence syndrome were more than double the state rate from 2011 to 2015 (sidebar).
- No voluntary home visiting programs were available in at least five Virginia localities in FY16; in at least 41 localities, there was only one model available to families. Together these localities—many but not all of which are rural—accounted for 22 percent of all births in Virginia from 2011 to 2015.

Neonatal abstinence syndrome (NAS) occurs when an infant is born exhibiting symptoms of withdrawal from certain substances, which can indicate that the mother engaged in substance use during pregnancy. NAS is most commonly linked to opioid addiction and can result in complications including prolonged hospitalization, poor postnatal growth, and increased irritability, according to the federal Centers for Disease Control and Prevention and the Virginia Department of Health.

The variation of program distribution throughout the state reflects the lack of a systematic, statewide planning process for voluntary home visiting programs. Individual programs generally select communities in which to operate on the basis of their specific goals and target population as well as their resources.

Virginia's voluntary home visiting programs are generally effective

> *"If you're looking for school-age differences that matter longer down the road, you'll look at the cognitive and birth outcomes, and the parenting behaviors."*
>
> **– Subject-matter expert Centers for Disease Control and Prevention**

Families who participate in Virginia's voluntary home visiting programs often have better outcomes than similar families who do not participate, according to outcomes data. Virginia's voluntary home visiting programs show positive results in measures unique to their individual goals as well as in common measures such as birth and child health outcomes. Virginia's programs also demonstrate improvement for individuals and families over the course of participation.

Participation in Virginia's voluntary home visiting programs is associated with positive birth outcomes, such as full-term pregnancy and healthy birth weight—both of which are key predictors of healthy child development. For example:

- Babies born to mothers participating in Healthy Families Virginia and CHIP of Virginia were 40 percent more likely to reach full term than the babies of non-participants, according to a 2017 Pay for Success evaluation. The statewide rate of preterm birth in Virginia recently rose to 9.6 percent, with substantial variation by race.
- Babies born to mothers who received services through CHIP of Virginia for at least four months prior to delivery were more likely to be born at full term and at a healthy birth weight than babies born to those same mothers prior to their enrollment in the program, according to program data collected from 2014 through 2017.

A recent analysis of data from a randomized controlled trial of **Nurse-Family Partnership** found increases in academic achievement for boys in particular as late as middle school. The research team, led by Nobel Laureate James Heckman, attributed the likely cause of these long-term impacts to increases in birth weight as a result of program participation.

Virginia's voluntary home visiting programs also show better outcomes for participants compared to non-participants in the area of child health. For example, a higher percentage of children in families participating in Healthy Families Virginia were up-to-date on immunizations (87.5 percent) than comparable children whose families did not participate (68.1 percent) in FY16.

Programs in Virginia demonstrate improvement for individuals and families over the course of participation as well. For example, in FY16, nearly 71 percent of teenage participants in the Resource Mothers program who were smoking when they became pregnant stopped smoking during pregnancy. Similarly, in FY17, 50 percent of families participating in CHIP of Virginia experienced improved housing stability (moved less than twice) after one year of services.

Programs similar or identical to Virginia's have been evaluated in other states, and the evaluations concluded that those programs lead to positive outcomes in both the short and long term. Some programs that also operate in other states, specifically those receiving federal MIECHV funds (Healthy Families, Parents as Teachers, and Nurse-Family Partnership), have been shown to positively impact birth outcomes, maternal and child health, child cognitive and behavioral skills, and parental behaviors. These programs can reasonably be expected to produce similar outcomes in Virginia because

they use strong controls on implementation fidelity. (See Appendix F for more examples of program outcomes.)

Nearly all programs are well designed but lack administrative support and stable funding

Further confidence in most of the state's voluntary home visiting programs is gained when assessing their design and implementation (sidebar).

To identify how a voluntary home visiting program should be designed and implemented, JLARC staff reviewed national research and consulted leading subject-matter experts. (See Appendix B on methodology to assess program design and implementation.)

Experts generally agree that an effective voluntary home visiting program should

- use eligibility criteria designed to serve children and families most at risk of encountering the adverse experiences that can undermine a child's development;
- use an evidence-based model supported by a clear theory of change and fidelity controls, such as regular observation of home visits. The model should feature (a) effective screening and referrals, (b) high-quality interactions between home visitors and families and children, and (c) home visitors who are competent, highly trained, and receive high-quality professional development; and
- use data systematically and continuously to evaluate implementation, including individual families' progress, and improve where necessary over time.

Nearly all programs feature components necessary for effectiveness, though the extent varies

The voluntary home visiting programs in Virginia generally feature the components recommended by experts (Figure 3-1). All seven programs use eligibility criteria that focus on families and children most at risk for the adverse experiences that can undermine a child's development. Nearly all programs to some extent use (and ensure implementation fidelity of) clear, evidence-based models; are effective at screening and referring clients for services; ensure quality interactions between their clients and staff; and ensure that staff are competent, well trained, and well supported. Nearly all programs also use data to track families' progress and decide how to improve implementation and performance over time.

FIGURE 3-1
Nearly all of Virginia's state-supported home visiting programs feature all components of effective programs, though the extent varies

SOURCE: JLARC interviews with program staff and review of program documents and data.
NOTE: HFV = Healthy Families Virginia; CHIP = CHIP of Virginia; PAT = Parents as Teachers; NFP = Nurse-Family Partnership; LS/HS = Loving Steps/Healthy Start; RM = Resource Mothers; LINK = Project LINK. Parents as Teachers (PAT) in Virginia uses eligibility criteria focused on at-risk children, but the national PAT model does not.

Project LINK is intended to address maternal substance abuse but lacks reliable evidence of effectiveness and nearly all components of an effective program

Project LINK was created in 1992 to provide intensive case management to pregnant and parenting women currently abusing (or at risk of abusing) substances including but not limited to alcohol, methamphetamine, cocaine, heroin, and prescription drugs, including opioids. The goal of Project LINK, which is available at nine community services boards, is to use intensive case management, including home visiting services, to actively "link" women in this high-risk population to services to overcome their addiction and become healthy enough to care for themselves and their children.

Unlike the state's other home visiting programs, Project LINK has not demonstrated clear or reliable evidence of effectiveness. The nine Project LINK sites report data on their service delivery and outcomes to the state, but only every six months, and such infrequent reporting is not sufficiently timely to be fully useful to improve program implementation. In contrast, all other home visiting programs report to the state on service delivery and outcomes at least quarterly, and many do so monthly. Further, Project LINK has not been subject to formal, external evaluation since 1994, whereas

Virginia's other home visiting programs have all been subject to external evaluation in the past five years.

Project LINK also lacks many components of effective programs. A central reason for this is that Project LINK leaves many key decisions about implementation to the individual community services boards. For example, Project LINK sites are not required to utilize an evidence-based or evidence-informed curriculum, and Project LINK case workers across the state are not required to meet the same minimum qualifications. State-level Project LINK staff, who are part-time, have communicated at least some expectations to individual Project LINK sites, such as the expectation that they administer all child developmental screenings on the recommended schedule. However, the frequency and intensity of state-level monitoring is insufficient to ensure that these expectations are met. State Project LINK staff have acknowledged many of these deficiencies both in interviews with JLARC staff and in an application for a federal grant submitted in July 2017.

State could improve Project LINK to reduce maternal substance abuse

The state has recognized the increase in maternal substance abuse and related challenges surrounding substance-exposed infants in recent years. Most notably, **House Bill 2162 (2017)** created an interagency work group to study and propose solutions for barriers to treatment.

The deficiencies in the Project LINK program result in missed opportunities to help address a particularly difficult, costly, and growing issue. Rates of maternal substance abuse have risen steadily across Virginia in recent years, with substantial variation by locality. Heightened rates of maternal substance abuse not only have the potential to severely undermine child development but also present high costs for society, including but not limited to the costs of care for fetal alcohol spectrum disorders (FASD) and neonatal abstinence syndrome (NAS):

- Each case of FASD results in lifetime costs of approximately $800,000 due to the health care, developmental services, special education services, and other intensive services these individuals require.
- Each baby born with NAS spends an average of 23 days in the hospital immediately after birth at a total cost of approximately $93,000, according to the federal Centers for Disease Control and Prevention.

Total state and federal funding for Project LINK ($850,000) is therefore roughly equivalent to the lifetime cost of a single case of FASD, or to the initial hospital costs of fewer than 10 babies born with NAS.

The deficiencies of Project LINK can complicate the already difficult work of the state's other voluntary home visiting programs, many of which rely on Project LINK as a key partner in their service referral network. Increased rates of maternal substance abuse also challenge the ability of home visiting programs serving the general population to operate as designed and achieve their intended outcomes, according to subject-matter experts.

Given the increased need for maternal substance abuse services, the state could take steps to ensure that Project LINK (or a similar program) effectively provides intensive

case management and home visiting services to its target population, particularly in communities of the state with the highest levels of need. DBHDS, VDSS, and VDH would need to collaborate to improve the program with the assistance of Early Impact Virginia.

The federal Substance Abuse and Mental Health Services Administration grant awarded in September 2017 will provide DBHDS and Project LINK $1 million per year for three years. The grant will be used to **expand the number of Project LINK sites to 11 (from 9)** and **fund certain improvements**, including evidence-based curricula, at both the state and site levels.

Some of the deficiencies of Project LINK will likely be at least partially addressed through a federal grant awarded to DBHDS and Project LINK in 2017 (sidebar). However, the state could consider requiring that Project LINK implement a model with all the components of an effective program, including an existing evidence base, implementation fidelity controls, and robust evaluation protocols. One such model, the Parent-Child Assistance Program (PCAP) at the University of Washington, has been subject to numerous evaluations and replicated in at least nine other states and two other countries (Canada and New Zealand) since 1998.

Requiring Project LINK to adopt and implement the three-year PCAP model would entail a substantial increase in investment relative to current levels. State and federal funding for Project LINK in FY16 equated to less than $1,100 per participant. In contrast, the total annual cost of implementing the PCAP model would be approximately $5,000 per participant. Maintaining FY16 service levels of Project LINK within the PCAP model would therefore require an additional investment of approximately $3.3 million per year, assuming continued use of renewable federal grant funding from the Substance Abuse Prevention and Treatment block grant and general funds.

However, improving Project LINK by adopting the PCAP model would likely generate substantial cost savings. PCAP has demonstrated annual cost savings of nearly $4 for every $1 invested in the program through reductions in incidences of fetal alcohol spectrum disorders alone, according to a rigorous evaluation of its implementation in Canada. Those savings do not account for other potential sources of savings that have been demonstrated in the state of Washington, such as reductions in the costs of child welfare services and incarceration. PCAP's implementation fidelity controls provide confidence that the model would result in similar impacts and savings in Virginia.

RECOMMENDATION 3

Recommendation 3	
Category	Cost
	$3.3M* (annually)
*Cost savings generated through improved Project LINK expected to cover added costs.	

The General Assembly may wish to consider including language in the Appropriation Act to direct the Department of Behavioral Health and Developmental Services, Department of Health, and Department of Social Services to transform Project LINK into an evidence-based, well-designed, consistently implemented home visiting program to improve child development outcomes by reducing maternal substance abuse. The General Assembly may wish to consider appropriating sufficient funding.

All programs lack adequate administrative support and sufficiently stable funding

Administrative support and funding stability are vital to the success, over time, of the state's voluntary home visiting programs. Because these programs are small in size and their funding levels are relatively low, they depend on administrative infrastructure so

that they can devote staff time to home visiting rather than administrative activities. Further, these programs need some confidence that funding will be consistent from year to year so that they can make sound, strategic decisions about how to improve their performance over time.

State could designate a lead entity for administrative support across home visiting programs

Early Impact Virginia, formerly the Virginia Home Visiting Consortium, was created in 2007 to ensure that prevention-based home visiting programs in Virginia are equipped to provide high-quality, research-based home visiting services to at-risk families. Early Impact Virginia coordinates efforts among prevention-based voluntary home visiting programs and their partners, such as Project LINK and Early Intervention. Coordination among home visiting programs helps to avoid duplication and to ensure that families are matched to appropriate services.

Subject-matter experts, national organizations, and other states have recognized Early Impact Virginia as a model for coordinating home visiting services and ensuring a baseline of quality at the state level. For example, the Pew Center on the States, National Governors' Association Center for Best Practices, and Zero to Three have all named Virginia as a model state for coordinating home visiting efforts because of the track record established by Early Impact Virginia's precursor, the Virginia Home Visiting Consortium. Additionally, Early Impact Virginia has partnered with James Madison University to develop core home visitor competencies and training, and with the state of Iowa to develop a national training institute for home visitors through an innovation grant funded by MIECHV.

> *"Home visitors cannot do their job if they are not supported by an organization that is functioning well and fiscally sound."*
>
> **– Subject-matter expert, home visiting**

Despite the recognition Early Impact Virginia has earned, its lack of formalized state support has the potential to limit its effectiveness as well as the effectiveness of Virginia's total investment in voluntary home visiting. For example, Early Impact Virginia has identified communities of the state at highest risk for poor early child development outcomes to receive the federal MIECHV grant. However, there is no organized process to assess needs and make resource decisions that align with those needs across all voluntary home visiting programs. Similarly, Early Impact Virginia has developed specific plans for ensuring the sustainable growth of voluntary, evidence-based home visiting services across the state, but currently lacks the authority to secure funding and to execute those plans.

The state could take action to solidify and strengthen Early Impact Virginia as the lead entity for the state's voluntary home visiting programs. These steps could include: articulating the role of Early Impact Virginia as a public-private partnership in statute; granting it the authority and flexibility to conduct needs assessments, create strategic plans, and collect quality and outcomes data across programs on behalf of the state; and securing more stable funding for the organization, which currently relies on part-time staff, federal MIECHV funds, and organizational support voluntarily provided by

Healthy Families Virginia and CHIP of Virginia. Such actions would formalize the leadership of Early Impact Virginia and ensure that its work can be sustained.

Strengthening Early Impact Virginia's ability to provide support to all home visiting programs could cost up to $600,000 per year in additional state funding. These funds would be used for salary and benefits for three full-time staff, including a director and evaluator. These funds would also help ensure the continuation of Early Impact Virginia's home visitor training partnerships with James Madison University and the state of Iowa, which have the potential to generate revenue and therefore support Early Impact Virginia's operations in the future.

Recommendation 4	
Category	Cost
	$600K (annually)

RECOMMENDATION 4

The General Assembly may wish to consider including language in the Appropriation Act to designate Early Impact Virginia as the lead entity to (i) determine and systematically track key outcomes; (ii) conduct systematic needs assessments; and (iii) support continuous quality improvement, training, and coordination across state-supported voluntary home visiting programs. The General Assembly may wish to consider appropriating sufficient funding.

Funding approaches used in other states could be used to diversify and stabilize funding for voluntary home visiting programs in Virginia

Unstable and uncertain funding can challenge agencies' and programs' ability to plan and operate strategically, which in turn can undermine their effectiveness. Funding for Virginia's voluntary home visiting programs has been unstable over the past decade. For example, CHIP of Virginia's funding was reduced by 13 percent, then another 15 percent, then another five percent, then another seven percent (FY10-FY14). The program's funding was then increased by 25 percent (FY14-FY15), and then 44 percent (FY16-FY17). As another example, funding for the Resource Mothers program was eliminated (FY10-FY11), and no funding was provided again until FY16.

> *"We work with high-risk families, more than previously. More domestic violence, substance abuse, neighborhood safety issues. We are asking more of home visitors."*
>
> **– Director, Virginia home visiting program**

Frequent and substantial changes to program funding are particularly challenging for program stability. Most government programs experienced reductions followed by increases to funding after the Great Recession. However, significant changes in funding of home visiting programs over time have complicated the functioning of these programs and reduced their ability to plan and operate strategically.

Another reason Virginia's home visiting programs face challenges to operating strategically and with stability is that the resources allocated to these programs have not kept pace with the costs of providing the services. For example, the value of funding allocated by the state to CHIP of Virginia was only slightly higher in FY17, adjusted for inflation, than during the recession. In contrast, voluntary home visiting programs in Virginia and nationwide are seeing rising levels of need among families in their target populations, according to multiple Virginia program leaders and national subject-mat-

ter experts. High levels of family need due to problems such as mental illness, substance abuse, and domestic violence require more intensive intervention and can substantially diminish the likelihood of achieving positive outcomes.

Other states have identified ways to secure diverse and more stable sources of funding for their voluntary home visiting programs. For example:

- **Iowa** partially funds home visiting services through a state treasury account dedicated to the state's Early Childhood Initiative. Home visiting funds are allocated to Iowa localities according to a funding formula linked to child poverty rates.
- **Illinois** requires a certain proportion of all state child development block grant funds to be allocated to programs serving infants and toddlers. Many of the programs serving this age group in Illinois are voluntary home visiting programs.
- **Louisiana** partially funds child development programs, including home visiting, using its Children's Trust Fund, which is funded by fees charged to obtain duplicate birth certificates as well as other contributions and donations.
- **South Carolina** is funding statewide implementation of the Nurse-Family Partnership model using a Pay for Success approach, with $17 million in upfront philanthropic funding and $13 million in federal Medicaid funding obtained through a waiver. The state will pay up to $7.5 million to sustain statewide implementation of the model in years four and five, depending on outcomes.

Additional sources of diverse and stable funding utilized by other states include TANF, Medicaid, tobacco settlement funds, and education dollars, among others. At least one state, Arizona, partially funds home visiting programs using lottery funds, which Virginia currently uses to fund the Virginia Preschool Initiative.

The state could identify more diverse and stable sources of revenue for its voluntary home visiting programs. To inform this decision, Early Impact Virginia should assess and then report on the feasibility, advantages, and disadvantages of potential revenue sources.

Recommendation 5	
Category	Cost
	Minimal

RECOMMENDATION 5

The General Assembly may wish to consider including language in the Appropriation Act to direct Early Impact Virginia to identify potential additional sources of funding for Virginia's voluntary home visiting programs. The assessment should consider other states' approaches and funding sources, including but not limited to Medicaid, Temporary Assistance for Needy Families, lottery funds, and other dedicated sources of revenue. The assessment should consider the effect on funding stability and the advantages and disadvantages of each potential revenue source identified. Early Impact Virginia should report its findings and recommendations to the House Appropriations and Senate Finance Committees by July 1, 2019.

4 Virginia Preschool Initiative

SUMMARY The Virginia Preschool Initiative (VPI) is the state's program intended to provide quality preschool to at-risk four-year-olds. More than 18,000 at-risk children participated in VPI in FY16. VPI's eligibility criteria are appropriately focused on serving at-risk children; however, limitations in local funding and space in public schools precluded VPI from serving more than 5,000 at-risk children in FY16. VPI is effective at improving children's literacy skills, but literacy is recognized as a narrow measure of kindergarten readiness. The state lacks sufficient data to determine whether VPI is effective at improving the other skills children need to be ready for kindergarten, such as social skills and self-regulation. In the absence of data about VPI's effectiveness at improving kindergarten readiness, the program's design and implementation can still be assessed. The state has few assurances of the quality of the VPI program across localities. This is mostly because implementation of the program is local, and the state has made only minimal efforts to monitor the quality of implementation. The state has a number of ways it can improve the design and implementation of VPI. These improvements would require a more meaningful role and additional staffing resources for the Virginia Department of Education to administer the program.

Virginia's publicly funded pre-kindergarten (pre-K) program, the Virginia Preschool Initiative (VPI), was created by the 1995 General Assembly to "provide quality preschool programs for at-risk four-year-olds who are unserved by Head Start." VPI is administered by the Virginia Department of Education (VDOE) and implemented locally in both public and private settings. Most states, including Virginia, currently have publicly funded pre-K programs that are intended to provide quality learning experiences for children.

National research has shown that high-quality pre-K programs with strong quality controls can improve the likelihood that children acquire the foundational skills and abilities necessary to be successful in school and later in life. According to a recent review of national pre-K program research, "at their most effective, pre-K programs can provide young children with the kinds of enriching and supportive early environments that protect and nurture the developing brain and thus foster all facets of healthy development" (Brookings Institution and Duke University, 2017). Effective pre-K programs can be especially beneficial for children in low-income or otherwise at-risk situations.

Mixed Delivery Preschool Grant program, a recent initiative intended to promote public-private delivery of pre-K to high-risk children through state-funded grants, received $1.5 million in general funds in FY17.

Virginia Preschool Initiative Plus (VPI+) is piloting practices to ensure high-quality services and is funded primarily though the federal Preschool Development Grant. VPI+ is not part of the VPI program.

VPI serves more than 18,000 at-risk children, but certain challenges limit the reach of the program

Title I Preschool funding is not part of VPI's base funding but can be used to support VPI classrooms. Funds can be used to purchase items including classroom supplies and professional development for teachers. (See report supplement: Early Childhood Development Program Inventory.)

VPI served 18,356 at-risk four-year-olds in 119 Virginia school divisions in FY16. These children were eligible to participate in VPI on the basis of (1) poverty, (2) homelessness, (3) parent education level, (4) special education/special needs status, or (5) locally established criteria. (As of the 2016-17 school year, locally established criteria can be used to determine eligibility for up to 15 percent of participants in each school division.) Poverty is the primary reason children become eligible for VPI. During the 2016-17 school year, the majority of VPI participants (88 percent) were eligible because their family income was at or below 200 percent of the federal poverty level.

VPI received $110.2 million in funding in FY16, making it the largest state-supported early childhood development program. The majority ($70.7 million) of VPI's funding comes from state lottery proceeds, while the remainder ($39.5 million) comes from required local match funding. (The amount that school divisions owe in local match funding is based on the local composite index, which reflects local ability to pay.) State appropriations to VPI have increased from $5,700 to $6,125 per child (FY07 to FY17).

> *"Children who have had early experiences of economic scarcity and insecurity gain more from [pre-K] programs than their more advantaged peers."*
>
> **– Pre-kindergarten Task Force, Brookings Institution and Duke University, 2017**

Given limited resources, VPI's eligibility criteria are appropriately focused on serving children at risk of poor developmental outcomes. VPI's focus on at-risk four-year-olds recognizes the fact that these children have the most to gain from an effective pre-K program. In its formula for allocating VPI slots, the state more heavily weights school divisions with lower ability to pay. The formula appropriately excludes those children who already participate in the federal Head Start program.

Nearly all (91 percent) of VPI participants were taught in **public schools** in FY16.

The children served by VPI represent about three-fourths of those who could have participated. Based on the state's calculations using the Standards of Quality formula, more than 5,000 potentially eligible children did not participate in VPI in recent years, and the number may be much higher. (The Standards of Quality formula estimates the total number of children who could be eligible primarily based on a measure of poverty; it does not account for VPI's other eligibility criteria, such as special education status.)

JLARC assessed and reported on the VPI program in 2007. (See *Virginia Preschool Initiative (VPI): Current Implementation and Potential Changes*, 2007.)

According to feedback collected by VDOE staff from localities, these children did not participate in VPI mostly because local funding and space were limited. Of the 53 school divisions that explained why they were not able to fully use their VPI slots during the 2016-17 school year, 22 divisions cited an inability to provide local match funds, and 16 cited insufficient classroom space in public schools. These barriers to utilization are not new; they have historically been cited by localities that do not have VPI programs, and they were identified in JLARC's 2007 report on VPI.

The school divisions that had the most unused VPI slots did not have many overarching similarities other than their size. Some of the state's largest VPI programs in Prince William, Chesterfield, Henrico, and Loudon Counties used less than 50 percent of their VPI slots.

VPI improves literacy, but its impact on other key aspects of kindergarten readiness is unknown

VPI generally promotes growth in children's literacy skills and reduces the need for reading intervention services better than other pre-K programs. In an assessment of 2016 literacy screening data (PALS-K), only nine percent of children who participated in VPI were found to need reading intervention services in kindergarten, compared to 14 percent of children in other publicly funded pre-K programs (e.g., Head Start) and 35 percent of children who did not attend pre-K at all, on average. The extent of VPI's impact on children's literacy skills varies across participating school divisions.

Children need a variety of mutually reinforcing skills to be successful in kindergarten and future grades. (See Chapter 2 on kindergarten readiness and risk factors among Virginia's children.) Literacy skills, although important, comprise only one aspect of kindergarten readiness. Other key skills, such as social skills, self-regulation, math skills, and physical and motor skills are also important for kindergarten readiness.

Beyond literacy, the state does not have sufficient data to determine whether VPI promotes kindergarten readiness. The Virginia Kindergarten Readiness Program (VKRP) is not currently administered to all, or a representative sample, of children who attended VPI statewide. As of the 2016-17 school year, VKRP was administered to only 3,761 children in public preschool—a figure that includes not only children in VPI, but also those participating in other publicly funded pre-K programs, such as VPI+.

Other states use multi-dimensional kindergarten readiness assessments to understand the readiness of children who have attended publicly funded pre-K programs. Maryland and Kentucky, for example, both conduct such assessments and publish the information in annual kindergarten readiness reports.

To better understand the kindergarten readiness of children who attended VPI, and to support improvements to VPI, the state could ensure that the VKRP results are tracked for VPI students as the VKRP program is rolled out statewide. (See Recommendation 1, which proposes a multi-dimensional assessment of all children's kindergarten readiness.) With the assistance of VDOE staff, staff from the University of Virginia's Center for Advanced Study of Teaching and Learning (UVA CASTL) could identify all children who participated in VPI and assess their kindergarten readiness. The results of VKRP assessments would help the state identify areas of the state where children who participate in VPI still enter kindergarten without the full set of skills needed to be successful, and inform future strategies for supporting VPI teachers.

Evaluations are required under the Appropriation Act, which says that "[VPI] students shall be required to be evaluated in the fall and in the spring by each participating school division." School divisions primarily evaluate children using the phonological awareness and literacy screening (PALS) assessment. Most school divisions conduct additional evaluations, though the skills they assess vary.

> *"[Literacy] is an extraordinarily narrow measure of learning and development that leaves out almost all of what is covered by Virginia's standards."*
>
> **– National Institute for Early Education Research**

RECOMMENDATION 6

The Virginia Department of Education and the University of Virginia's Center for Advanced Study of Teaching and Learning should use the results of multi-dimensional kindergarten readiness assessments to determine how well the Virginia Preschool Initiative promotes readiness in all key developmental domains.

Recommendation 6	
Category	Cost
	Minimal

VPI needs better assurances of program quality

Although there is insufficient data to fully determine how well VPI prepares children for kindergarten, insight into how well VPI prepares children for kindergarten can be gained by assessing the program's design and implementation (sidebar).

To identify how a pre-K program should be designed and implemented, JLARC staff reviewed national research and consulted leading subject-matter experts. (See Appendix B on methodology to assess program design and implementation.)

Experts generally agree that to ensure high quality, an effective pre-K program should

- ensure effective teacher-child interactions;
- use curriculum shown through research to lead to improvement;
- provide effective professional development for teachers; and
- collect and use data to evaluate implementation and improve where necessary over time.

Through high-quality teacher-child interactions and research-based curricula, effective pre-K programs should support the development of the skills children need to be successful in kindergarten and in later grades.

2016 State of Preschool Report conducted by the National Institute for Early Education Research indicates that Virginia has fewer quality components than several neighboring states, including North Carolina, West Virginia, and Maryland.

The General Assembly created VPI to provide children with a *quality* preschool experience, but VPI currently lacks adequate quality assurance mechanisms to ensure that this purpose is fulfilled. Accordingly, it would be prudent for the state to ensure that the VPI program does provide the quality experience that the General Assembly intended. Because VPI is predominantly state funded, the state has significant discretion in how the program is designed and implemented. The state can therefore make changes to provide greater assurances that children in VPI receive quality services.

VPI has few assurances of quality teacher-child interactions, and in most classrooms, interactions have not been assessed

Experts generally agree that high-quality interactions between teachers and children are key to effective pre-K programs. Effective and high-quality interactions involve more than friendly and positive interactions with children. To provide high-quality interactions, teachers should intentionally provide children opportunities to think critically and have complex language interactions, be responsive and nurturing, provide emotional support to children, and build the variety of skills children need to succeed. Teachers should also be well organized and maximize the time spent on learning.

There is little current information available to reach strong conclusions about the quality of teacher-child interactions at all VPI providers. Although it is likely that many VPI providers seek to ensure high-quality teacher-child interactions for other reasons, the state has no formal, written expectations for such interactions, and very few assurances that they are occurring in VPI classrooms.

Findings from JLARC's 2007 review of VPI suggested the need for better assurances that high-quality teacher-child interactions are occurring. JLARC's review found that teacher-child interactions were generally of medium or high quality:

> Classrooms were rated using a validated scoring instrument (CLASS) which focuses on teacher-student and student-peer interactions. Observation scores were typically in the medium- to high-quality range.

The review also found, though, considerable differences in quality across providers:

> The difference between medium quality and high quality was sometimes striking, however. Within the subset of school divisions visited, some significant differences in mean scores were found based on the type of instruction, number of VPI classrooms in the locality, locality wealth, and time during the school year when the classroom was observed.

Very few VPI providers have been assessed recently and can demonstrate that their teachers have high-quality interactions with children. Participation of VPI providers in the Virginia Quality system is voluntary, and providers decide when they are ready to pursue each quality rating level (sidebar). Of the 625 VPI sites statewide, 182 VPI sites (29 percent) participate in Virginia Quality, and only 21 sites (3 percent) have pursued the quality rating levels (4 and 5) that require assessments of the quality of teacher-child interactions. VPI sites with other quality rating levels (1, 2, and 3) have not had the quality of their teacher-child interactions assessed, though the lack of an assessment does not necessarily mean that a VPI site has low-quality teacher-child interactions.

In contrast with Virginia, the federal government and several states currently require observations of *all* publicly funded pre-K programs. These observations are the best approach to assess the quality of teacher-child interactions. For example, the federal government requires a random sample of multiple classrooms at each Head Start provider to undergo observations. Louisiana takes a more intensive approach, requiring observations to be conducted twice a year for all publicly funded toddler and pre-K classrooms.

To gain better assurances that VPI teachers have high-quality interactions with children across all VPI providers, the state should require VPI providers to participate in CLASS observations every two years and use this information to inform targeted professional development for teachers. The Virginia Early Childhood Foundation (which administers Virginia Quality) could train enough individuals to conduct CLASS observations for half of the VPI classrooms each year, which would enable all classrooms to be reviewed every two years and allow VPI teachers time to make improvements, where necessary, between observations. According to Virginia Early Childhood Foundation staff, the state does not currently have enough trained CLASS observers to review all VPI classrooms, but it could have this capacity in two years.

Foundation staff report that it costs up to $400 per classroom to pay the individual conducting a CLASS observation. If the state conducted CLASS observations of all 1,235 VPI classrooms every two years, it would cost approximately $250,000 annually—less than one percent of total state funding for VPI in FY16.

CLASS is "an observational instrument developed at the University of Virginia's Center for Advanced Study of Teaching and Learning to assess … multiple dimensions of teaching that are linked to student achievement and development." It can be used in child care, pre-kindergarten, and K-12 classrooms.

Virginia Quality is the state's voluntary quality rating and improvement system for early learning programs. (See Appendix G for more information on Virginia Quality.)

Some VPI providers have multiple sites. Most sites are in public schools, but some are in private early learning settings where there is at least one VPI-funded child. The 182 VPI sites referenced are located in 33 school divisions.

Requiring CLASS observations of VPI providers would fulfill a recommendation made in JLARC's 2007 report on VPI to "increase the state's capacity to facilitate classroom observations of local VPI programs."

RECOMMENDATION 7

Recommendation 7	
Category	Cost
	$250K (annually)

The General Assembly may wish to consider including language in the Appropriation Act to require all Virginia Preschool Initiative provider classrooms to have the quality of their teacher-child interactions assessed through a rigorous and research-based classroom observational instrument (such as the CLASS observational instrument) at least once every two years. The General Assembly may wish to consider appropriating sufficient funding.

Head Start providers are required to reach minimum thresholds for the quality of teacher-child interactions. Providers under these thresholds are less likely to receive federal funding than other providers.

If VPI providers are regularly assessed through CLASS observations, the state could also consider requiring VDOE staff to establish, over multiple years, a minimum acceptable threshold for the quality of teacher-child interactions. This threshold could be established with the assistance of UVA CASTL staff using existing research on CLASS observation scores. The threshold would clarify for providers the minimum quality of teacher-child interactions that is expected by the state. The threshold could be phased in over several years to allow VPI providers to become familiar with the CLASS observation process and expectations.

RECOMMENDATION 8

Recommendation 8	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education to establish a statewide minimum acceptable threshold for the quality of teacher-child interactions for the Virginia Preschool Initiative. The threshold should be established with the assistance of the University of Virginia's Center for Advanced Study of Teaching and Learning, using a rigorous and research-based classroom observational instrument (such as the CLASS observational instrument).

Curriculum is defined as "goals for the knowledge and skills to be acquired by children and the plans for learning experiences through which such knowledge and skills will be achieved," according to the National Association for the Education of Young Children.

VDOE has approved funding for several VPI providers that reported using no curriculum or an unproven curriculum

Experts also generally agree that using a proven curriculum is essential to providing an effective pre-K program. A strong curriculum is necessary to provide structure to pre-K learning over time, so that the daily and weekly experiences aggregate toward a particular set of goals. Curricula should be validated through credible research to show that they build foundational skills. Curricula should also be developmentally appropriate and adapted to each stage in a child's developmental progression.

The state has minimal effective controls over the quality of each VPI provider's curriculum. Although it is likely that many VPI providers use a proven curriculum, VPI's existing curriculum standards are inadequate to ensure that all VPI providers have and use proven, research-based curricula. VDOE directs VPI providers to use a research-

based curriculum that is aligned with the state's early learning standards, but the VPI providers ultimately choose which curriculum they use. VDOE staff do not offer formal guidance on which curricula are research-based or review the content of locally developed curricula.

JLARC staff identified eight VPI providers that reported using a curriculum (or curricula) that (1) is not an actual curriculum or (2) does not appear to be research-based (sidebar). These eight VPI providers were approved to receive funding, and in FY16 they served approximately 2,100 children, or 12 percent of all children in VPI.

There is also broader concern about curriculum in VPI programs. For example:

- Multiple state agency staff and Virginia pre-K researchers noted that not all VPI providers use an actual curriculum, and that the quality of curricula varies significantly across VPI providers.
- There are some discrepancies between the curricula VPI providers reported on their applications for VPI funding in 2017 and the curricula they reported using in later reports to VDOE.
- Many VPI programs participating in the Virginia Quality system have achieved a quality rating level that indicates use of a proven curriculum. However, these providers' curricula were not sufficiently verified. (See Appendix G for potential improvements to curriculum reviews conducted through the Virginia Quality system.)

JLARC staff identified **research-based curricula** by reviewing curricula that were identified as research-based by (1) the What Works Clearinghouse, (2) the National Center on Quality Teaching and Learning, and (3) southern Atlantic region states (GA, MD, NC, FL, and DE).

Virginia Department of Education staff emphasized that improvements to the VPI program would also be beneficial for early childhood special education.

Virginia's approach to VPI curricula is less structured than other states' approaches to their pre-K programs. Five out of seven of Virginia's neighboring states in the southern Atlantic region currently have a preapproval process for their pre-K curricula. North Carolina, for example, requires all state-funded pre-K classrooms to use an approved curriculum that aligns with the state's early learning standards and assembles a committee of early learning stakeholders to approve the list of curricula every three years. Similarly, Georgia requires all state-funded pre-K classrooms to use a curriculum from an approved list and works with University of Georgia researchers to update the list every three to five years.

To ensure that all VPI providers have and use a research-based curriculum, the state should develop a list of research-based early learning curricula that are approved for use. The list could include curricula that address one or multiple early learning domains listed in the state's early learning standards (i.e., Virginia's Foundation Blocks for Early Learning); however, VPI providers should ensure their curricula cover all key early learning domains, rather than a single domain such as literacy. VDOE staff could work with staff at UVA CASTL to create the list and update it at least every three years. Minimal resources would likely be required for VDOE to develop the list of approved curricula, as UVA CASTL staff recently helped the federal government conduct a similar effort for the national Head Start program.

To allow some flexibility for VPI providers that currently use effective locally developed curricula, the state could create an exemption from using approved curricula for VPI providers that can demonstrate sufficient kindergarten readiness outcomes. For example, the state could allow VPI providers to use locally developed curricula if VKRP results show they have a relatively high proportion of VPI-participating children who are ready for kindergarten compared to other VPI providers.

Recommendation 9	
Category	Cost
	Minimal

RECOMMENDATION 9

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education to (i) work with the University of Virginia's Center for Advanced Study of Teaching and Learning to develop a list of approved research-based early learning curricula that align with the state's early learning standards; (ii) update the list at least every three years; and (iii) require providers to select and use curricula from the list of approved curricula as a condition of receiving funding through the Virginia Preschool Initiative program.

According to VDOE staff, some VPI providers may be unable to afford to purchase comprehensive, research-based curricula that would be on the approved list. To address this, the state could subsidize the cost of developing a curriculum that could be used free of charge by localities that cannot afford to purchase a comprehensive curriculum on the approved list. For example, the state could subsidize the cost of the research-based Integrated Intentional Interactions (In^3) curriculum that was developed by UVA CASTL staff in partnership with the New E3 School in Norfolk, Virginia. This curriculum is for children ages one to five and covers all key early learning domains. Maryland is undertaking a similar initiative. The Maryland State Department of Education is currently working with the University of Maryland to develop a comprehensive curriculum to make available online, for free, to its pre-K providers.

Prior to making the curriculum available statewide, the state could appropriate funds for UVA CASTL staff to conduct a two-year pilot to implement the curriculum in several VPI school divisions and assess its impact using VKRP and CLASS observation results. If the curriculum was piloted in 50 VPI classrooms across five school divisions during the 2018-19 school, and in 200 classrooms across 15 school divisions during the 2019-20 school year, the state would incur a one-time cost of about $150,000 in FY19 and $600,000 in FY20. After the pilot, if all other VPI providers opted to use this curriculum, the state would incur a one-time cost of approximately $2.96 million—making the total one-time cost, including the pilot, approximately $3.7 million. This estimate is likely high because some VPI providers may opt to use other approved curricula.

OPTION 3

The General Assembly could include language in the Appropriation Act to direct the University of Virginia's Center for Advanced Study of Teaching and Learning (UVA CASTL) to design and implement a two-year pilot of a comprehensive research-based curriculum for the Virginia Preschool Initiative (VPI). The goal would be to offer the curriculum to localities free of charge. UVA CASTL could submit a report to the House Appropriations and Senate Finance Committees on the (i) results of the pilot and (ii) feasibility and costs to the state of offering the curriculum to VPI providers statewide. The General Assembly could appropriate sufficient funding.

Option 3	
Category	Cost
	<$3.7M* (one-time)
*Estimated costs include two-year pilot.	

VPI's professional development standards do not ensure that pre-K teachers have skills necessary to be effective

Experts also agree that quality pre-K programs ensure that teachers receive relevant and useful professional development before they begin teaching and on an ongoing basis. The professional development should help teachers acquire the skills they need to implement their program well, such as how to have quality interactions with children and teach curriculum effectively. The most effective professional development is individualized to meet the specific needs of teachers.

The state currently requires all VPI teachers to complete 15 hours of professional development each year, but no controls are in place at the state level to ensure that teachers receive the types of professional development they actually need to be effective. The training that VPI teachers pursue is currently decided locally based on teachers' annual evaluations and school division requirements. No mechanisms exist, though, to ensure that pre-K teachers receive the individualized training necessary to have quality teacher-child interactions and to teach their curriculum effectively. Virginia's unstructured approach to professional development is not new. The 2007 JLARC review of VPI found that "Virginia currently provides minimal professional development support for VPI teachers."

To ensure that VPI teachers receive sufficient training, the state should require VPI teachers to regularly receive individualized professional development that is informed by the results of classroom observations and is intended to improve the quality of teacher-child interactions and curricula implementation. VPI teachers should meet with professional development specialists each year to (1) discuss CLASS observation results, (2) build skills required to improve the quality of teacher-child interactions (e.g., through observing other teachers), and (3) receive support for implementing curricula effectively. VPI teachers could apply the time spent meeting with specialists toward their 15-hour professional development requirement.

VDOE could work with two entities to facilitate this type of professional development:

- The Virginia Early Childhood Foundation could hire professional development specialists who are proficient in CLASS observations and the skills necessary for quality teacher-child interactions.
- UVA CASTL could train and support professional development specialists to be proficient in research-based practices and the skills needed to implement curricula—such as the In^3 curriculum—effectively.

If professional development specialists provided VPI teachers in all 1,235 VPI classrooms with 15 hours of individualized professional development each year based on their CLASS observation results, it could cost the state about $926,000 annually. If UVA CASTL staff provided training and ongoing support for specialists to prepare them to train VPI teachers on curricula implementation, it would cost an additional $428,000 each year (totaling about $1.4 million). The actual costs will depend on the extent to which VPI teachers need professional development assistance. The highest priority should be professional development targeted to VPI teachers with classroom observation scores that do not meet the statewide minimum acceptable standards for the quality of teacher-child interactions.

Recommendation 10	
Category	Cost
	$926K to $1.4M* (annually)
*Depends on extent and duration of professional development provided.	

RECOMMENDATION 10

The General Assembly may wish to consider including language in the Appropriation Act to require all Virginia Preschool Initiative teachers to annually receive individualized professional development from professional development specialists to support quality teacher-child interactions and effective curriculum implementation. The Virginia Department of Education should work with the Virginia Early Childhood Foundation and the University of Virginia's Center for Advanced Study of Teaching and Learning to hire and train specialists to provide this professional development. Professional development resources should be targeted to providers as identified through formal classroom observation (using an observational instrument such as CLASS). The individualized professional development should count toward existing requirements. The General Assembly may wish to consider appropriating sufficient funding.

Improvements to VPI quality will require more meaningful role and resources for VDOE

Ensuring that VPI provides a quality pre-K experience would require VDOE to take a more meaningful role and would likely require additional VDOE staff. According to national research, ensuring the effectiveness of a pre-K program requires good design, consistent implementation, and valid and useful performance measures. A reasonable degree of variation across divisions and classrooms is acceptable, but the VPI program, as currently implemented, lacks the quality assurances needed to provide confidence that it is effectively and efficiently accomplishing its goals across the state.

Given the size of the state's investment in VPI and the importance of quality to the program's overall effectiveness, the General Assembly may wish to set forth in the Code of Virginia specific responsibilities for VDOE to ensure the quality of instruction provided through VPI. Currently, the Appropriation Act directs VDOE to establish standards for children to be ready for kindergarten and directs school divisions to certify that their VPI programs follow these standards. However, the Act does not direct VDOE to take any meaningful actions to monitor or ensure the quality of the program's implementation. Consequently, and in part because of limited staffing resources, VDOE mostly defers to local school divisions to design, implement, and assess their own VPI programs.

North Carolina's Department of Health and Human Services has at least 20 staff assigned to administer the North Carolina pre-K program—substantially more than VDOE's 1.75 FTEs. However, VDOE is unlikely to need this many staff, as state spending on pre-K in North Carolina is twice as much as in Virginia, according to the National Institute for Early Education Research.

Ensuring quality VPI instruction on an ongoing basis would likely require that VDOE staff

- monitor the quality of teacher-child interactions;
- ensure the use of evidenced-based curricula in VPI classrooms;
- facilitate individualized professional development and direct increased resources to programs that do not meet expectations for quality; and
- report to the General Assembly annually on the extent to which VPI funding supports quality pre-K experiences for children across the state.

RECOMMENDATION 11

Recommendation 11	
Category	Cost
	None

The General Assembly may wish to consider amending Title 22.1 of the Code of Virginia to require the Virginia Department of Education (VDOE) to ensure that high-quality preschool is provided through the Virginia Preschool Initiative (VPI). On an ongoing basis, VDOE should (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) report to the General Assembly on the extent to which VPI funding supports high-quality pre-K experiences across the state.

A more meaningful VDOE role in administering the VPI program and ensuring quality would require additional staffing resources. Although VPI is the state's largest early childhood development program, only 1.75 full-time-equivalent (FTE) VDOE staff are responsible for monitoring the implementation of VPI across 625 VPI sites and 1,235 classrooms each year. As a result, VDOE is limited in its ability to provide meaningful assurances of program quality. For example, VDOE staff currently review VPI program implementation through "desk audits" rather than more meaningful approaches to monitoring, such as site visits. VPI site visits were conducted by several consultants from 2005 to 2010, but these positions were defunded due to state budget cuts. Additionally, VDOE staff require VPI providers to report the curriculum they use, but, without site visits, staff do not know whether teachers are actually *using* the curriculum in practice or doing so effectively. Key stakeholders interviewed for this

VDOE staff reported that they plan to **expand the scope of desk audits** for VPI providers in 2018. Still, these additional desk audits would not provide adequate assurances of quality across VPI providers.

study acknowledged the limitations of VDOE's current monitoring capacity and practices. These limitations were also identified in JLARC's 2007 review of VPI.

The total number of additional VDOE staff needed to implement improvements to VPI's design, implementation, and assessment would depend on whether, how, and to what extent this report's recommendations and options are implemented. To inform how much additional funding would be required, the General Assembly may wish to consider directing VDOE to submit a plan for carrying out its new statutory responsibilities (Recommendation 11), including additional funding and staffing needed. The plan could be informed by an existing VDOE resource—its nationally recognized approach to providing targeted technical assistance to low-performing K-12 schools (sidebar).

VDOE has a nationally recognized comprehensive support system for K-12 schools, known as the Partnership for Achieving Successful Schools, that is used to help historically low-performing schools and school divisions implement effective instructional strategies and best practices to increase student achievement.

RECOMMENDATION 12

Recommendation 12	
Category	Cost
	TBD

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Education (VDOE) to develop a plan to ensure high-quality preschool is provided through the Virginia Preschool Initiative (VPI). The plan should detail how VDOE will (i) monitor the quality of teacher-child interactions; (ii) ensure the use of evidence-based curricula; (iii) facilitate individualized professional development and direct more resources to programs that do not meet expectations for quality; and (iv) provide the General Assembly with useful information about how VPI funding supports quality pre-K experiences for children across the state. The plan should include details on the number of staff and additional funding needed to carry out these new responsibilities. VDOE should submit its proposal to the House Appropriations and Senate Finance Committees by November 1, 2018.

5 Child Care Subsidy Program

SUMMARY Virginia's Child Care Subsidy Program pays subsidies to child care providers that care for low-income children. The subsidy contributed to the cost of care for 18,500 low-income children younger than age five in FY16. Because funding is limited, the program was not able to subsidize care for another 4,000 children who were determined to be potentially eligible. The Child Care Subsidy Program was established to enable parents to work or obtain education or training, but the program recently incorporated a new goal: to promote healthy brain and skills development in children. The state could pursue this goal by incentivizing high-quality care, but as it is currently designed, the program provides few incentives. The state could improve the Child Care Subsidy Program to more effectively promote high-quality care, but doing so would require substantial changes in the program's design and quality assurance mechanisms.

Virginia's Child Care Subsidy Program is intended to help parents and other caregivers afford child care, and to facilitate parental employment, education, or training. The subsidy is administered by the Virginia Department of Social Services (VDSS) and uses federal and state funds to reduce the cost of child care for participants in five categories, including the state's Temporary Assistance for Needy Families (TANF) program. The subsidy program serves children up to age 13 (and age 18 in certain circumstances); this chapter focuses on the use of the subsidy for children through age four. The financial assistance that the subsidy provides can be used for care received in public and private settings, including child care centers and family day homes (including relatives' homes).

Research indicates that child care programs, like pre-K programs, can promote brain and skills development in young children when they are well designed and ensure child care professionals provide quality early learning experiences for children:

> At its best, child care can be a significant source of nurturance, friendships, and early learning for the fortunate children in high-quality, stable arrangements. At its worst, however, child care can expose children to safety hazards, extremely unstimulating environments, and unresponsive supervision. (National Research Council and Institute of Medicine, 2000)

Compared to pre-K programs, child care programs can have an especially large developmental impact because they not only serve four-year-olds, but also infants and toddlers—children whose brains are developing most rapidly.

The federal Child Care and Development Block Grant Act (codified in 2014) and federal Child Care Development Fund regulation (issued in 2016) maintained the program's initial purpose to help parents achieve independence from public assistance. Recent revisions, though, added references regarding the need to improve the quality of the child care subsidized through the program.

Parents participating in the subsidy program receive a state-issued card to swipe in a card reader when children arrive at and depart from a child care facility. VDSS uses the information collected from the card reader to reimburse child care providers at a particular rate for services provided under the subsidy.

Subsidy contributes to cost of care for 18,500 children under age five, but funding constraints limit program's reach

The Child Care Subsidy Program contributed to the cost of care for 18,561 children younger than age five in FY16. The subsidy is given to providers on behalf of children whose families are eligible under one of the following categories: (1) TANF Child Care; (2) TANF Transitional Child Care; (3) Supplemental Nutrition Assistance Program, Employment and Training Child Care; (4) Head Start Wraparound Child Care; or (5) Fee Child Care.

The Child Care Subsidy Program is the state's second-largest early childhood development program in terms of total funding and received $63.9 million from federal and state sources in FY16. The majority of the subsidy's funding ($50.1 million) comes from two federal block grants: the TANF Block Grant and the Child Care and Development Block Grant. The remainder of the subsidy's funding comes from the state general fund ($13.7 million). The subsidy program currently pays $3,440 annually per child served, on average (for both full- and part-time child care).

Certain very low-income participants can be granted relief from paying the remaining portion of the cost of care. Federal guidelines require families to share in the cost of child care but allow some exceptions.

The eligibility criteria of the Child Care Subsidy Program are appropriately focused on children who are at risk of poor brain and skills development and less likely to be ready for kindergarten. The subsidy's eligibility criteria include families that have an income below 150 to 250 percent of the federal poverty level, depending on the locality. The program prioritizes those families with the greatest financial constraints by allowing them to bypass the program's waiting list and not requiring co-payments.

The children served through the subsidy represented 82 percent of those who were potentially eligible to participate. Although 18,561 children did receive care under the subsidy in FY16, recent data indicates that 4,007 additional children younger than age five were determined to be potentially eligible but were placed on a waiting list. The number of children on the waiting list has dropped substantially. A significant portion of this reduction can be attributed to parents forgoing subsidy participation because of the requirement to cooperate with Child Support Enforcement.

The subsidy does not serve all eligible children primarily because of funding limitations. According to VDSS staff, in light of upcoming federally mandated changes, which will extend eligibility periods and allow children to remain in the program longer, serving more children at current rates would require additional state or federal funding. Some child care providers decline to provide care at current reimbursement rates. According to representatives of Virginia's various types of child care providers, the subsidy's low reimbursement rates discourage providers, especially those with high costs, from providing care under the subsidy.

Little is known about Child Care Subsidy's effect on development and kindergarten readiness

The state does not currently know whether (or to what extent) the subsidy program is promoting brain and skills development in children served by the program. This is primarily because the state does not assess the development of children who benefit from subsidized care. Neither the Phonological Awareness Literacy Screening tool (PALS) nor the Virginia Kindergarten Readiness Program assessment (VKRP) collect information on whether children participated in the subsidy program before kindergarten. VDSS staff acknowledge the importance of outcomes data and attribute its scarcity to the subsidy program's sole focus, until recently, on access to care.

PALS and **VKRP** are tools the state currently uses to assess children's developmental growth. PALS assesses literacy, while VKRP assesses literacy using PALS, as well as three additional developmental domains.

Several other states assess the school readiness of children who have attended child care programs prior to kindergarten. For example, both Maryland and Kentucky assess the kindergarten readiness of children in center-based and in-home child care as part of their annual kindergarten readiness assessments. It is unclear, though, whether any states use their assessments to understand the outcomes of children served through state-funded child care subsidy programs.

To better understand whether subsidized care has an effect on child development and kindergarten readiness, VDSS and the University of Virginia's Center for Advanced Study of Teaching and Learning staff could assess the development of children who receive care under the subsidy. Center staff would use detailed information, to be supplied by VDSS, on the amount of time children spend in subsidized care.

RECOMMENDATION 13

The Virginia Department of Social Services and the University of Virginia's Center for Advanced Study of Teaching and Learning should use the results of a multi-dimensional kindergarten readiness assessment to assess how well the Child Care Subsidy Program promotes readiness in all key developmental domains.

Recommendation 13	
Category	Cost
	Minimal

Child Care Subsidy could improve quality assurances

To identify how a child care program should be designed and implemented, JLARC staff reviewed national research and consulted leading subject-matter experts. (See Appendix B on methodology to assess program design and implementation.)

Although there is insufficient data to determine how well state-subsidized child care promotes brain and skills development, insights can be gained by assessing the program's design and implementation (sidebar). These key aspects are the same as those for effective pre-K programs. Among experts, there is an increasing recognition that both child care and pre-K programs are (and should be considered) early learning environments for young children. Accordingly, experts generally agree that to ensure high-quality services, an effective child care program should

- ensure effective interactions between child care professionals and children;
- use curriculum shown through research to lead to improvement;
- provide effective professional development for child care professionals; and
- collect and use data to evaluate implementation and improve where necessary.

> *"Previous distinctions between 'early education' or 'preschool' and 'day care' have unraveled. In fact, child care may be seen as providing a number of services, including the provision of nurturance and learning opportunities for children."*
>
> **– National Research Council and Institute of Medicine, 2000**

The federal government and states are increasingly using child care programs to promote brain and skills development. The federal government, for example, modified the language of the Child Care and Development Block Grant in 2014 to include "development" and "quality." States such as Louisiana and Washington now specify that their child care programs are intended to provide high-quality services, and they are using state quality rating and improvement systems to increase the quality of the child care services they subsidize.

Virginia is also placing greater emphasis on the "child development" goal of the subsidy program, according to VDSS staff. Recent VDSS efforts include implementing preservice training requirements for child care providers and extending eligibility periods to enhance the continuity of child care. However, because the shift to emphasize brain and skills development is recent, the state's subsidy policies and monitoring activities still focus primarily on compliance with state health and safety standards rather than the quality of children's experiences in subsidized care settings.

Moving forward, the state can take action to improve its confidence that public funds are used to subsidize higher-quality learning environments for children at risk of poor developmental outcomes. Though federal funds comprise a majority of funding for the Child Care Subsidy Program, the state has some discretion over the parameters of the program and could alter aspects of its design and its quality assurance mechanisms. Ultimately, these improvements would provide greater confidence that state-subsidized child care is not only safe but also promotes brain and skills development and kindergarten readiness. The improvements identified in this chapter would not necessarily require changes to state child care regulations.

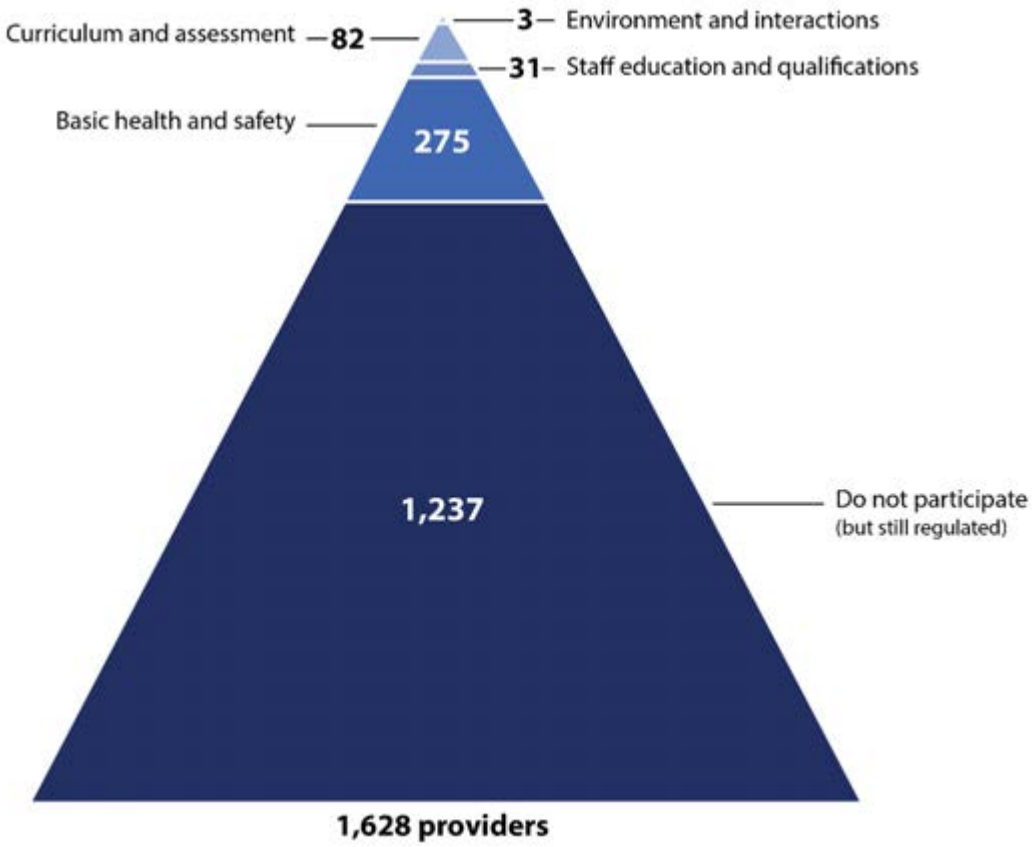
Subsidy program could improve assurances that child care professionals provide high-quality interactions

Although it is likely that some child care providers or professionals already provide high-quality interactions, the Child Care Subsidy Program currently has no meaningful or systematic assurances that care is provided in environments where these interactions

are high quality. The state only has information on the quality of interactions for three of the 1,628 providers that receive the subsidy and serve children younger than age five (Figure 5-1). This minimal information is only available because these providers voluntarily participated in Virginia Quality, the state's quality rating and improvement system.

Virginia Quality is the state's voluntary quality rating and improvement system that is designed to evaluate and improve the quality of early learning services. (See Appendix G for more information on Virginia Quality.)

FIGURE 5-1
Most child care providers do not participate in Virginia Quality



SOURCE: VDSS data on Virginia Quality participants and providers of subsidized child care (as of June 2017).
NOTE: Total number of providers reflects those that receive the subsidy and serve children younger than age five.

CLASS is "an observational instrument" used "to assess ... multiple dimensions of teaching that are linked to student achievement and development" (Center for Advanced Study of Teaching and Learning). CLASS can be used in child care, pre-K, and K-12 classrooms.

Providers that have not been assessed through Virginia Quality do not necessarily have low-quality interactions, but the state cannot assume that the quality of state-supported child care is high. National research has shown that the quality of child care in the United States is generally low. In interviews with JLARC staff, trained CLASS observers report that because the subsidy's policies do not require high-quality interactions, the quality of interactions is likely low for the majority of providers receiving the subsidy.

Subsidy program could facilitate better use of research-based curricula and more useful training

Because the Child Care Subsidy Program has historically focused on access to and the safety of child care rather than the quality of child care, the program has no requirement that providers use a curriculum. VDSS staff report that they do not have the authority under the subsidy to inquire about or provide feedback on the curriculum that providers use. According to a curriculum consultant who has worked extensively in Virginia, some subsidy providers do use research-based curricula, and there is wide variation in the types of curricula used.

The state should develop a list of research-based curricula for infants, toddlers, and four-year-olds to help child care professionals provide developmentally appropriate and effective learning experiences for the children in their care. Leading early childhood development subject-matter experts could help VDSS staff develop the list. The curricula on the list for four-year-olds could also be consistent across the Child Care Subsidy and VPI programs.

The state should not *require* a curriculum in the short term, because some child care providers participating in the subsidy program may lack the funding to purchase a curriculum on the list. Rather, the list would be a resource for providers.

Recommendation 14	
Category	Cost
	Minimal

RECOMMENDATION 14

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Social Services and the University of Virginia's Center for Advanced Study of Teaching and Learning to develop a list of research-based, age-appropriate curricula to be available as a resource for child care providers participating in the Child Care Subsidy Program.

Beyond basic health and safety requirements, the current professional development requirements of the Child Care Subsidy Program are too unstructured to be an efficient and effective use of child care professionals' time or to support healthy development. Neither the preservice training nor the ongoing annual training are specifically designed to promote quality interactions or to enable professionals to use curriculum effectively. Rather, the subsidy's required preservice training focuses on health, safety,

and general information on child development. Additionally, the subsidy's requirement of 16 hours of ongoing annual training is highly unstructured and allows child care professionals to fulfill their requirement by selecting *any* training related to child health, child safety, or child development.

The state should develop a list of professional development courses and providers to help child care professionals decide which courses to take to fulfill their existing training requirements. Courses should teach child care professionals how to have high-quality interactions with children and how to use curriculum effectively. Courses should be available both in person (outside of standard work hours) and online to accommodate providers in center-based and family day home settings statewide. The list could be developed by VDSS with assistance from the Virginia Early Childhood Foundation, the state's various higher education institutions, and early childhood development professional development organizations (e.g., Child Care Aware, Infant Toddler Specialist Network).

Virginia's School Readiness Committee was created by the 2016 General Assembly to develop "an effective professional development and credentialing system for the early childhood education workforce." The committee's creation reflects recent attention to the importance of the early learning (child care and pre-K) workforce in promoting brain and skills development in young children.

RECOMMENDATION 15

The General Assembly may wish to consider including language in the Appropriation Act to direct the Virginia Department of Social Services to develop, publish, and maintain a list of professional development courses and providers to be available as a resource for child care professionals participating in the Child Care Subsidy Program.

Recommendation 15	
Category	Cost
	Minimal

State could incentivize quality by paying higher subsidies to providers that demonstrate quality

VDSS regularly inspects providers that receive the subsidy, but with a focus on compliance with health and safety standards. Some health and safety standards address items that can affect child care service quality, such as adult-child ratios, but these standards do not sufficiently guarantee the quality of children's early learning experiences.

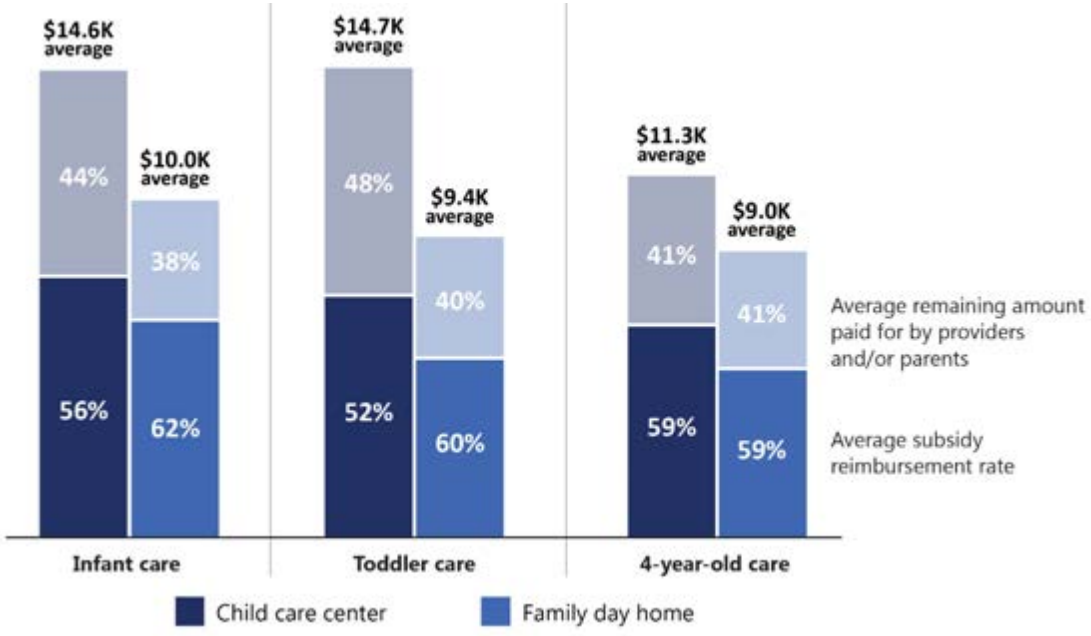
Few providers participate in Virginia Quality, according to VDSS and VECF staff, in part because providers have little incentive to participate. Virginia Quality could serve as a framework through which to incentivize providers (rather than impose more stringent regulations) to improve the quality of their services.

Subsidy reimbursement rates are likely too low to incentivize quality improvement

The subsidy's reimbursement rates are lower, on average, than the rates charged by most child care providers in the state (sidebar). The rates are lower than the federal government recommends and lower than rates in several other states, including Oregon, South Carolina, and Arkansas. The subsidy rates cover, on average, between 52 and 62 percent of the total cost of care (Figure 5-2). Providers and parents cover the remaining costs.

Subsidy reimbursement rates are determined based on a market rate survey conducted every few years. Rates differ based on children's age and locality. Rates set in 2014 cover the full cost of infant, toddler, and four-year-old care for only 41 percent, 39 percent, and 49 percent of providers, respectively.

FIGURE 5-2
Child Care Subsidy Program covers only a portion of average cost of child care



SOURCE: JLARC analysis of VDSS's maximum reimbursable rates for licensed subsidy providers (2014) and Child Care Aware cost data from State Child Care Facts Sheet (2017).
NOTE: Reimbursement reflects Virginia's licensed child care provider maximum reimbursable rates averaged across localities. Unlicensed child care providers receive lower rates. Annual cost of care was used to calculate total costs, which reflect the average of child care costs reported for full-time care at regular and nationally accredited child care providers. Reimbursement rates do not reflect actual subsidy amount paid by the state and are not weighted based on the number of infants, toddlers, and four-year olds served.

Given that current subsidy amounts only cover a portion of the cost of care, it is highly unlikely that these amounts are sufficient to encourage providers to spend more to improve the quality of their services. Many providers likely participate in the subsidy program because they believe it is important to help children in need. Making substantial improvements in quality often entails paying staff more, purchasing a curriculum, and paying for child care professionals to attend training.

Virginia could develop a pilot program consisting of higher subsidy reimbursements in return for quality improvements

To encourage providers participating in the Child Care Subsidy Program to improve their service quality, the state could develop a pilot program that would offer higher reimbursements to providers that achieve higher quality levels. This approach would enable the state to encourage (rather than require) participating providers to improve their quality and would recognize that improving quality likely requires incurring higher costs, including the costs of paying and retaining qualified staff.

Several other states offer higher subsidies to providers that demonstrate higher levels of quality, with the quality level determined through assessments using state quality rating and improvement systems. For example:

- **Georgia** awards providers participating in the state's child care subsidy program a five-percent, 10-percent, or 25-percent bonus, based on their ranking in the state's three-level quality rating and improvement system.
- **North Carolina** awards providers participating in the state's child care subsidy program incrementally higher reimbursements for each level in the state's five-level quality rating and improvement system. North Carolina's rates are customized, as rate increases for each level are determined based on local market rates rather than on a statewide formula.

VDSS staff could implement a pilot program of tiered payments for the Child Care Subsidy in several localities, building on the study it completed in 2014 (sidebar). This would enable the state to better understand how many providers might improve quality in return for higher reimbursement, but also how much more the state would need to pay to effectively incentivize higher quality. In designing the pilot, VDSS would need to determine which localities would participate, how quality improvement would be measured, and how much more it would pay to incentivize higher quality. The pilot would need to be in operation long enough to allow a "market" of interested providers to agree to participate and begin taking action to improve quality. VDSS would then determine whether it is feasible to broaden the concept to more localities, and refine the program based on lessons learned from the pilot before moving forward.

At the direction of the 2014 General Assembly, **VDSS submitted a report on tiered reimbursements**. (See *Report on the Study of a Tiered Reimbursement Subsidy Program, Based on a Quality Rating and Improvement System*, Senate Document 5, 2015.)

Depending on how VDSS designs the pilot, the cost could range from $826,000 to $5.9 million annually for 1,000 children (Table 5-1). The high end of this estimate assumes that the state would pay 50 percent more than the current subsidy rate for *all* of the providers participating in the pilot. Most tiered reimbursement systems only award substantial rate increases to providers that demonstrate the highest level of quality (e.g., a level 5 provider on the Virginia Quality scale). It is unlikely that many child care providers would be eligible for the largest rate increase as part of the pilot.

The estimated cost of the pilot assumes that the state would use CLASS observations to understand the quality of teacher-child interactions as part of its assessments of provider quality, and that *all* participating providers would be subject to CLASS observations each year. The cost of CLASS observations would be approximately $70,000 per year. This cost estimate assumes that VDSS would hire an additional staff person to design the pilot program and assist with its implementation and review.

TABLE 5-1

Pilot program to provide financial incentives for higher quality care for 1,000 children could cost about $900,000 to $6 million

Additional VDSS staff	Financial incentive for higher quality: Beyond current subsidy	Financial incentive for higher quality: New reimbursement as % of total cost of care	Additional cost to program: Incentives	Additional cost to program: CLASS observations	Total pilot cost: VDSS staff + incentives + CLASS observations
$85,000	+10%	57%	$755,500	$70,168	$910,669
$85,000	+20%	64%	$1,662,100	$70,168	$1,817,269
$85,000	+30%	71%	$2,765,130	$70,168	$2,920,299
$85,000	+40%	81%	$4,128,052	$70,168	$4,283,221
$85,000	+50%	92%	$5,841,526	$70,168	$5,996,695

SOURCE: JLARC analysis using VDSS's maximum reimbursable rates for licensed subsidy providers (2014). Child Care Aware cost data from State Child Care Facts Sheet (2017).

NOTE: Financial incentive estimates were generated based on the assumption that child care providers will receive increased financial incentives for serving 1,000 children in full-time child care at the rate for toddler care in a center. CLASS observation estimate was generated based on the assumption that CLASS observations would cost approximately $400 per classroom and would be conducted for approximately 175 classrooms. VDSS is also likely to incur some costs associated with designing, operating, and evaluating a tiered subsidy rate pilot, which are not included in total estimated costs.

Option 4	
Category	Cost
	$910K to $6M* (annually)
*Depends on design of pilot and ability of providers to reach higher quality levels	

OPTION 4

The General Assembly could include language in the Appropriation Act to direct the Virginia Department of Social Services to establish and administer a pilot program to provide higher child care subsidy reimbursement rates for providers that demonstrate higher-quality care. The General Assembly could provide the Department of Social Services with additional funding for the pilot. The Virginia Department of Social Services should submit a report on the results of the pilot, along with options to modify and expand it, to the House Appropriations and Senate Finance Committees.

6 Individuals with Disabilities Education Act Programs

SUMMARY Virginia's Individuals with Disabilities Education Act programs support the skills development of young children with disabilities. Early Intervention (EI) promotes the development of infants and toddlers, while Early Childhood Special Education (ECSE) supports the education of older preschoolers. Both programs address social-emotional, cognitive, and self-care skills critical for children to succeed in the K-12 system. Outcomes data indicates that the majority of children improve their skills in EI and almost all children improve their skills in ECSE. However, the state should further ensure that outcomes data is valid through regular analysis and training for program practitioners. Despite its strong performance, the ECSE program could further improve its understanding of the extent to which local practitioners use evidence-based practices so that the state can more strategically provide training and technical assistance. Data also shows that the state could do more to increase the number of ECSE participants served in "inclusive" settings, which is a key evidence-based practice for improving children's skills.

Virginia's Early Intervention (EI) and Early Childhood Special Education (ECSE) programs serve young children with disabilities. They fund individualized services that are designed to support the development of skills that are an essential foundation for success in later education and adulthood (Figure 6-1). Effective EI and ECSE services can reduce or eliminate the need for later government services, such as grade-school special education.

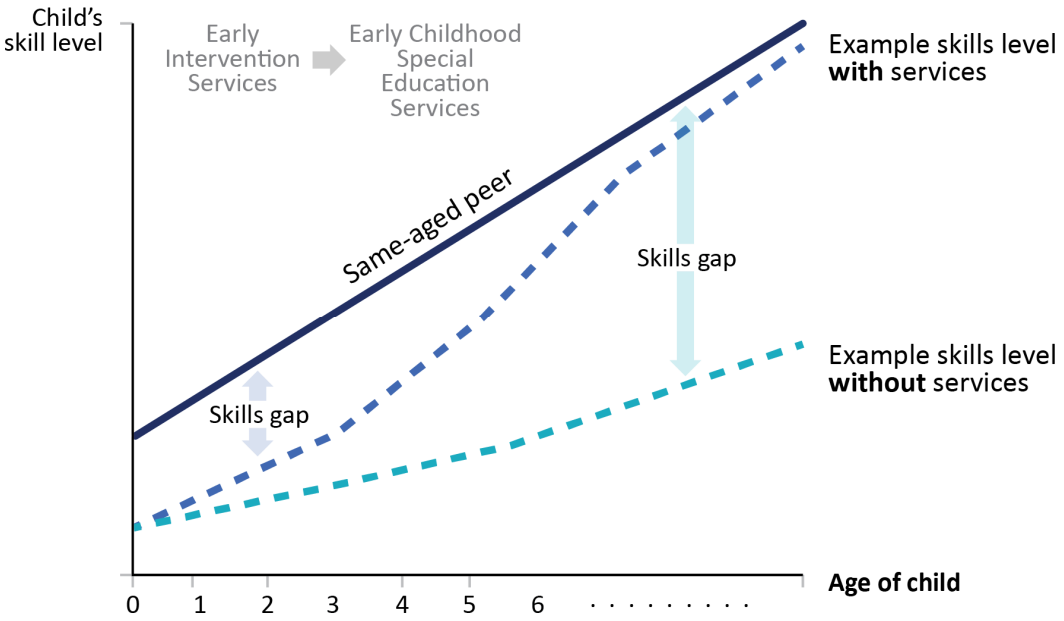
EI and ECSE are Virginia's programs for implementing the federal Individuals with Disabilities Education Act (IDEA) (sidebar). IDEA consists of two programs relevant for this review of early childhood development:

- EI for children from birth until age three; and
- ECSE for children ages three through five (and certain two-year-olds).

Although implementing IDEA is optional, all 50 states have chosen to implement IDEA programs and receive federal funds to support implementation, and are therefore subject to federal requirements. In the past few years, federal oversight has shifted from monitoring compliance with requirements to improving the effectiveness of services children are receiving.

In 1975, Congress created the predecessor to the **Individuals with Disabilities Education Act (IDEA)** to provide special education programs for children ages three to 21. In 1986, Congress added the EI program for children from birth to age three.

FIGURE 6-1
Early Intervention and Early Childhood Special Education services are intended to improve a child's skills



NOTE: Conceptual illustration of example developmental trajectory for child for whom services led to improved skills and child who did not receive services. Depending on the type and severity of a child's disability, the potential of the developmental trajectory for that child may be lower than their same-aged, typically developing peers.

Depending on each child's specific needs, services provided through both programs—especially ECSE—can be embedded within general early learning programs, such as the Virginia Preschool Initiative. For the purposes of this study, though, EI and ECSE are reviewed as programs distinct from other early childhood development programs, because they have separate administrative structures and distinct funding streams.

EI and ECSE programs are intended to build skills of Virginia children with disabilities

Both the EI and ECSE programs are designed to provide the individualized services needed to support each participant. A multidisciplinary team that includes practitioners (e.g., teachers and therapists) and family members identifies the skills in need of improvement and the type, amount, and setting of services necessary to achieve this improvement. Examples of services include physical therapy, behavioral interventions, and specialized instruction.

While there are commonalities between EI and ECSE in the types of available services, there are some important distinctions between the two programs. For example, because

the EI program is intended to help very young children and their parents, EI services are typically provided in the child's home environment and involve advising parents on strategies they can implement to promote their child's development. In contrast, ECSE services may be stand-alone (e.g., classrooms limited to children with disabilities), supplement general early learning programs (e.g., therapy for which child temporarily leaves the classroom). Some ECSE services are integrated into general early learning programs (e.g., therapy incorporated into classroom activities by general teacher).

EI and ECSE have different eligibility criteria but are both locally implemented

The EI and ECSE programs have different eligibility criteria, but both seek to provide services to children with disabilities who need support for skills development, rather than to all children with disabilities. Federal law establishes minimum eligibility criteria but allows states some flexibility in defining and expanding those criteria. Children may be eligible for only EI, only ECSE, or both programs as they get older.

Children are eligible for Virginia's EI if they meet one of the following criteria:

- 25 percent delay in at least one of five developmental categories (i.e., cognitive, physical, communication, social-emotional, and adaptive);
- a diagnosed condition with a high probability of resulting in developmental delay (e.g., autism or blindness); or
- atypical development (e.g., poor reflexes or persistent fearfulness).

Children are eligible for Virginia's ECSE if they meet both of the following criteria:

- at least one of 13 specified categories of disability (including developmental delay); and
- a need for special instruction due to that disability.

Children participating in EI and ECSE may participate in **other state programs that serve children with disabilities**, such as Medicaid's long-term care waivers or community services boards' developmental services.

Both programs serve children with a wide range of disability type and severity. Some children receiving EI services demonstrated delays in physical development (14 percent) and communication (14 percent), and a similar number were eligible after a long stay in the NICU (12 percent) (FY17). Some children receiving ECSE services have developmental delays (49 percent), speech and language issues (35 percent), or autism (9 percent) (FY16).

Virginia state agencies oversee EI and ECSE, but the services are administered at the local level. The Department of Behavioral Health and Developmental Services (DBHDS) contracts with 40 local entities, including 30 community services boards, to administer EI, while the Virginia Department of Education (VDOE) requires the 132 school divisions to administer ECSE. In turn, each local program employs practitioners to deliver services to participants.

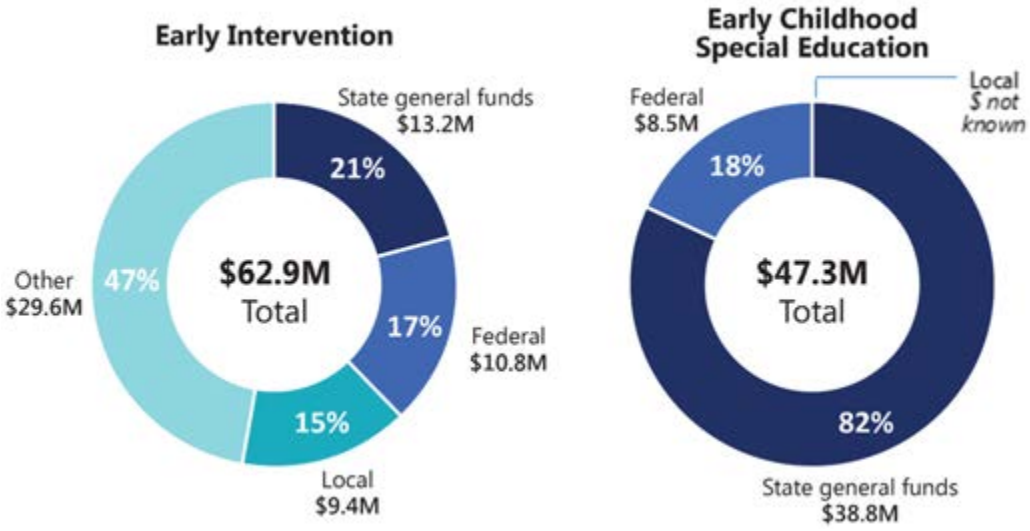
EI and ECSE received $52 million in state funds in FY16

About 17,800 children received services through EI and about 22,000 children received services through ECSE in FY16. Federal law requires EI and ECSE to serve all eligible children and to proactively identify potentially eligible children. About three percent and five percent of children in the relevant age groups received services from EI and ECSE, respectively. These percentages are similar to the national averages.

Federal funding for Virginia's EI and ECSE programs does not automatically increase as the number of participants increases.

Both EI and ECSE are funded by state and non-state sources. The state spent $13.2 million on EI and $38.8 million on ECSE in FY16 (Figure 6-2). Both programs receive federal and local funding, and EI also receives funding from other sources, such as fees paid by families and private insurance.

FIGURE 6-2
Early Intervention has diverse funding sources, while Early Childhood Special Education is primarily state-funded (FY16)



SOURCE: JLARC analysis of DBHDS and VDOE program data.
NOTE: Data is limited to funding sources tracked by the programs at the state level. Funding sources for Early Childhood Special Education that are not tracked include local funding and federal pre-K–12 special education funds (IDEA Part B). (See report supplement, Early Childhood Development Program Inventory, for more information about funding.)

Data suggests programs improve skills for most children, but data validity concerns should be addressed

Federal law requires states to report the number of children whose skills improved while they participated in EI and ECSE. Improving children's skills compared to the skills expected of same-aged peers is a primary goal of EI and ECSE. However, in some cases, factors outside of the control of the local programs limit the ability of a

program to improve a child's skills. For example, it is harder to improve the skills of children who have more severe disabilities or parents who are less willing to implement approaches advised by a practitioner.

States report on three categories of skills to provide a comprehensive picture of children's skills compared to those of same-aged peers. These skills serve as the necessary foundation for their education and attainment of more advanced skills as older children. The specific skills expected vary with a child's age, but the following three categories are used for all children in both EI and ECSE:

- social-emotional skills (e.g., accepting temporary separation from parent, expressing feelings, and playing interactively)—*a skill category referred to as "positive social emotional skills" by the federal government*;
- cognitive skills (e.g., remembering, problem solving, communicating, counting, and recognizing letters)—*a skill category referred to as "acquisition and use of knowledge and skills" by the federal government*; and
- self-care skills (e.g., using a fork to eat, self-toileting, and caring for personal safety)—*a skill category referred to as "use of appropriate behaviors to meet their needs" by the federal government*.

Local teams assess the child's skills in each category compared to the skills expected of a same-aged child without disabilities. A local team typically includes practitioners, a case manager, and the child's parents. The teams rate the child's skills level on a seven-point scale, in which more points denote a higher skills level. This scoring process is conducted when a child enters and exits each program, and the difference between the two ratings represents the child's improvement in their skills levels compared to the levels of children without disabilities. In other words, improvement is defined as narrowing the gap between the skills level of the child with disabilities and the skills level expected of a same-aged child without disabilities.

Local programs report to the state the percentage of children whose skills improved, and all states report statewide totals to the federal government. While not a perfect measure, these improvement percentages are the best available data indicating local programs' effectiveness that is systematically collected statewide. Local programs may collect other information, such as children's progress on their individualized goals and results of specific assessments.

A majority of Virginia children improve skills while participating in EI and ECSE programs

Data indicates that a majority of children in Virginia improved their skills when served by the EI and ECSE programs in FY16. Nearly all children in the ECSE program demonstrated improvement in their social-emotional, cognitive, and self-care skills (92 percent, 94 percent, and 92 percent, respectively). A smaller proportion, but still a majority, of children in the EI program improved their skills (64 percent, 68 percent, and 71 percent, respectively). Improvement percentages cannot be compared across

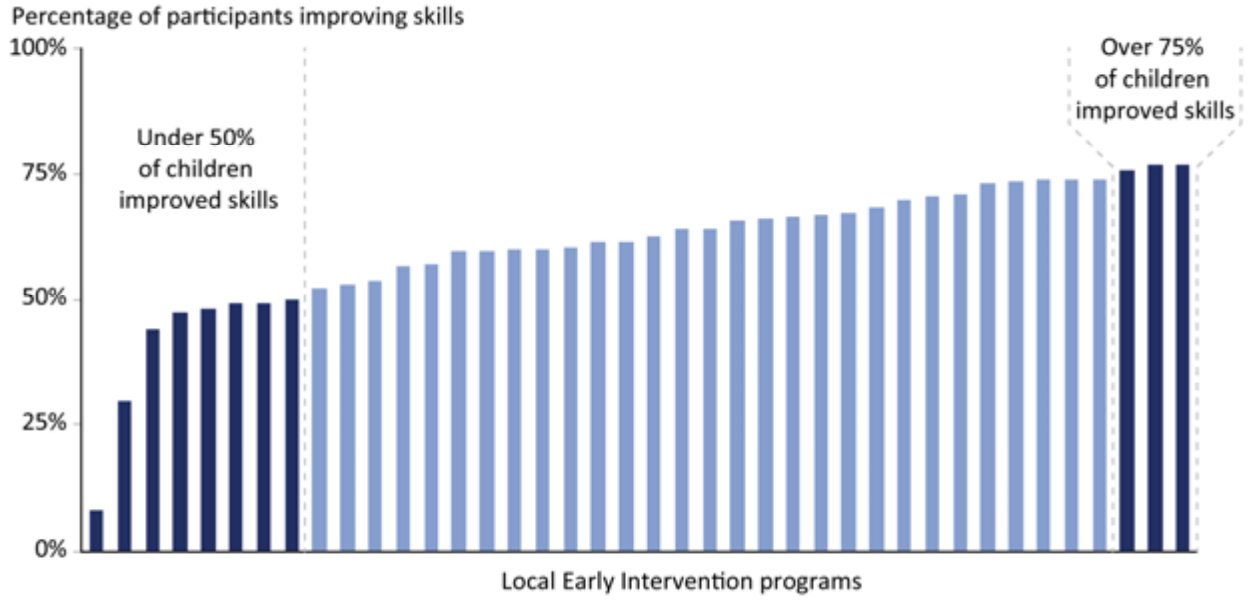
the two programs, because of substantial differences in the programs, including in their eligibility criteria.

Children in Virginia's ECSE program improved at a higher rate than the national average, while children in Virginia's EI program improved their skills at about the same rate as the national average. However, experts caution against drawing conclusions from comparisons across states. Eligibility criteria and methods of assessment vary from state to state, so skills improvement data may not be comparable.

Skills improvement appears to vary substantially across local programs

Children served in several of Virginia's local EI programs demonstrate considerably less skills improvement. There is wide variation across local programs in the percentage of children improving their skills; a majority of children in most local programs improve their skills, but several programs are the exceptions. For example, in seven of the 40 local EI programs, less than half of children improved their social-emotional skills while participating (Figure 6-3). In other local programs, the improvement percentages were low in the other skill categories. In ECSE, by contrast, a vast majority of children in most localities improved their skills for all three skills categories. (See Appendix H for FY16 data on each local EI and ECSE program.)

FIGURE 6-3
Less than half of children in seven local EI programs demonstrated social-emotional skills improvement (FY16)



SOURCE: JLARC analysis of DBHDS program data.

Steps should be taken to improve validity of outcomes data across local ECSE and EI programs

As with any government program, the data used to measure outcomes must be valid in order to be used to target improvements. Without valid data, the state cannot have sufficient confidence that it can use the data as the basis to target technical assistance or develop specialized training for practitioners who are less successful than others at improving children's skills. EI and ECSE outcomes data is valid only if the rating on the seven-point scale selected by the local team truly reflects a child's skills attainment. Because measuring a child's skills is inherently subjective and complex, knowledgeable practitioners may disagree on the appropriate rating. However, if practitioners have a strong understanding of the scoring process and consider multidimensional information about the child's skills level, the state's confidence in the validity of their ratings will be much stronger.

There are reasons for concern about the validity of EI and ECSE outcomes data. Notably,

- 11 (69 percent) of the 16 local EI and ECSE program administrators interviewed by JLARC staff expressed some level of concern about the validity of data submitted;
- state agency staff responsible for both programs also expressed concern about the validity of the data; and
- 16 percent of EI managers and practitioners responding to an EI program survey in 2016 reported not being confident in the validity of the outcomes data. Nine and 13 percent reported not fully understanding the definitions of the three skills categories or the levels of skills development that correspond with each level on the seven-point scale.

While it is impossible to know whether an individual child's rating is valid without reassessing that child, steps can be taken by states to ensure ratings submitted are as valid as possible. National experts have developed methods for states to analyze ratings and identify local EI and ECSE programs with a higher likelihood of invalid ratings. In the past few years, both Virginia programs have taken steps to attempt to improve validity by training local program administrators. The EI program implemented annual reporting of two validity analyses for each local program. However, neither Virginia program regularly conducts these analyses in a systematic and documented manner. Additionally, consistent and comprehensive training on the scoring process could improve the validity of ratings, but neither EI nor ECSE requires practitioners to receive this training.

Ensuring that ratings are valid is a challenge experienced by other states, and an area of focus for federally funded technical assistance centers. Other states have taken steps to identify local programs that may be submitting invalid ratings. For example, in Texas, state education staff analyze local EI program ratings for potential validity problems, such as an unusually large percentage of children with very high or very low

ratings. Such an approach could be warranted in Virginia; twelve percent of local ECSE programs for which data was available reported that *every* child improved in *all three* skills categories in both FY15 and FY16. For local programs selected for in-depth reviews, Texas staff assess data validity for a sample of children, comparing the assigned rating to descriptive information about the child's skills.

To address these issues and improve the usefulness of the data submitted by local programs, the General Assembly may wish to require DBHDS and VDOE to conduct routine, systematic, and documented evaluations of the validity of ratings. These evaluations (which could include assessments of inter-rater reliability) could be conducted by existing agency staff or contractors.

Recommendation 16	
Category	Cost
	Minimal

RECOMMENDATION 16

The General Assembly may wish to consider amending § 2.2-5304 and § 22.1-214 of the Code of Virginia to require the Department of Behavioral Health and Developmental Services and Virginia Department of Education to develop and implement a plan to (i) ensure all Early Intervention and Early Childhood Special Education practitioners receive initial and ongoing training on the programs' scoring processes; (ii) regularly assess the validity of ratings through systematic and documented analyses; and (iii) use results of these analyses to improve technical assistance and systematically target assistance to programs that need it.

State could better target ECSE technical assistance

Virginia's EI and ECSE practitioners operate in an extremely challenging and complex environment. They work with diverse groups of high-needs children who each have different developmental challenges, service needs, and potential for improvement over time. Because of the challenges of improving the skills of all children, there is no simple or guaranteed way to make statewide improvements. Despite this challenging and complex environment, the state can take actions to help practitioners and local programs be more effective—and by extension may improve the effectiveness of both programs for children with disabilities.

Beyond obtaining valid data on outcomes, understanding whether and to what extent EI and ECSE practitioners use effective evidence-based practices can also improve a state's confidence that these programs are helping to improve the skills of children with disabilities—and doing so to the maximum extent possible. The state can then strengthen the training provided to local practitioners and help to prioritize the use of technical assistance resources.

With the assistance of national subject-matter experts, JLARC staff identified evidence-based practices that, if used consistently, increase the likelihood that EI and ECSE services achieve their intended goals of supporting the development of skills in young children with disabilities. For EI and ECSE, evidence-based practices include

individualizing services to meet an individual child's needs, ensuring children with disabilities are engaging in meaningful experiences with children without disabilities, and advising parents and other program practitioners on strategies they can implement to promote the child's skills. (See Appendix E for more information on each of these evidence-based practices.)

Evidence suggests that some local ECSE practitioners are not consistently using evidence-based practices, while local EI practitioners receive assistance in the use of evidence-based practices. EI program staff collect information—through surveys of local practitioners and systematic record reviews—on local use of evidence-based practices, and use this information to provide targeted technical assistance to local programs and improve local program policies. Similar strategies could be applied to the ECSE program.

Less is known about the extent to which local ECSE practitioners are using best practices, but there appear to be opportunities to improve the state's efforts to monitor their use and provide targeted technical assistance. For example, in interviews with JLARC staff,

- directors of university-based technical assistance centers who support local ECSE programs expressed concern about the inconsistent use of evidence-based practices among practitioners; and
- staff of three of seven local ECSE programs cited the need for additional training on evidence-based practices or indicated that some practitioners were not using evidence-based practices.

To improve the state's understanding of and support for the use of evidence-based practices among local ECSE practitioners, the state should collect more information about their use from all local ECSE programs. Following the approaches used by Virginia's EI program, the ECSE program could conduct an annual survey of ECSE practitioners and conduct regular records reviews for documented evidence indicating use of best practices.

Ultimately, the ECSE program should more systematically target its technical assistance. Currently, the state contracts with five university-based centers to provide technical assistance but does not ensure their limited resources are allocated strategically. Rather, the state instructs the centers to serve any local ECSE program that requests assistance and to prioritize programs identified by the state as performing poorly in general education or pre-K–12 special education. Instead, the state should direct the centers to prioritize low-performing local ECSE programs. The state should identify these local programs through an annual systematic process based on available data on outcomes, outcomes validity, inclusion, and evidence-based practices.

Recommendation 17	
Category	Cost
	Minimal

RECOMMENDATION 17

The General Assembly may wish to consider amending § 22.1-214 of the Code of Virginia to direct the Virginia Department of Education to develop and implement a process to regularly and systematically collect information about the use of evidence-based practices in local Early Childhood Special Education programs. The Virginia Department of Education should use this information, together with data on inclusion and outcomes, to identify low-performing local programs and systematically target technical assistance to those in need of assistance.

State could further support the inclusion of ECSE participants

"Inclusion" is an evidence-based method to promote skills development by allowing children with disabilities to learn from their peers. Inclusion means that, at a minimum, children with disabilities are served in the same settings as children without disabilities, rather than in separate settings. Full inclusion goes beyond co-location and consists of meaningful participation in the same playing and learning activities.

Federal law requires that states ensure "to the maximum extent appropriate, children with disabilities . . . are educated with children who are nondisabled" and separation "occurs only if the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily."

Federal law requires ECSE services to be provided in the most inclusive setting in which a child's educational goals can be achieved (sidebar). Local teams are responsible for determining in which setting each child will receive services. However, states are required to make a continuum of options available, such as the home, settings limited to children in special education, general early learning providers (e.g., Virginia Preschool Initiative, Head Start, community-based child care), or a combination.

Virginia's ECSE programs could likely expand their use of inclusive settings. Statewide, only 27 percent of children received the majority of their ECSE services in inclusive settings in FY16, which is half of the national average. Virginia's use of inclusive settings has remained in this relatively low range for at least the past five years. Moreover, there is wide variation across local programs. According to FY16 data, at least 35 local programs served very few children (less than 15 percent) in inclusive settings, while at least seven local programs served most children (at least 85 percent) in inclusive settings.

Inclusive settings are more applicable to ECSE programs than EI programs. Federal regulations require EI services to be provided in "natural environments," meaning the home or community. In FY16, 99 percent of EI participants in Virginia received services in natural environments.

Several factors appear to have contributed to Virginia's lower use of inclusive settings, including

- logistical and financial challenges associated with serving ECSE participants through general early learning providers;
- beliefs among ECSE practitioners or parents that general early learning providers cannot successfully serve children with disabilities;
- shortages of general early learning providers, especially high-quality providers (e.g., limited Virginia Preschool Initiative slots); and
- shortages of teachers licensed in early childhood special education.

Greater inclusion cannot be accomplished by ECSE alone, and increasing the percentage of children in inclusive settings would necessitate state-level collaboration between ECSE and Virginia's other early learning programs. The state's ECSE program has attempted to promote inclusive settings through technical assistance and training for local ECSE administrators, and the state's pre-K–12 special education program has developed an inclusion plan after collecting stakeholder input. However, because inclusion often means delivering ECSE services at or through general early learning providers, its attainment depends on these providers being committed to supporting inclusion, overcoming logistical and financial barriers, and employing practitioners who are competent in evidence-based practices for children with disabilities.

Other states have taken steps to increase general early childhood learning providers' capacity and competence at serving children with disabilities (not necessarily limited to ECSE participants). For example:

- **Idaho** and **Illinois** incorporated inclusion standards into the higher levels of their quality rating and improvement systems.
- **Pennsylvania** issued multiple requirements for programs in its Office of Child Development and Early Learning, such as making inclusion consultation available to local programs, developing inclusion resources to educate families, and implementing professional development for practitioners.
- **Massachusetts** published an interagency "Vision and Mission" for ECSE that emphasizes the training of the early childhood workforce and interagency coordination.

Virginia should identify the key barriers to greater inclusion and each agency's role in removing or minimizing the barriers. This could be accomplished by a working group of the key state agency staff responsible for administering early learning programs, with the assistance of other key stakeholders.

RECOMMENDATION 18

Recommendation 18	
Category	Cost
	Minimal

The General Assembly may wish to consider including language in the Appropriation Act to direct the Secretary of Education and the Secretary of Health and Human Resources to convene a working group to (i) identify and assess the key barriers to serving Early Childhood Special Education participants in inclusive settings and (ii) develop a plan to increase the percentage of Early Childhood Special Education participants served in inclusive settings. Members of the working group should include state agency administrators of early learning programs, including the Virginia Preschool Initiative, Virginia Preschool Initiative Plus, Child Care Subsidy Program, and the Virginia Head Start State Collaboration Office. The working group should include representatives of other stakeholder groups, as appropriate. The findings of the workgroup should be submitted in a written report to the House Committee on Education, House Appropriations Committee, Senate Committee on Education and Health, and Senate Finance Committee by November 1, 2019.

7 Improving Virginia's Early Childhood Development Programs

SUMMARY The 18 recommendations and four options presented in this report would modify the design of Virginia's early childhood development programs, strengthen their quality assurance mechanisms, and improve how they measure their effectiveness. Some recommendations and options would improve individual programs, although many would support the efficiency and effectiveness of multiple programs. Many improvements can be made with minimal to no additional appropriations. Others would require additional funding, which could be obtained by eliminating a minimally effective state child care tax deduction. The deduction, which costs the state $28.9 million per year, has a negligible effect on Virginia families' ability to afford child care, as it only covers about one percent of the total average cost of child care. Eliminating the minimally effective deduction would provide the state with sufficient funding to offset the cost of improvements, and it would make available funds to expand state support for very young children at risk of poor developmental outcomes.

The study mandate directed JLARC staff to identify opportunities to improve Virginia's early childhood development programs. In this chapter, the cost of each of the report's recommendations and options is estimated, and an additional cost-saving option is presented, which would eliminate a minimally effective tax deduction and reallocate funding toward effective early childhood development programs.

Opportunities exist to strengthen Virginia's early childhood development programs

National research has shown that high-quality early childhood development programs improve the odds that children will be successful in school and become independent contributors to society. National research is also clear, however, that not all early childhood development programs have a strong positive effect on child outcomes. Effective programs need to be (1) appropriately designed to achieve their intended goals, (2) actually implemented as designed and with a reasonable degree of consistency across sites, and (3) accompanied by valid and useful measures of their effectiveness. Programs that can demonstrate that they have a logical, research-based design, adequate controls to ensure effective implementation, and valid and useful measures of their effectiveness are the ones in which the state can confidently invest.

Most of the recommendations and options presented in this report are intended to improve individual programs by modifying their design, strengthening their quality assurance mechanisms, and improving program data. Some recommendations and options would improve individual programs, while others would support the efficiency

and effectiveness of multiple early childhood development programs. Such cross-program recommendations and options include improving the state's ability to identify and serve children at risk of poor developmental outcomes and formalizing support for the state's home visiting programs. Together, these improvements are intended to increase the effectiveness of Virginia's core early childhood development programs.

Implementing most recommendations and options in this report is estimated to cost between $6.3 million and $11.8 million annually—or between four and eight percent of the state's annual funding for all early childhood development programs—and the one-time cost of implementing two options is estimated to be $4.2 million (Table 7-1). The costs of two recommendations would need to be determined by state agency staff. Many improvements, though, can be made with very minimal, or even no, additional appropriations by the General Assembly:

- Eleven recommendations would not require any additional appropriations (though agencies may incur minimal costs due to altering certain processes or staff responsibilities within their existing funding).
- Two recommendations would require $250,000 or less in additional appropriations.

Effective coordination across early childhood development programs is also important, and a lack of coordination can lead to inefficiency and confusion. In interviews, many state agency staff and stakeholders pointed out that state-supported early childhood development programs operate without adequate regard to other programs, even though they all pursue the general goal of supporting the healthy development of young children prior to kindergarten. Other states have taken various approaches to improving the communication, coordination, and data-sharing across programs (sidebar).

Despite its importance, better coordination across programs does not appear to be the most pressing priority for improving Virginia's early childhood development programs. Systematic coordination may not even be achievable at this time. Over the long term, however, effective coordination across the state's early childhood development programs—particularly those that serve children at the same time or over time as a child ages—will be important to maximize the effectiveness and efficiency of the state's total investment in early childhood development.

States take different approaches to improving **coordination across early childhood development programs.**

Some states, such as **Washington and Georgia**, have consolidated all (or most) core early childhood development programs under one agency.

Other states, such as **Michigan and Maryland**, have consolidated all child care and pre-K programs under one agency.

Wisconsin, Illinois, and New Mexico use interagency coordination strategies to accomplish goals without consolidating programs into one entity.

TABLE 7-1
Recommendations and options could cost $6.3M to $11.8M annually

	RECOMMENDATION (R) or OPTION (O)	ESTIMATED COST
	Kindergarten readiness and risk factors	
R1	All school divisions to participate in VKRP readiness assessment	$175K (annually)
O1	UVA CASTL to support teachers' ability to use VKRP data	$100K (annually)
O2	UVA CASTL to incorporate physical motor skills component into VKRP	$500K (one-time)
R2	VDH to develop plan to improve state's information on at-risk children and families	*TBD*
	Voluntary home visiting programs	
R3	Direct state agencies to transform Project LINK to more effective program	$3.3M (annually)
R4	Designate lead status of and provide funding to Early Impact Virginia	$600K (annually)
R5	Direct Early Impact Virginia to identify potential stable and diverse funding sources	Minimal
	Virginia Preschool Initiative (VPI)	
R6	VDOE and UVA CASTL to use VKRP data to assess outcomes of VPI	Minimal
R7	VPI providers to receive observations of VPI classrooms every two years	$250K (annually)
R8	VDOE and UVA CASTL to establish threshold for VPI teacher-child interactions	Minimal
R9	VDOE and UVA CASTL to develop list of approved research-based curricula for VPI	Minimal
O3	UVA CASTL to develop research-based curricula to be offered to VPI providers	$3.7M (one-time)
R10	VDOE to hire and train specialists to provide individualized professional development	$926K to $1.4M (annually)
R11	Articulate VDOE's responsibilities to ensure quality of VPI on ongoing basis	None
R12	VDOE to develop plan to execute new responsibilities for ensuring quality of VPI	*TBD*
	Child Care Subsidy Program	
R13	DSS to use VKRP data to assess outcomes of Child Care Subsidy Program	Minimal
R14	DSS and UVA CASTL to develop list of researched-based, age-appropriate curricula to be available for Child Care Subsidy providers	Minimal
R15	DSS to clarify existing training requirements for child care professionals participating in Child Care Subsidy Program	Minimal
O4	DSS staff to implement a tiered reimbursement pilot	$910K to $6M (annually)*
	Individuals with Disabilities Education Act programs	
R16	DBHDS and VDOE to develop and implement plan to improve accuracy of EI and ECSE child outcomes data	Minimal
R17	VDOE to develop systematic process to assess use of evidence-based practices in local ECSE programs	Minimal
R18	Secretaries of HHR and Education to convene workgroup to identify strategies to promote greater inclusion among ECSE participants	Minimal
		Total: $6.3M to $11.8M (annually) **$4.2M** (one-time)

NOTE: VKRP = Virginia Kindergarten Readiness Program; UVA CASTL = University of Virginia's Center for Advanced Study of Teaching and Learning; VDH = Virginia Department of Health, HHR = Health and Human Resources; VDOE = Virginia Department of Education; VDSS = Virginia Department of Social Services; DBHDS = Virginia Department of Behavioral Health and Developmental Services; EI = Early Intervention; ECSE = Early Childhood Special Education

*Actual cost depends on design of pilot and ability of providers to reach higher quality levels.

Programs that serve youngest children lack sufficient funding to serve all eligible children

This report focuses on improving, rather than expanding, the state's existing early childhood development programs. However, if more substantial funding became available, using it to expand programs that can demonstrate effectiveness would likely benefit the additional children who would be able to participate. National research shows that not only do high-quality programs improve the odds of success, but that programs that focus on maternal health, newborns, and very young children have especially profound short- and long-term benefits.

Virginia's voluntary home visiting programs are limited in their availability within Virginia communities and are not available at all in some areas of the state. These programs serve expectant mothers and very young children and have demonstrated they are especially effective. Expectant mothers who participate are more likely than comparable mothers to carry their pregnancies to full term, for example. (See Chapter 3 on home visiting programs.)

The Child Care Subsidy Program has a waiting list. Of the 4,007 children younger than age five on the waiting list in FY16, about 600 were less than 12 months old. These children were determined to be potentially eligible for the program, but the program lacks sufficient funding to subsidize their care. (See Chapter 5 on the Child Care Subsidy Program.)

Eliminating minimally effective child care tax deduction could offset cost of improvements

Virginia has a tax deduction for child care expenses that accounts for a substantial amount of forgone tax revenue each year. The amount by which the deduction reduces tax liability, though, is too small to have much effect on the affordability of child care. The General Assembly could consider eliminating this minimally effective tax deduction to offset the cost of improvements to the state's early childhood development programs identified in this report.

State child care tax deduction is intended to help parents afford care and maintain employment

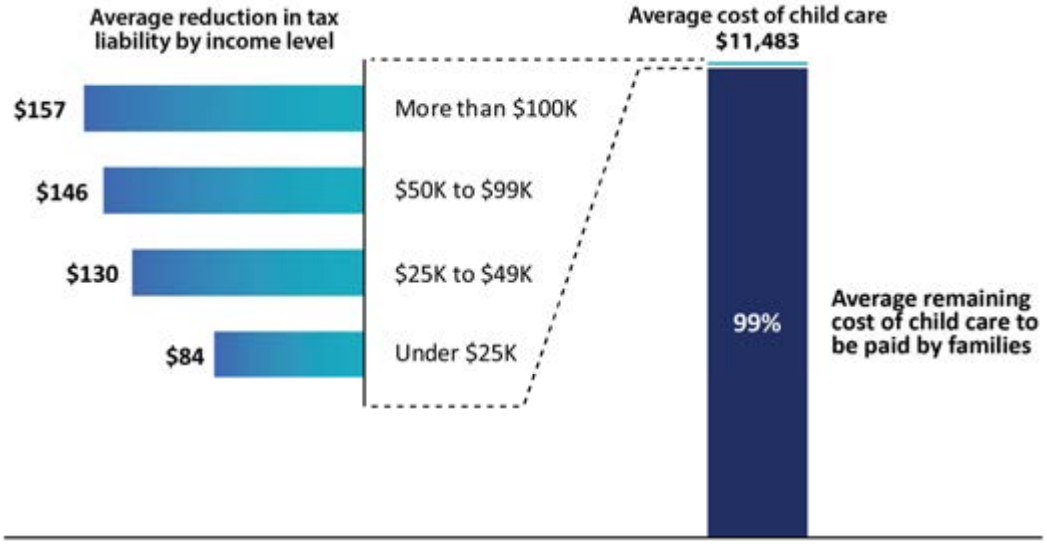
Virginia's Child and Dependent Care Expenses Tax Deduction was created in 1977 to help parents maintain full-time employment by reducing the cost of child care. Virginia's deduction is a separate tax incentive from the nonrefundable federal Child and Dependent Care Tax Credit, which can be as much as $1,050 for one child and $2,100 for two or more children. Although Virginia follows the same basic guidelines as the federal credit, Virginia's tax incentive is structured as a deduction from state adjusted gross income. The amount of the Virginia deduction is based on the total child care expenses taxpayers use to claim the federal credit.

The Virginia deduction represented approximately $28.9 million in forgone state tax revenue and was claimed by 205,217 families in FY16. (This figure includes families with dependents who are not children but are physically or mentally incapable of self-care—estimated to be about six percent of total claimants, based on U.S. Census Bureau data.) Higher-income families are more likely than lower-income families to claim the deduction. In FY16, families reduced their tax liability by an average of $141, with relatively little variation across income levels.

Deduction has negligible effect on ability of Virginia families to afford child care and maintain employment

Despite the substantial financial commitment that the state makes to the deduction ($28.9 million per year), the benefit to individual Virginia families ($141 per year, on average) is too low to have much effect on parents' ability to afford child care and maintain full-time employment—the purpose of the deduction. Placed in context, the $141 average reduction in annual tax liability would only cover about one percent of the annual average cost of child care—less than one week of care (Figure 7-1).

FIGURE 7-1
The average reduction in tax liability only covers about one percent of the average annual cost of child care (FY16)



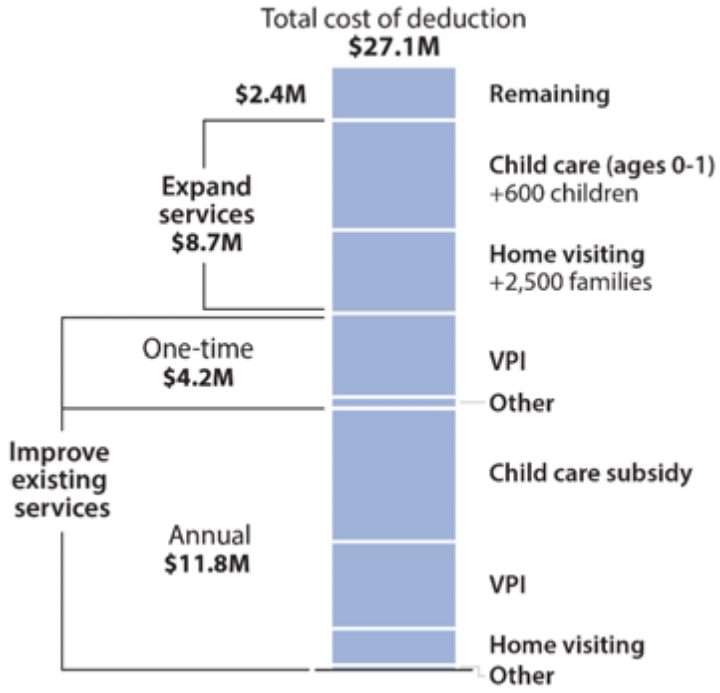
SOURCE: JLARC analysis of data from the Virginia Department of Taxation (FY16); State Child Care Facts Sheet (2017).
NOTE: Amounts shown include taxpayers who claim the deduction because they care for disabled dependents and taxpayers with children older than age four in child care. These taxpayers could not be excluded from the available data. Costs reflect average child care costs reported for full-time infant, toddler, and four-year-old care at care centers and family day homes.

Total cost of tax deduction would fund all improvements and could be used to address unmet need in programs for infants and toddlers

If the $28.9 million deduction were eliminated (but not for disabled dependents), the state would have an estimated $27.1 million in additional revenue each year. This $27.1 million would be sufficient to cover the estimated annual costs of the recommendations and options presented in prior chapters ($11.8 million), with additional resources for the two options with one-time costs ($4.2 million) and for the three recommendations for which estimated costs still need to be determined (Figure 7-2).

Eliminating the deduction would also allow the General Assembly to expand programs that serve the state's youngest children. For example, serving an estimated 2,500 additional families through Virginia's home visiting programs is estimated to cost $3.7 million. In addition, serving all 600 children younger than 12 months on the waiting list for the Child Care Subsidy is estimated to cost about $5 million.

FIGURE 7-2
Total cost of the Child and Dependent Care Expenses Deduction would fund all improvements and could be used to address unmet need (FY16)



SOURCE: JLARC analysis of cost estimates to implement recommendations and options, and voluntary home visiting and VDSS data on program participation and costs.
NOTE: $27.1 million figure is lower than total cost of deduction ($28.9 million) because JLARC staff assumed benefits for individuals caring for disabled dependents would not be affected. Census Bureau data was used to estimate that six percent of claimants are in this category. Estimate to serve 2,500 more families through home visiting programs derived using average cost per family served for each program. Estimate to subsidize child care for 600 additional children derived using number of children younger than 12 months old on waiting list and average subsidy amount for children of that age.

The General Assembly could eliminate the minimally effective state tax deduction and fund improvements to effective early childhood development programs. Alternatively, the deduction could be changed to a refundable tax credit with an income limit for eligibility. This more modest approach could cost less than the current deduction, depending on the structure of the credit, and make available some additional funds for the improvements identified in this report.

The **majority (21 out of 25) of states with a tax incentive supporting child care offer tax credits.** Only four states, including Virginia, use deductions.

OPTION 5

The General Assembly could repeal § 58.1-322.03(3) of the Code of Virginia to eliminate the Virginia Child Care and Dependent Expenses Deduction. Available revenue could then be used to (i) fund improvements to state-supported early childhood development programs and (ii) serve additional families through effective voluntary home visiting programs and subsidize care for children 12 months or younger currently on the Child Care Subsidy Program waiting list.

Appendix A: Study mandate

2016 Session

SENATE JOINT RESOLUTION NO. 88

Directing the Joint Legislative Audit and Review Commission to study specific early childhood development programs, prenatal to age five, in the Commonwealth in order for the General Assembly to determine the best strategy for future early childhood development investments. Report.

Agreed to by the Senate, February 10, 2016
Agreed to by the House of Delegates, March 4, 2016

WHEREAS, according to the Virginia Department of Education, children who repeat at least one grade in kindergarten through grade three cost taxpayers in the Commonwealth approximately $80 million per year; and

WHEREAS, according to a 2013 Voices for Virginia's Children report, one in eight children in the Commonwealth begin kindergarten without the basic skills to succeed in school; and

WHEREAS, according to a 2011 Annie E. Casey Foundation report, children who do not demonstrate proficiency in reading in third grade are four times more likely to fail to graduate from high school than children who demonstrate proficiency in reading in third grade; and

WHEREAS, national data indicates that children who enter the elementary through secondary education system without sufficient preparedness are more likely to fall behind grade-level expectations, move into special education, and drop out of high school and are less likely to enter postsecondary education programs; and

WHEREAS, although the Virginia Preschool Initiative has been in effect since 1994, House Joint Resolution No. 729 of the Acts of Assembly of 2007 is one of the few studies directed by the General Assembly to evaluate the effectiveness, accountability, and program costs of the Initiative; and

WHEREAS, in 1993, the Virginia Board of Education, the Virginia Department of Education, and the former Virginia Council on Child Day Care and Early Childhood Programs developed a report entitled "A Study of Programs Serving At-Risk Four-Year-Old Children" that found that "[t]here is no central data base tracking all the funding streams or demographic information on at-risk children or the quality of the programs" and that such information is "either non-existent, or inconsistent as well as scattered among agencies"; and

WHEREAS, no effort to track such information in a central database has been completed; and

WHEREAS, according to a 2011 National Conference of State Legislatures report, Virginia spent more than $229 million in federal, state, and grant funding on "early care" programs, including child care, the Virginia Preschool Initiative, home visiting programs, and other programs, notably mental health programs; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Legislative Audit and Review Commission be directed to study specific early childhood development programs, prenatal to age five, in the Commonwealth in order for the General Assembly to determine the best strategy for future early childhood development investments.

In conducting its study, the Joint Legislative Audit and Review Commission (JLARC) shall:

1. To the greatest extent possible, focus on early childhood development programs that are currently supported with state assistance, including but not limited to early childhood development programs that also receive federal funds, the Virginia Preschool Initiative, locally based programs that receive federal child care and Title I assistance, family support and home visiting programs, and quality improvement models such as the Virginia Star Quality Initiative;

2. Include a listing of the lead agency, a description and the objectives of the program, an identification of the target audience, and a catalog of the types and amounts of funding for each early childhood program studied;

3. Identify eligibility requirements and characteristics of populations that each program serves;

4. Assess program design, implementation, and measurement of outcomes;

5. Assess program outcomes, including effectiveness and cost-effectiveness;

6. Assess alignment of programs with kindergarten readiness;

7. Identify best practices in the Commonwealth and other states for program design, implementation, and outcome measurement;

8. Review other aspects of each program as deemed appropriate; and

9. Provide options for improving early childhood development programs in the Commonwealth.

Technical assistance shall be provided to the Joint Legislative Audit and Review Commission by appropriate state agencies. The Joint Legislative Audit and Review Commission shall have access to individual-level records of all early childhood development programs, including all education, health, and support programs. To assist JLARC in its work, local school boards shall provide standardized test result data and other information to JLARC, and school board personnel shall meet with the staff of JLARC, upon request, to discuss program implementation and effectiveness so that JLARC may satisfy the requirements of this resolution. All agencies of the Commonwealth shall provide assistance to JLARC for this study, upon request.

The Joint Legislative Audit and Review Commission shall complete its meetings for the first year by November 30, 2016, and for the second year by November 30, 2017, and the chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the next Regular Session of the General Assembly for each year. Each executive summary shall state whether JLARC intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summaries and reports shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Appendix B: Research activities and methods

Key research activities performed by JLARC staff for this study included

- structured interviews with Virginia state agency leadership and staff, program leaders, local providers, and other stakeholders including experts in Virginia and other states;
- collection and analysis of data, including data on
- early childhood development program funding and participation,
- indicators of school readiness and risk factors to healthy development across the state,
- impacts of Child and Dependent Care Expenses Deduction on Virginia claimants' annual tax liability, and
- program outcomes;
- review of national research;
- review of program policies and practices in Virginia and other states; and
- review of documents, including past reviews of Virginia early childhood development programs, standards published by national child development organizations and federal agencies, strategic plans, and various other documents, such as program policies and guidelines, activity and performance reports, staff position descriptions, staff training schedules, and parent surveys.

Structured interviews

Structured interviews were a key research method for this report. JLARC staff conducted more than 200 interviews. Key interviewees included

- leadership and staff of state agencies and early childhood development organizations;
- program leadership and staff;
- local providers; and
- stakeholders and subject-matter experts in Virginia and other states.

Leadership and staff of state agencies and early childhood development organizations

JLARC staff conducted in-depth interviews in person and by phone with staff at Virginia state agencies and offices, including the

- Office of the Superintendent of Public Instruction,
- Department of Education,
- Office of the Secretary of Health and Human Resources,
- Department of Health,
- Department of Behavioral Health and Developmental Services,
- Department of Medical Assistance Services,
- Department of Social Services,
- Senate Finance Committee, and
- House Appropriations Committee.

State agencies and offices were selected for interviews on the basis of their involvement in the state's early childhood development programs.

JLARC staff also conducted structured interviews with leadership and staff of organizations focused on early childhood development in Virginia, including the Virginia Early Childhood Foundation, Early Impact Virginia, and Voices for Virginia's Children.

Program leadership and staff

JLARC staff conducted structured in-person and phone interviews with leadership and staff responsible for administering or supporting Virginia's early childhood development programs. Some program leaders interviewed by JLARC staff oversee programs through their roles within Virginia state agencies, such as VDH, DBHDS, and VDSS. Other program leaders interviewed by JLARC staff oversee state-level implementation through their roles within nonprofit organizations, such as the Virginia Early Childhood Foundation and Prevent Child Abuse Virginia.

Providers

JLARC staff also conducted in-depth interviews by phone and in person with local-level providers or provider groups of early childhood development services. The number and content of interviews varied by program area. Interview questions also varied by program area but were intended to inform JLARC staff's assessment of the design, implementation, and outcomes of Virginia's early childhood development programs, as well as to hear suggested areas for improvement for Virginia's programs.

Stakeholders and subject-matter experts

JLARC staff conducted in-depth interviews by phone and in person with a number of stakeholders and subject-matter experts both in Virginia and in other states. JLARC staff interviewed stakeholders in Virginia, such as representatives of child care providers, and subject-matter experts representing the federal government, academic institutions, and other states. Interview questions varied by the experience and expertise of the individual or group being interviewed. Specific interviewees included:

- Harvard Center on the Developing Child,
- Build Initiative,
- Child Trends,
- Center for Advanced Study of Teaching and Learning at the University of Virginia,
- American Enterprise Institute,
- Center for American Progress,
- Pew Center on the States,
- Centers for Disease Control and Prevention,
- National Association of State Directors of Special Education,
- Zero to Three, and
- National Conference of State Legislatures.

Data collection and analysis

Several types of data analyses were performed for this study. Specific analyses utilized in each program area varied according to the type and quality of data available. JLARC staff inventoried all early childhood development programs receiving public dollars in the state. JLARC staff assessed: indicators of school readiness and risk factors to healthy development using data provided by the University of Virginia, Virginia Department of Health, and U.S. Census Bureau; program demand or need relative to existing capacity using data provided by lead agencies for each program area; participant characteristics using data provided by state agencies and programs; and program design, implementation, and outcomes using documents and data provided by state agencies and programs.

Early childhood development program inventory data collection and analysis

JLARC staff interviewed state agency staff and reviewed various resources, including the Code of Virginia, the Appropriation Act, and state agency websites, to develop a preliminary list of all entities that administer or co-administer state-supported programs intended to promote brain and/or skills development among children prior to kindergarten entry. The following 11 entities were found to administer or co-administer at least one early childhood development program.

- Department of Behavioral Health and Developmental Services
- Department for the Blind and Vision Impaired
- Department of Education
- Department of Health
- Department of Medical Assistance Services
- Department of Social Services
- Office of Children's Services
- State Council of Higher Education for Virginia
- University of Virginia
- Virginia Commonwealth University
- Virginia Early Childhood Foundation

JLARC staff worked with staff from these entities to identify and obtain information on all of Virginia's state-supported early childhood development programs. The following types of information were collected through data requests for each early childhood development program: (1) lead agency, (2) purpose, (3) eligibility criteria, (4) funding amounts and sources, (5) target audience and participation, (6) outcome measures, and (7) outcomes. JLARC staff compiled key information into a single inventory of the state's early childhood development programs, called the Early Childhood Development Program Inventory.

JLARC staff divided programs into four categories according to their purpose: (1) early learning, (2) programs for children with disabilities, (3) voluntary home visiting, and (4) other. Within each category, staff designated "core" programs based on (1) whether programs directly provide services to children or families and (2) the amount of funding that programs receive.

In addition to the state's early childhood development programs, JLARC staff compiled a list of programs that promote maternal and child health, which also support healthy brain and skills development among children prior to kindergarten entry. These programs are listed in Appendix D.

Early childhood development programs (Chapter 1)

JLARC staff used program participation data submitted by agencies and American Community Survey estimates to estimate (1) the number of children under age five that participate in Virginia's core early childhood development programs and (2) the number of children in Virginia between ages zero and five that live below 200% of the federal poverty level.

Analysis (1): Participants in Virginia's core early childhood development programs

JLARC staff collected data on core program participation from state agencies. Agencies provided unduplicated participation counts *within* each program; totaling participants across all program areas *certainly* produces a *duplicated* count of participants served by core programs. Many children, though it is impossible to know how many, are served by multiple programs *simultaneously.* The bottom row of Table 1-2 presents the range of possible discrete program participants. The total number of children served by all core programs, 90,561, provides the *maximum* number of children served by core programs. To calculate the lower bound, 36,195, JLARC staff added the number of participants in VPI (18,356) to the number of participants in Early Intervention (17,839). Early Intervention and VPI are the two largest programs for which participation is mutually exclusive. Early Intervention serves 0-2 year olds and VPI serves 4 year olds. As such, one child could not be eligible for both programs within the same year.

Analysis (2): Children under five below 200% of the federal poverty level

JLARC staff estimated the number of children under age five in Virginia that live below 200% of the federal poverty level (FPL) using estimates from the 2015 American Community Survey Five-Year Estimates. Those estimates show that:

- 505,455 children under age five live in Virginia
- 11.5% of the general population lives below the FPL
- 17% of the under-five population lives below the FPL
- 27% of the general population lives below 200% of the FPL

JLARC staff used those estimates to show that children under age five are 48 percent more likely to live under the federal poverty level than the general population:

$$\frac{17\%\ (under\ five\ rate) - 11.5\%\ (general\ rate)}{11.5\%\ (general\ rate)} = 48\%$$

Staff then assumed that children under age five are also 48 percent more likely to live under 200% of the federal poverty level than the general population. Staff applied that likelihood to the proportion of the general population that lives below 200% of the FPL to estimate that 40% of children under age five in Virginia live below 200% of the federal poverty level:

$$27\%\ (general\ rate) * 148\% = 40\%\ (likelihood\ of\ being < 5, < 200\%\ \text{FPL})$$

Indicators of school readiness and risk factors to healthy development (Chapter 2)

JLARC staff collected data on the prevalence of prenatal and early childhood risk factors in Virginia as well as data on the kindergarten readiness of Virginia's students in order to better understand the kindergarten readiness and other indicators of experiences of young children across the state.

Analysis (1): Kindergarten readiness of Virginia's students

JLARC staff collected data on Virginia students' kindergarten readiness from the Phonological Awareness Literacy Screening – Kindergarten (PALS-K), collected and analyzed by the University of Virginia Curry School of Education with support from the Early Intervention Reading Initiative, and the Virginia Kindergarten Readiness Program (VKRP), collected and analyzed at the Center for Advanced Study of Teaching and Learning at the University of Virginia Curry School of Education.

Analysis (2): Prevalence of prenatal and early childhood risk factors in Virginia

JLARC staff collected data on prenatal and infant risk factors to healthy development from VDH. JLARC staff calculated average rates of these risk factors at the local and statewide level for 2015, the most recent year for which data is available. In addition, JLARC staff reviewed Virginia and national risk factor data collected by the federal Centers for Disease Control and Prevention (CDC). Finally, JLARC staff reported local poverty rates for children under age five using data from the American Community Survey 2015 five-year estimates.

Voluntary home visiting programs (Chapter 3)

JLARC staff conducted two primary data analyses to inform its evaluation of voluntary home visiting programs in Virginia:

Analysis (1): Potential demand or need for voluntary home visiting services relative to existing capacity

JLARC staff assessed potential demand or need for voluntary home visiting services relative to existing capacity by analyzing data from Early Impact Virginia and the Virginia Department of Health (VDH). JLARC staff utilized two sources of data from Early Impact Virginia: locality-level needs assessment data assembled for the federal MIECHV grant in 2015, and state-level funding and participation data collected by Early Impact Virginia's member programs for FY16. JLARC staff utilized two sources of data from VDH: locality-level maternal and child health indicators (e.g., total live births, total low-birth-weight births, counts of maternal smoking, teen pregnancy) from FY11 to FY15, and locality-level data on incidences of neonatal abstinence syndrome (NAS) from FY11 to FY15.

JLARC staff compared the availability of the Resource Mothers program to localities identified by Early Impact Virginia as having teen pregnancy rates higher than the state median in 2015. Similarly, JLARC staff identified localities with no providers and only one provider in FY16, according to data collected by Early Impact Virginia and modified by JLARC staff to include Project LINK sites. JLARC staff utilized VDH data on live births by locality to calculate the share of all births statewide from 2011-2015 that took place in localities with one or no home visiting programs. JLARC staff also used VDH data on live births and NAS case counts to calculate locality-level NAS rates from FY11 to FY15, and compared the availability of Project LINK to those localities with NAS rates at least double the state's rate over that time period.

Analysis (2): State appropriations to voluntary home visiting programs over time

JLARC staff also reviewed state appropriations to voluntary home visiting programs from FY07 through FY18. For the three programs explicitly referenced in the state budget (Healthy Families Virginia, CHIP of Virginia, and Resource Mothers), JLARC staff calculated the percentage change in general fund and TANF appropriations relative to the base year of FY10.

Virginia Preschool Initiative (Chapter 4)

JLARC staff conducted two primary data analyses to inform its evaluation of the Virginia Preschool Initiative:

Analysis (1): Unmet need relative to existing capacity

JLARC staff used the total number of unused VPI slots to quantify the program's unmet need. JLARC staff requested data from VDOE staff on (1) the total number of VPI slots that were calculated through the state's formula for each school division in FY17 and (2) the total number of VPI slots that were used by each school division during the same year. The difference between these two data points was used to estimate the magnitude of VPI's unmet need.

JLARC staff identified several school divisions with VPI programs that have children on waitlists for VPI services although they had already used all of their VPI slots calculated through the state's formula. This is likely because the state's formula calculates VPI slots based primarily on poverty and not other VPI eligibility criteria.

Analysis (2): Curriculum analysis

To identify the curricula used by each of Virginia's 119 school divisions with a Virginia Preschool Initiative (VPI) program, JLARC staff reviewed information from two sources: (1) FY17 VPI applications and (2) FY17 local plans. VPI applications are submitted by May 15th of each year and list the program's "primary" and "secondary" curriculum. Local Annual Plans are finalized by October 1st each year and document the curricula used by each VPI program. Both sources of information are completed by a VPI program coordinator and reviewed by VDOE staff.

JLARC staff took several steps to determine whether VPI programs consistently reported using the same curricula. JLARC staff first compared the information documented in each VPI program's application and local plan to see whether the same curricula were referenced. In many cases, the curricula listed in the application and the local annual plan were different. JLARC staff also reviewed the curricula documented in each VPI program's local annual plan over the past three years to determine whether VPI programs appear to have used similar curricula over time.

To determine whether the curricula that VPI programs used during the 2016-17 school year were research-based, JLARC staff reviewed:

- whether the curricula used by each VPI provider were real curricula (e.g., Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds was cited as a curriculum, but is not intended to be used as a curriculum);
- whether the curricula used by each VPI provider were on preapproved curricula lists in other states; and

- whether the curricula used by each VPI provider were identified as research-based by the What Works Clearinghouse and/or the National Center on Quality Teaching and Learning.

JLARC staff focused other state comparisons on states identified by the U.S. Census Bureau as being in the South-Atlantic region with Virginia, including: Delaware, Maryland, West Virginia, North Carolina, South Carolina, Georgia, and Florida. Of these states, five states have preapproved lists of curricula that were verified as research-based and were applicable to pre-kindergarten programs.

JLARC staff concluded that a VPI program did not use research-based curricula if their curricula were: (1) not real curricula or (2) not preapproved or verified as research-based by other states (Maryland, North Carolina, Delaware, Georgia, and Florida) or organizations that have reviewed curricula (What Works Clearinghouse and the National Center on Quality Teaching and Learning).

Child Care Subsidy Program (Chapter 5)

JLARC staff conducted two primary analyses specific to the state's Child Care Subsidy Program:

Analysis (1): Unmet need relative to existing capacity

JLARC staff used the Child Care Subsidy Program's waitlist to quantify the program's unmet need. JLARC staff requested data from VDSS staff on the total number of children, ages zero through four, who were on a waiting list as of June 30, 2017.

Analysis (2): Assessing subsidy rates compared to estimates of the cost of child care

To assess the rates that child care providers receive to participate in the Child Care Subsidy Program, JLARC staff compared the state's maximum reimbursable rates to the average cost of child care in Virginia.

The state's maximum reimbursable rates are listed in the Virginia Department of Social Service's Child Care Subsidy Program manual. These rates were last updated in 2014 and apply to all licensed child care providers. (Unlicensed child care providers receive lower reimbursable rates that were last updated in 2001). A Market Rate Survey is conducted every few years to determine child care market conditions. The state's maximum reimbursable rates are calculated at the 50th percentile of the survey responses. Rates vary based on the locality in Virginia where the child care is provided, the age of the child in care (infant, toddler, four-year-old), and the type of child care facility (center, family day home).

The average cost of child care in Virginia is estimated each year by Child Care Aware, which is a national organization that provides information on child care. Child Care Aware publishes a "State Child Care Fact Sheet" for Virginia that details the average cost of child care in centers and family day homes for both regular and nationally-accredited child care providers. Child Care Aware determines the average cost of care based on voluntarily reported child care rates. Virginia currently has a mixture of regular and nationally-accredited center-based and family day home child care providers. Therefore, JLARC staff averaged the cost of child care for regular and nationally-accredited providers to estimate the average cost of child care in 2017.

Virginia Quality provider participation analysis (Chapters 4 and 5)

To determine the number of publicly funded pre-kindergarten and child care providers that voluntarily participate in the state's quality rating and improvement system, Virginia Quality, JLARC staff obtained data from VDSS on all participants in Virginia Quality as of June 30, 2017.

JLARC staff identified the number of Virginia Preschool Initiative provider sites currently participating in Virginia Quality by counting all sites with the label of "Program Type VPI" (182 sites). These sites represented 29 percent of all VPI sites statewide (625 sites).

JLARC staff identified the number of child care providers that participate in the Child Care Subsidy Program and are part of Virginia Quality by counting all providers identified as serving children enrolled in the Subsidy (391 providers). These providers represented 24 percent of all child care providers that participated in the subsidy program and served children ages zero through four (1,628 providers).

Individuals with Disabilities Education Act programs (Chapter 6)

JLARC staff analyzed outcomes data from EI and ECSE, as well as inclusion data from ECSE. Data was obtained from DBHDS and VDOE. JLARC staff calculated state-level changes over time between FY13 through FY15 for outcomes data and between FY12 through FY16 for inclusion data. In addition, JLARC staff analyzed the variation between local programs' outcomes data and inclusion data. See Appendix H for definitions of outcomes and inclusion data, as well as FY16 data for each local program.

Child and Dependent Care Expenses Deduction analysis (Chapter 7)

JLARC staff conducted two primary analyses related to the Child and Dependent Care Expenses Deduction:

- Analysis (1): Determine the Child and Dependent Care Expenses Deduction's annual impact on the state and Virginia taxpayers

JLARC staff worked with staff from the Department of Taxation to determine the total number of taxpayers who claimed Virginia's Child and Dependent Care Expenses Deduction (205, 217 taxpayers) and the total fiscal impact to the state ($28.87 million) in FY16.

TAX staff were not able to exclude claimants that were caring for a disabled dependent from deduction participation and funding totals. JLARC staff estimate that approximately six percent of taxpayers likely claimed the deduction to assist with the cost of caring for a disabled dependent, based on estimates of Virginians with disabilities according to the American Community Survey. (This is consistent with Iowa, which has a similarly-designed tax deduction that was claimed by only one percent of claimants for disabled dependents.)

TAX staff were also not able to exclude deduction claimants that were using deduction benefits to help with the cost of care for children over four years old. As a result, these taxpayers are part of the deduction's participation and funding totals.

To put the deduction's fiscal impact in context, JLARC staff calculated the average deduction benefits received by each claimant ($141) and compared it to the average cost of child care (1.2 percent). JLARC

staff looked at the extent to which deduction benefits varied for claimants with different federal-adjusted gross incomes and determined that high-income taxpayers received the largest benefits.

Analysis (2): Assess whether a tax deduction is the most effective policy tool for promoting early childhood development

JLARC staff assessed whether the deduction is the most effective policy tool for promoting early childhood development by identifying the proportion of low-income claimants. TAX data were used to determine the federal-adjusted gross income of all deduction claimants. Claimants were grouped into four income categories: (1) $Under 25,000, (2) $25,000 to $49,999, (3) $50,000 to $99,999, and (4) $100,000 or more.

To determine how much it would cost the state to repurpose all of the deduction's funding, JLARC staff subtracted the estimated $1.73 million that currently supports care for disabled dependents. Staff concluded that this would leave $27.13 million out of the original $28.87 million in funding to repurpose. (Note: numbers do not sum due to rounding.)

Review of national research

JLARC staff conducted an in-depth review of national research, with an emphasis on high-quality meta-analyses and syntheses of the literature. Through the initial national research review process as well as initial interviews with subject-matter experts, JLARC staff identified key subject-matter experts from whom to obtain structured feedback relating to the core components of effective programs in the areas of voluntary home visiting, early learning, and Individuals with Disabilities Education Act programs.

Research literature

JLARC staff conducted an initial review of national research on the science of early childhood development. Individual JLARC staff then conducted reviews of national research in their assigned program areas. See Appendix C for a bibliography of the key resources that informed JLARC's research and findings.

Structured feedback from subject-matter experts

JLARC staff obtained structured feedback from subject-matter experts to inform and validate their lists of the core components of effective home visiting, early learning, and Individuals with Disabilities Education Act programs. See Appendix E for final lists of core components as well as subject-matter experts and resources consulted in each area.

Review of program policies, practices, and outcomes

JLARC staff conducted an in-depth review of program policies, practices, and outcomes. JLARC staff requested documents and data relating to program policies, practices, and outcomes at the state level for programs in each area (voluntary home visiting, early learning, and the Individuals with Disabilities Education Act). To compare alignment between local providers' policies, practices, and outcomes and those set at the state level, JLARC staff requested documents and data at the local provider level as well. For voluntary home visiting programs, JLARC staff selected local providers using a stratified

random sampling method that prioritized geographic distribution of programs in accordance with their total number of sites.

JLARC staff also reviewed program policies and practices via site visits. JLARC staff conducted site visits at two early learning facilities identified as high-quality. JLARC staff additionally conducted site visits at local providers for two voluntary home visiting programs (CHIP of Virginia and Resource Mothers) and one Early Intervention Program.

Document review

JLARC staff reviewed numerous other documents and literature pertaining to early childhood development programs in Virginia and nationwide, such as

- industry standards published by entities such as the National Association for the Education of Young Children;
- policy and budget synthesis documents published by entities such as the National Conference of State Legislatures;
- program implementation guidance documents published by entities such as the RAND Institute, Zero to Three, and Division for Early Childhood of the Council for Exceptional Children;
- state laws and recent legislation;
- laws and legislation in other states and at the federal level, including the federal Head Start Act, Race to the Top Early Learning Challenge, and the Individuals with Disabilities Education Act;
- other states' program and policy documents such as needs assessments, strategic plans, and performance reports; and
- prior studies and reports on early childhood development, such as the JLARC review of the Virginia Preschool Initiative (2007) and Assessment of Services for Virginians with Autism Spectrum Disorders (2009).

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Appendix D: Program inventory

JLARC staff identified 34 state-supported early childhood development programs in Virginia. With the assistance of subject-matter experts and state agency staff, JLARC staff divided early childhood development programs into five categories:

1. Voluntary home visiting
2. Pre-kindergarten (pre-K)
3. Child care
4. Programs for children with disabilities
5. Other

All types of programs are intended, at least in part, to improve healthy brain and skills development before birth and/or during early childhood. This appendix provides a list of Virginia's state-supported early childhood development programs. Additional information about each program's purpose, participation, funding, and eligibility criteria can be found in a supplemental document, *Early Childhood Development Program Inventory*.

In addition to identifying early childhood development programs, JLARC staff identified 30 maternal and child health programs. Though these programs do not directly intend to improve children's healthy brain and skills development, they provide important services that support healthy child development. This appendix also provides a list of maternal and child health programs. For additional information about maternal and child health programs, please inquire with the program's administering agency or with JLARC staff.

Early childhood development programs

Voluntary home visiting

1. Centralized Intake Communities
2. Comprehensive Health Investment Project (CHIP) of Virginia
3. Early Impact Virginia (formerly Virginia Home Visiting Consortium)
4. James Madison University / Home Visiting Professional Development
5. Loving Steps / Virginia Healthy Start Initiative
6. Nurse-Family Partnership
7. Parents as Teachers
8. Project LINK
9. Resource Mothers
10. Virginia Healthy Families Program

Programs for children with disabilities

1. Child Development Center
2. Children's Services Act – Special Education
3. Early Childhood Special Education (IDEA Part B-619)
4. Early Intervention (IDEA Part C)
5. Education and Early Childhood Support Services
6. Family to Family Network (F2F)
7. Virginia Autism Resource Center

Early learning: Pre-K and child care

1. Child Care Subsidy Program
2. Expansion of STEM Model for Kindergarten and Pre-Kindergarten
3. Head Start State Collaboration Office
4. Infant and Toddler Specialist Network
5. Innovative Partnerships Grant Program
6. Mixed Delivery Preschool Fund and Grant Program
7. Phonological Awareness Literacy Screening (PALS) – Pre-K
8. Project Pathfinders
9. Title I Preschool
10. Training of Individuals in Early Childhood Education Field
11. Virginia Child Care Provider Scholarship Program
12. Virginia Kindergarten Readiness Program
13. Virginia Preschool Initiative (VPI)
14. Virginia Preschool Initiative Plus
15. Virginia Quality

Other

1. Child and Dependent Care Expenses Deduction
2. VECF Base Funding / Smart Beginnings Network
3. Virginia Longitudinal Data System

Maternal and child health programs

1. Bright Smiles for Babies Fluoride Varnish Program / Dental Sealant Program
2. Care Connection for Children
3. Child and Adult Care Food Program
4. Children's Services Act – Mental Health
5. Developmental Services for Children
6. Fresh Fruit and Vegetable Program
7. Lead Safe Virginia

8. Low-Income Safety Seat Distribution and Education Program
9. Medicaid for Children
10. Medicaid for Pregnant Women
11. Mental Health Services for Children
12. Mental Health Services for Pregnant Mothers
13. National School Lunch Program
14. Newborn Screening Program
15. School Breakfast Program
16. Sickle Cell Program
17. Smoking Cessation for Pregnant Women
18. Special Milk Program
19. Special Supplemental Nutrition Program for Women, Infants, and Children
20. Substance Abuse Services for Pregnant Mothers
21. Summer Food Service Program
22. Text4baby
23. Title 21/Family Access to Medical Insurance Security Plan for Children
24. Title 21/Family Access to Medical Insurance Security Plan for Pregnant Women
25. Vaccines for Children
26. Virginia Bleeding Disorders Program
27. Virginia Congenital Anomalies Reporting and Education System
28. Virginia Early Hearing Detection and Intervention Program
29. Virginia Hearing Aid Loan Bank
30. Virginia Maternity Quality Improvement Collaborative

Appendix E: Core components of effective early childhood development programs

JLARC staff developed lists of features that are essential for early childhood development programs to be effective at promoting positive developmental and educational outcomes. Separate lists were developed for the three core early childhood development program areas: (1) voluntary home visiting programs, (2) early learning programs, and (3) Individuals with Disabilities Education Act programs. These features were assembled and used to assess Virginia's programs and to provide the legislature with a manageable framework for program assessments going forward.

Features listed here are those around which there is the greatest consensus among subject matter experts and in the research literature. According to researchers, these features are linked to effective programs, and increase the likelihood, but do not guarantee, that a program will be effective at promoting positive developmental and educational outcomes.

See Chapter 3 on Virginia's voluntary home visiting programs and Appendix C for documents used to identify home visiting program core components. See Chapters 4 and 5 on Virginia's early learning programs. See Chapter 6 on Individuals with Disabilities Education Act programs.

Core components of effective voluntary home visiting programs

Core components	Sub-components
Clear, coherent core model supported by a clear theory of change and fidelity controls	There is alignment among program goals and intended outcomes, the characteristics of the target population, the qualifications of program staff, what the program does to attain its intended outcomes (including the timing, dosage, and intensity of services as well as the curriculum or other teaching materials the program utilizes), and how the program reinforces its goals and expectations of home visitors.
	Staff and families alike clearly understand the goals of the program as well as the role the home visitor will play.
	The program provides staff with specific implementation guidelines and institutes and utilizes fidelity controls, such as observations of home visits and fidelity checklists, to ensure services are actually delivered as intended and required.
Systematic, ongoing tracking of family characteristics, service delivery, and program outcomes to inform program implementation	Program staff consistently collect and accurately record data about caregiver and child characteristics, including the results of screenings and referrals, and consistently and reliably document their interactions.
	Staff and supervisors use program data to inform decisions about program implementation.
Competent, highly trained staff supported by ongoing, high-quality professional development and coaching	Program staff possess necessary competencies in early childhood development knowledge and skills.
	Staff are knowledgeable about resources in the community.
	Staff know how to effectively teach and motivate caregivers to change their behavior, and explicitly teach responsive parenting.
	Staff are supported by high-quality training (both initial and ongoing) and effective supervision.

Positive, trusting relationships and high-quality interactions between home visitors and caregivers	Program staff build and sustain positive and trusting relationships with caregivers to ensure that the program is responsive to parents' cultural context and actual needs.
	The relationship between the home visitor and the family facilitates high levels of caregiver engagement, and caregivers actively participate in goal-setting with their home visitor.
Effective system for family and child screening and referrals	The program features an effective system for broadly identifying family needs and making referrals for services that can help to address them.
	Formal developmental screenings for children as well as screenings for maternal wellbeing (depression, intimate partner violence, substance abuse) are provided universally and in a timely manner, where applicable.
	To the extent that there are available and accessible resources in the community, program staff make appropriate referrals that correspond to the family's or child's needs and follow up to understand whether services were accessed.

Subject-matter experts

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Key documents

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Core components of effective early learning programs

Core component	Description
Responsive, stimulating, and organized teacher-child interactions	Teacher-child interactions are responsive and nurturing, with teachers providing emotional support to children. They are also stimulating, with opportunities for critical thinking and complex language interactions, particularly for low-skill language learners. They are organized and routine-based, and they maximize time spent on learning.
Research-based curriculum	Curricula are in place that are proven by scientifically valid research to build foundational skills for young children. They are developmentally appropriate and adapted to each stage in a child's progression.
Targeted, skills-based professional development for teachers	Teachers receive pre-service and ongoing professional development that is aligned with their program's goals and addresses the skills needed to implement their program with fidelity. Teachers receive feedback on their classroom practices and any areas in need of future improvement.
Ongoing program monitoring, evaluation, and improvement	Data is routinely collected and used to monitor program implementation and measure impacts. Program shortcomings are resolved by addressing ineffective policies and practices.

Subject-matter experts

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Steinhardt School of Culture, Education and Human Development
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Key documents

Duke University Center for Child and Family Policy and the Brookings Institution (2017). "Puzzling it out: The Current State of Scientific Knowledge on Pre-Kindergarten Effects."

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Core components of effective Individuals with Disabilities Education Act programs

Evidence-based practices

Family engagement

State level: Families are engaged in developing and implementing the program at the state-level. The state supports family engagement at the local level. (Note: An effectiveness feature for both programs, but emphasized more for Early Intervention, because the child is younger and the setting is more likely to be the home.)

Practitioner level: Families are engaged at each stage, including the development of the service plan, modification of the service plan, ongoing assessments, and transition planning. The practitioners and family discuss the family's needs, strengths, and preferences. The services (e.g., type, goals, location) are based on this information and adapted as this information changes. The practitioner actively strengthens family confidence and competence at supporting their child's development. Families are provided with useful information to support their child's development (e.g., assessment results, links to other resources). Families understand their rights.

Skills promotion

State level: State supports practitioners' knowledge and use of best practices for skills promotion.

Practitioner level: Services/instruction are designed to improve the child's development, the child's real-life and educational skills, and family life. The practitioner plans services based on comprehensive information about the child's current skills and needed skills.

Inclusion

State level: Policies ensure a full continuum of placements.

Practitioner level: The location of services is the natural environment for the child's daily routines. Practitioners modify the physical environment and add supports as needed to encourage inclusion and learning. In addition to access, the practitioner promotes the child's participation by encouraging engagement and interaction with peers and adults.

Well-planned transitions

State level: Policies require formal planning at the child's transitions between general EC settings, between EI and ECSE, and between ECSE and K-12 special education. Policies support information-sharing.

Practitioner level: Transition planning occurs in a timely manner. Practitioners prepare families to continue supporting their child's development after their exit from the program. Practitioners help families connect to other appropriate services/programs (e.g., EI to ECSE and ECSE to K-12 special education). The current program prepares the receiving program to serve the child, including sharing relevant information and documentation.

Infrastructure

Well-trained practitioners

State level: Policies ensure that families have access to practitioners from the multiple professions needed to provide specialized services. Pre-service requirements are aligned with national standards and across professions. Effective in-service supports are available, and aligned across professions. Training and supports are available to general EC providers serving children with disabilities.

Practitioner level: The team of practitioners serving a particular child collaborate and communicate to ensure services are delivered effectively and efficiently. Common knowledge about child development exists across professions and programs. Practitioners understand and use evidence-based practices with fidelity. EI and ECSE practitioners collaborate with general EC practitioners, including improving their competency at serving and including children with disabilities.

Active oversight

State level: The state collects information on utilization, quality, cost, and program outcomes. They use this information to regularly evaluate programs' effectiveness, identify areas for improvement, and inform funding allocation. The state monitors implementation, including practitioners' fidelity to evidence-based practices. The state creates and disseminates child development standards and program quality standards. The state systematically shares data with local entities and practitioners, and assists them to interpret it.

Practitioner level: Practitioners regularly monitor the child's needs and progress, and adapt services accordingly.

Subject-matter experts

Lisa Fox, PhD
Early Childhood Technical Assistance Center
University of South Florida

Maureen Greer
IDEA Infant and Toddler Coordinators Association

Christy Kavulic, PhD
Office of Special Education Programs
U.S. Department of Education

Peggy Kemp, PhD
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Donna Spiker, PhD
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SRI International

Megan Vinh, PhD
Early Childhood Technical Assistance Center
Center for IDEA Early Childhood Data Systems
Frank Porter Graham Child Development Institute

Key documents

Center for IDEA Early Childhood Data Systems. "DaSy Data System Framework." 2014.

Division for Early Childhood of the Council for Exceptional Children. "Promoting Positive Outcomes for Children with Disabilities: Recommendations for Curriculum, Assessment, and Program Evaluation." 2007.

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Regional Resource Center Program. "Key Principles of Early Intervention and Effective Practices: A Crosswalk with Statements from Discipline-specific Literature." 2012.

U.S. Department of Education. "Dear Colleague Letter on Preschool Least Restrictive Environments." 2017.

U.S. Department of Health and Human Services and U.S. Department of Education. "Policy Statement on Inclusion of Children with Disabilities in Early Childhood Programs." 2015.

Appendix F: Voluntary home visiting programs – additional information

JLARC staff assessed seven state-supported voluntary home visiting programs according to criteria developed based on national research and with the assistance of subject-matter experts. JLARC staff evaluated programs in several key categories:

- use by programs of evidence-based and evidence-informed models and tools;
- outcomes as evaluated by external researchers and demonstrated through program data; and
- inclusion of components identified as necessary by subject-matter experts and national research.

Use by programs of evidence-based and evidence-informed models and tools

JLARC staff assessed each state-supported voluntary home visiting program for its use of evidence-based and evidence-informed models and tools. The results of JLARC staff's assessment are listed below:

TABLE F-1
Most of Virginia's state-supported home visiting programs are evidence-informed, and many are evidence-based

Program	Implements national evidence-based model?	Utilizes evidence-based or evidence-informed curriculum?	Utilizes evidence-based or evidence-informed screening and assessment tools?
Healthy Families Virginia	✓	✓	✓
CHIP of Virginia		✓	✓
Parents as Teachers	✓	✓	✓
Nurse-Family Partnership	✓	✓	✓
Loving Steps/Healthy Start		✓	✓
Resource Mothers		✓	✓
Project LINK			✓

SOURCE: JLARC interviews with program leadership and review of program documents and data.

Program outcomes

JLARC staff assessed home visiting programs' outcomes in two key ways: reviewing recent external evaluations of Virginia programs' performance and assessing program outcomes according to programs' performance data for FY16 and FY17. The results of these assessments are listed in the following two tables.

TABLE F-2
Programs have completed, are completing, or will soon begin external evaluations of their effectiveness

Program	Evaluation(s)	Status	Key findings
Healthy Families Virginia	Home Visiting Evidence of Effectiveness Review (HomVEE)	Last updated 4/17	Favorable effects in 5 of 8 primary outcome areas, including child development and school readiness as well as positive parenting practices.
CHIP of Virginia	Pay for Success evaluation conducted by Third Sector Capital Partners	Completed 7/17	Infants born to prenatal enrollees of CHIP of Virginia and Healthy Families Virginia were 40% more likely to reach full term and 15% less likely to be born with a low birth weight than infants in the comparison group.
Parents as Teachers	HomVEE	Last updated 7/13	Favorable effects in 4 of 8 primary outcome areas, including child development and school readiness as well as positive parenting practices.
Nurse-Family Partnership	HomVEE	Last updated 5/16	Favorable effects in 6 of 8 primary outcome areas, including maternal health, child health, and child development and school readiness.
Loving Steps/Healthy Start	Evaluation conducted by Virginia Commonwealth University researchers	Completed 7/16	Enrollees of Loving Steps/Healthy Start were significantly likelier to be young, unmarried, and enrolled in Medicaid as their primary source of health insurance than women in the comparison group. After adjusting for differences between groups, only one of 13 outcomes was statistically significant; additionally, most effect sizes were small, and some effects were unfavorable relative to the comparison group. LS/HS participants were significantly likelier to enroll in Women, Infants, and Children nutrition services than women in the comparison group.
	National Healthy Start evaluation conducted on behalf of federal Maternal and Child Health Bureau	Ongoing	N/A
Resource Mothers	Evaluation conducted by University of Virginia researchers	Preliminary results published 6/16	Evaluation showed demonstrated, statistically significant improvements in participants' self-esteem compared to the control group, particularly for Hispanic teen mothers.
Project LINK	Evaluation to be funded by federal Substance Abuse and Mental Health Services Administration grant	Grant awarded 9/17	N/A

SOURCE: JLARC review of federal Home Visiting Evidence of Effectiveness Review findings, interviews with program leadership, and review of program documents and data.

TABLE F-3
Most programs' outcomes data demonstrates positive birth, child, and family outcomes

Program	Pregnancy & birth outcomes	Child outcomes	Maternal & family outcomes
HFV	• 89.4% of prenatally enrolled participants' infants were born at full birth weight (FY16)	• 87.5% of enrolled children were up-to-date on immunizations (FY16; compares to VDH client average of 68.1%)	• 96% of measured parent-child interactions and 95.1% of measured home environments rated within normal limits (FY16) • CPS founded abuse or neglect cases for 0.5% of active families with at least 6 months of services (FY16; compares to goal of 5%)
CHIP	• 88.3% of babies born after their mothers were enrolled in CHIP services for 4+ months were full-term (2014-2017; compares to 81.1% of babies born to same mothers prior to CHIP enrollment) • 91% of babies born after their mothers were enrolled in CHIP services for 4+ months had a healthy birth weight (2014-2017; compares to 84.2% of babies born to same mothers prior to CHIP enrollment)	• 95.4% of enrolled children had a medical home through 6/17 • 90% of enrolled children up-to-date or on-track with immunizations through 6/17	• 21% of mothers with less than HS education prior to enrollment attained diploma or GED after 2 years of services (FY17) • 50% reduction in number of families with 2 or more moves during the previous year (FY17) • 51.5% of families had one or both parents employed after one year of services (FY17)
NFP	• 88% of participants' pregnancies reached full term (as of 12/16) • 86% of participants' infants were born at full birth weight (as of 12/16) • 82% of mothers initiated breastfeeding (as of 12/16)		
RM	• 0 infant deaths at 6 of 7 sites; only 1 infant death total (FY16) • 72.5% of mothers who reported smoking at conception were no longer smoking at birth (FY16) • Over 89% of infants born to participating mothers were born at full birth weight (FY16)		• 97% of participants who scored positive for perinatal depression screening completed referrals (FY16)
LS/HS	State-level program performance data shows that only 1 of 3 key infant-related outcome measures was unambiguously positive in FY16. Participants had high rates of low birth weight (21%) and preterm birth (13%), but an infant mortality rate (1.5 per 1,000) substantially lower than both the state rate (6.2) and the rates in the high-risk communities in which the program operates (11.2 combined).		
PAT	Program performance data only available aggregated with other MIECHV sites.		
LINK	Program performance data not sufficiently reliable.		

SOURCE: JLARC review of program documents and data. NOTE: Outcomes listed not exhaustive.

Appendix G: Improvements to Virginia's Quality Rating and Improvement System

Senate Joint Resolution 88 (2016) directs JLARC to review the Virginia Star Quality Initiative (now called Virginia Quality). Virginia Quality is Virginia's voluntary quality rating and improvement system that was created in 2007 to assess, improve, and communicate the quality of Virginia's early learning providers (i.e., child care and pre-K providers).

The Virginia Department of Social Services administers Virginia Quality jointly with the Virginia Early Childhood Foundation (VECF). As of June 30, 2017, only 18 percent (933 out of 5,236) of early learning providers had opted to participate in Virginia Quality.

Virginia Quality does not receive any state funding. In FY17, Virginia Quality was fully funded through the federal Child Care and Development Block Grant (Virginia Quality received $2,536,850 in FY17). Although Virginia Quality is entirely funded through federal dollars, the state has full discretion over its design.

As of October 2017, 49 states, including Virginia, had quality rating and improvement systems (QRISs). One of these states has a pilot program (Alabama), while three states have systems that are not yet implemented statewide (California, Florida, Kansas). The majority of states, however, have statewide QRISs that measure and improve the quality of early learning providers with the goal of improving child development outcomes.

Virginia Quality includes important aspects of effective early learning programs

In its current form, Virginia Quality has five quality levels, all of which are intended to reflect providers' quality and the progress they have made towards increasing their quality (Figure G-1). Virginia Quality currently includes important aspects of effective early learning programs, including whether providers have

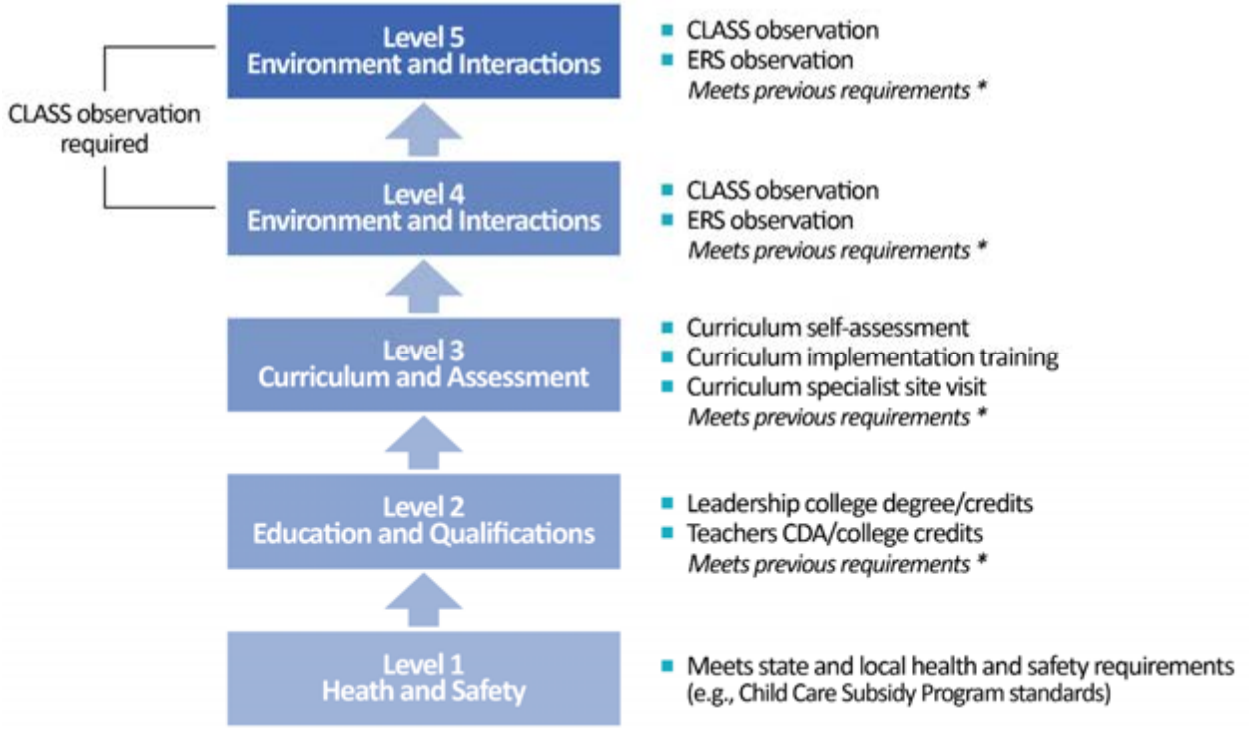
- quality teacher-child interactions (Level 4, Level 5),
- research-based curricula (Level 3),
- targeted professional development (Level 2, Level 3), and
- ongoing program monitoring, evaluation, and improvement (Levels 1-5).

(See Appendix E for information on the core components of quality for early learning programs.)

As described in Chapters 4 and 5, the quality of teacher-child interactions is generally viewed as the most important aspect of quality to improve child outcomes, with other aspects supporting these quality interactions.

To assess the quality of teacher-child interactions, Virginia Quality requires participants seeking a Level 4 or Level 5 status to participate in Classroom Assessment Scoring System (CLASS) observations. CLASS was developed by researchers at the University of Virginia's Center for Advanced Study of Teaching and Learning. Virginia's quality rating and improvement system was one of the first systems in the country to incorporate CLASS into its QRIS. Multiple other states now incorporate CLASS observations into their QRISs, including Louisiana, Arizona, and Colorado.

FIGURE G-1
Virginia Quality currently has five quality rating levels



SOURCE: *Virginia Quality Standards*, Virginia Early Childhood Foundation (October 2015).

Virginia Quality website needs additional information to be useful to parents and to support program effectiveness

As of November 2017, the Virginia Quality website provided a list of child care and pre-K programs that participate in the program, but it had no indication of the rating level that each program has achieved. Consequently, parents cannot determine the quality of the providers in their area.

To be most useful, the quality level of each program participating in Virginia Quality should be clearly listed on the website. This would allow parents to compare the quality of providers in their area and select the one that best meets their needs. It would also recognize those child care and pre-K providers that have taken steps to achieve higher quality levels.

Steps could be taken to improve the integrity of Virginia Quality's assessment process and quality levels

Several of Virginia Quality's levels do not have adequate policies in place to ensure that providers have comparable levels of quality, thereby weakening the reliability and integrity of Virginia Quality's rating levels. For example, the current requirements surrounding curriculum reviews by Virginia Quality staff are too subjective and unstructured to ensure that a provider's curriculum is research-based. Even though they conduct a site visit, Virginia Quality's curriculum specialists provide little guidance on

whether curricula are effective and research-based. They check whether curricula are implemented "intentionally," but they do not verify that providers are using curricula that have been validated through research findings to build foundational skills. More problematic is the fact that Virginia Preschool Initiative providers were allowed to bypass the normal Virginia Quality assessments and were "fast-tracked" to Level 3 without needing to demonstrate their quality. Virginia Quality staff reasonably assumed that Virginia Department of Education (VDOE) staff have reviewed Virginia Preschool Initiative providers' curricula. Neither VDOE staff nor Virginia Quality staff actually verify that these providers have and use effective, research-based curricula, making the Level 3 rating for these providers unreliable.

To address these issues and improve the integrity of the ratings, the state and VECF could take steps to strengthen and standardize the review process and ensure that all quality-rated providers go through the same review process. Several recommendations in Chapters 4 and 5, including requiring VDOE to develop a pre-approved list of curricula, would streamline and standardize the review process.

Greater focus on the quality of teacher-child interactions would provide better indications of quality, but would require additional resources

Although Virginia Quality, like the QRISs in many other states, is intended to indicate the presence of important aspects of effective early learning programs, it is not a fully reliable indicator of the quality of the program as currently designed for several reasons.

Most importantly, the state knows little about the quality of children's *actual experiences* at programs rated lower than Level 4 (beyond basic health and safety). Only a small percentage of Virginia Quality participants have achieved a Level 4 or Level 5 rating, where CLASS observations are conducted. Other levels are intended to assess other aspects of early learning programs that can support program quality; however, they leave the state (and parents) with little information about whether children's experiences are actually high quality and developmentally beneficial.

CLASS assessments could therefore be incorporated at each level of Virginia Quality to more accurately show gradations of quality. Performing CLASS observations for all child care and pre-K providers would require substantial additional resources, however, and may be seen by providers as more intrusive than the current model—especially if all programs were required to participate. It would also require a third overhaul of Virginia Quality's design.

If the state did move to assess and assign quality levels using a research-based observation tool, such as CLASS, other key quality features that are important to child development, including research-based curricula and targeted professional development, could remain part of Virginia Quality levels. However, they would no longer be the sole determinant of providers' quality levels. This approach appears to align with existing research, as the quality of teacher-child interactions is the most critical feature of program quality, and other key features are used to support those interactions.

Appendix H: Individuals with Disabilities Education Act programs – additional information

Skills improvement

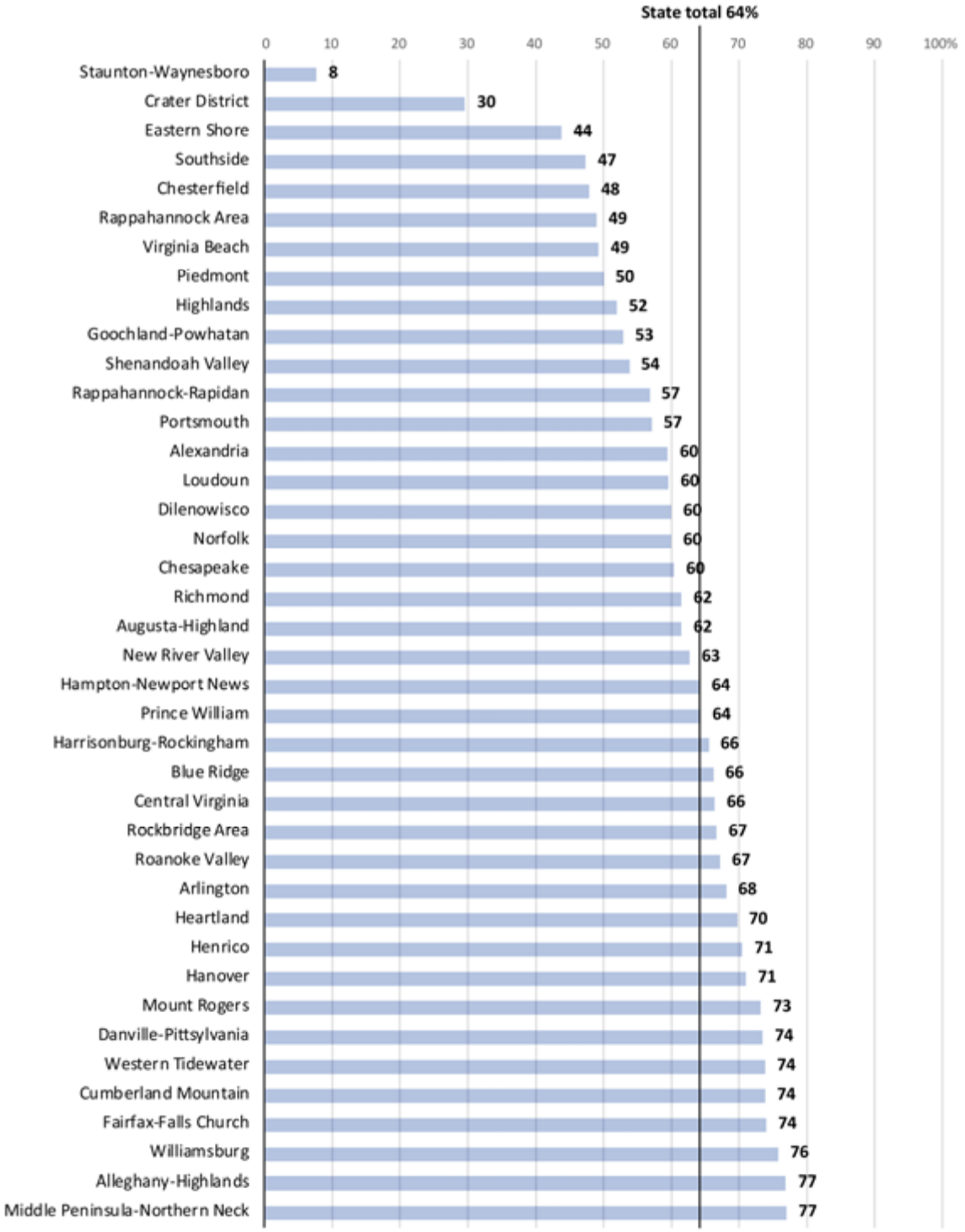
Federal law requires states to report the skills improvement of children participating in Early Intervention (EI) and Early Childhood Special Education (ECSE). Improved skills are a measure of a program's effectiveness at minimizing the gap between participants' skills and the skills expected of same-aged peers. The figures below indicate the percentage of participants who significantly improved their skills levels compared to same-aged peers during their participation in the program. See Chapter 6 for a full explanation of Virginia's process for calculating this percentage.

States report on three categories of skills to provide a comprehensive picture of the child's ability to actively participate in the real world. The specific skills expected vary with a child's age, but the following three categories are used for all children in both EI and ECSE:

- social-emotional skills (e.g., accepting temporary separation from parent, expressing feelings, and playing interactively);
- cognitive skills (e.g., remembering, communicating with others, and recognizing letters); and
- self-care skills (e.g., using a fork to eat, self-toileting, and caring for personal safety).

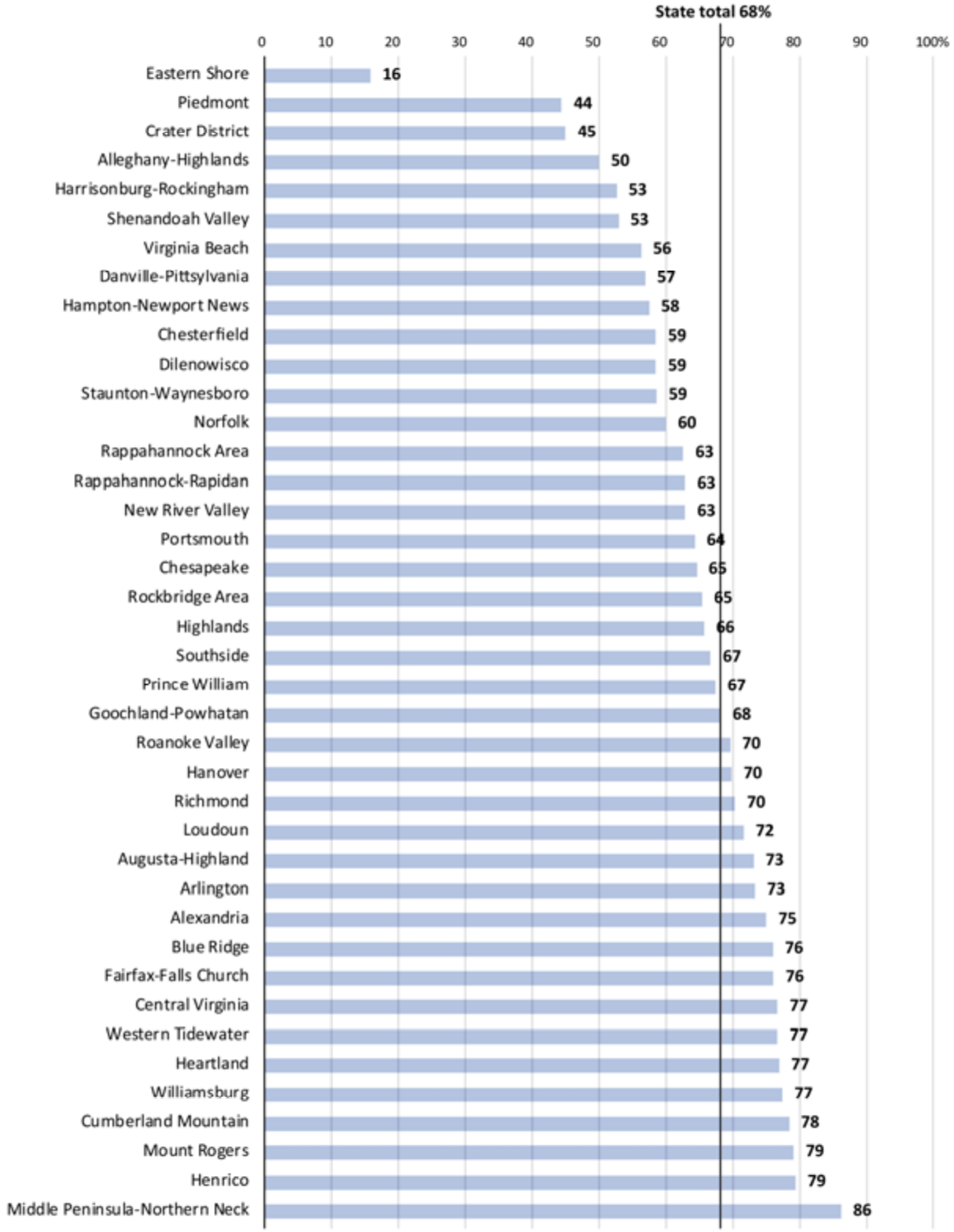
Early Intervention

FIGURE H-1
Percentage of participants improving social-emotional skills (FY16)



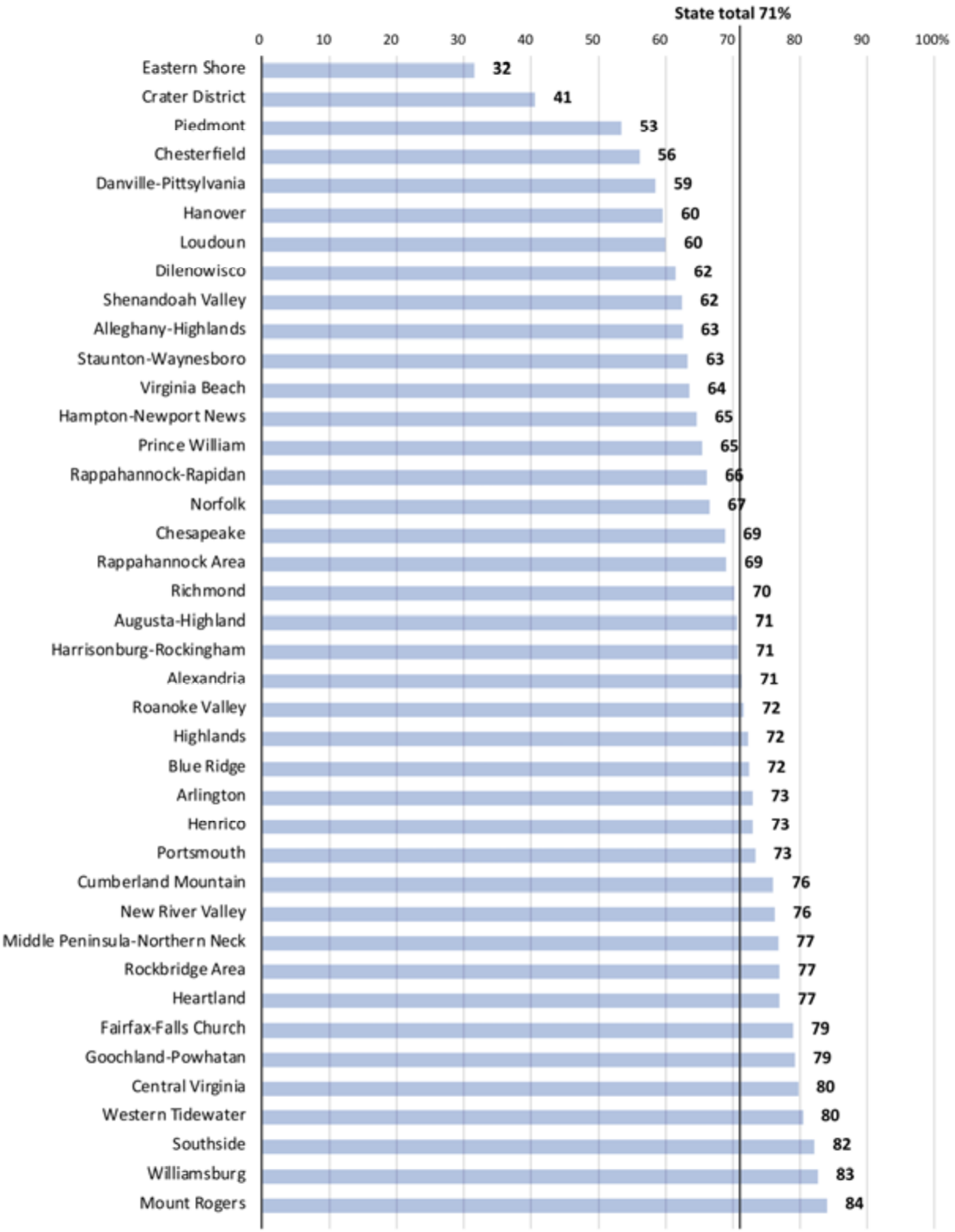
SOURCE: JLARC analysis of Early Intervention program data.

FIGURE H-2
Percentage of participants improving cognitive skills (FY16)



SOURCE: JLARC analysis of Early Intervention program data.

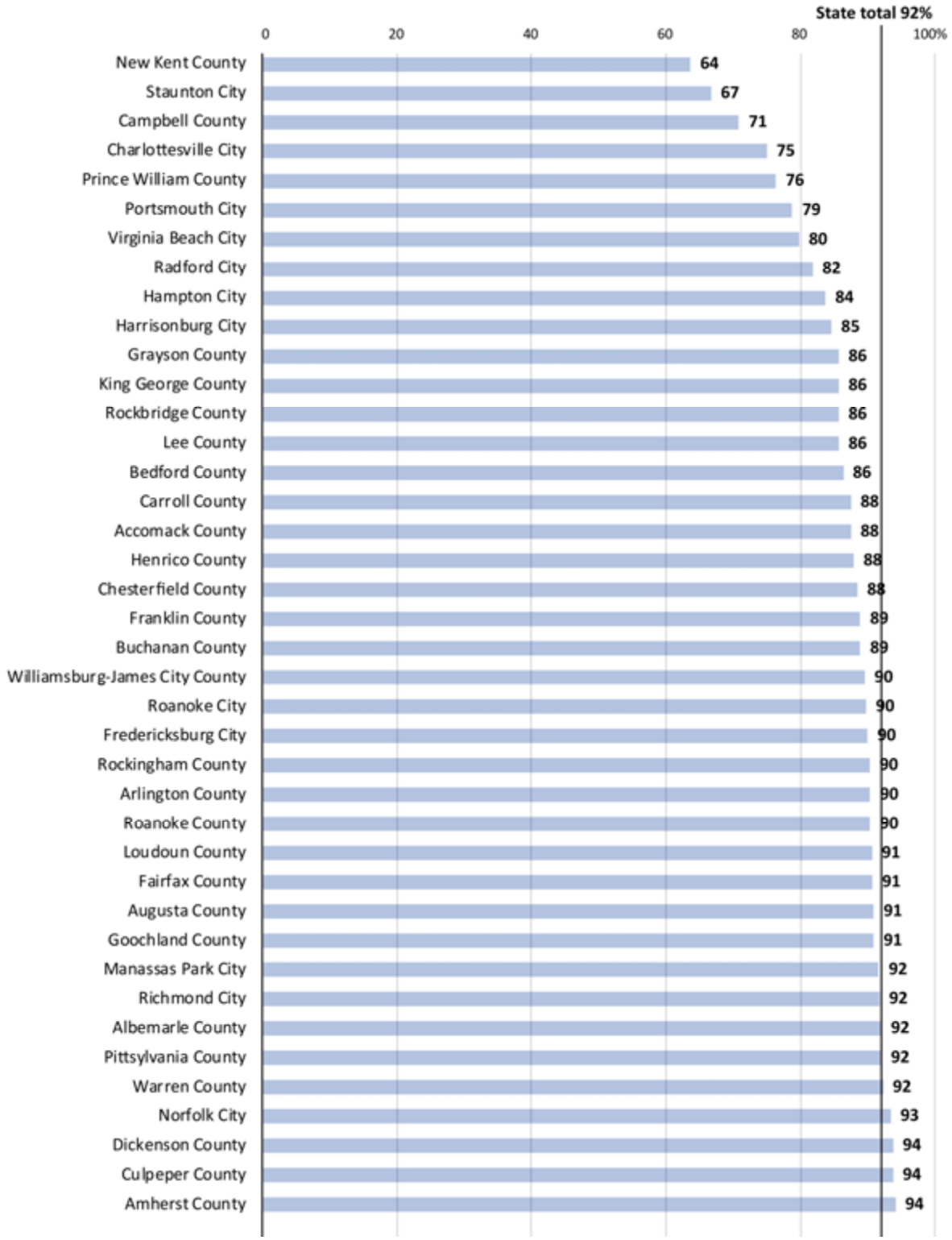
FIGURE H-3
Percentage of participants improving self-care skills (FY16)

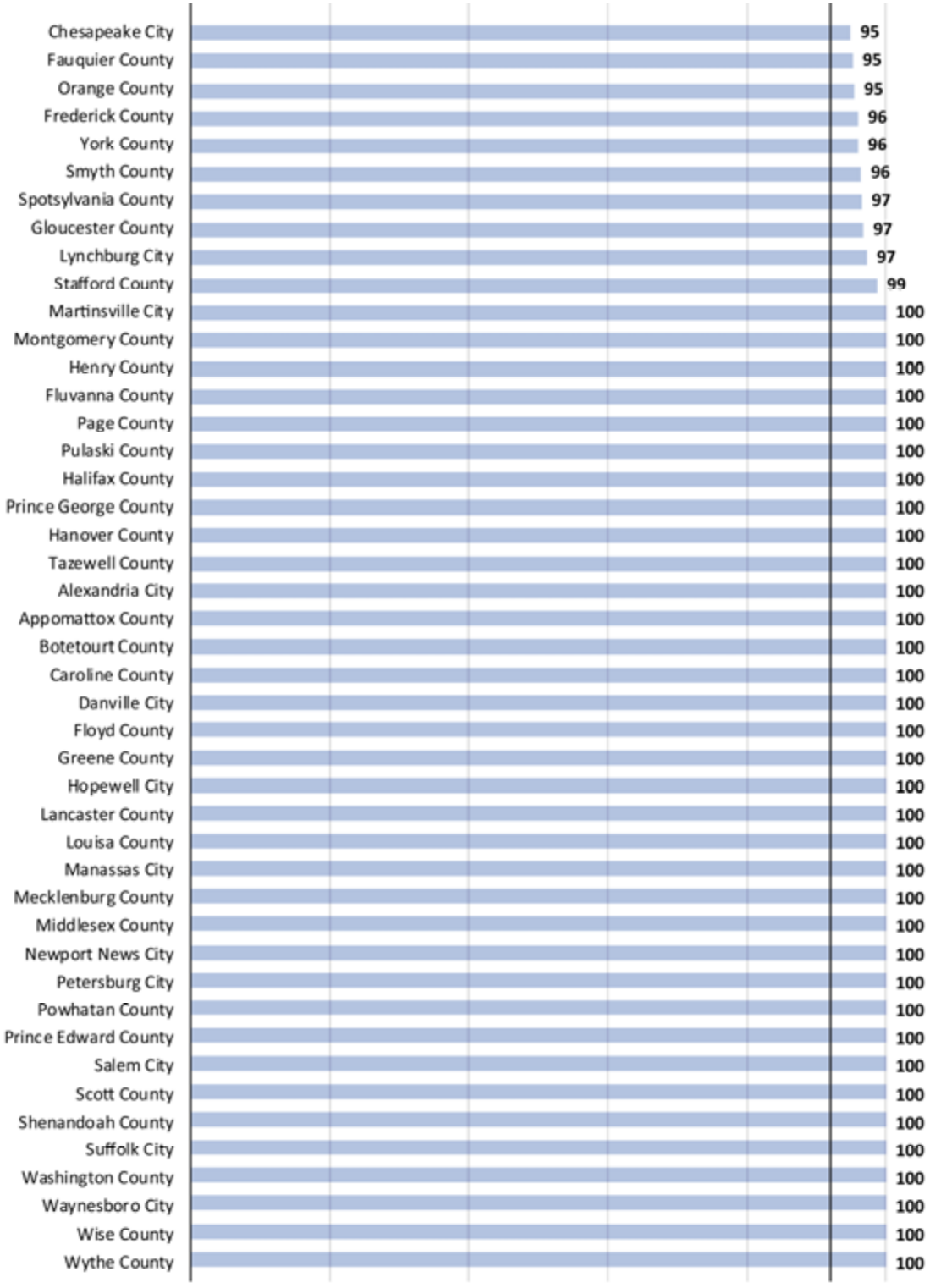


SOURCE: JLARC analysis of Early Intervention program data.

Early Childhood Special Education

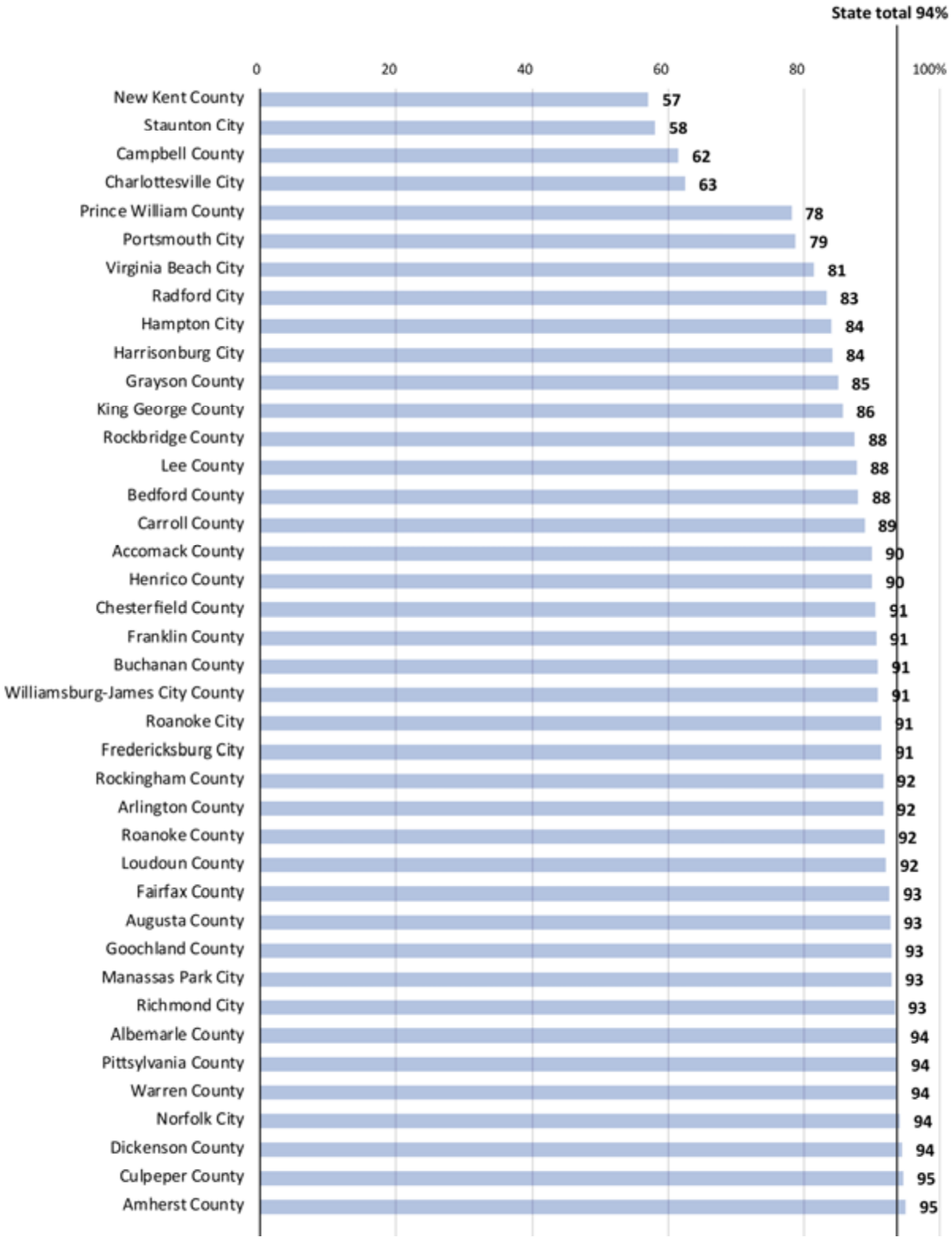
FIGURE H-5
Percentage of participants improving social-emotional skills (FY16)

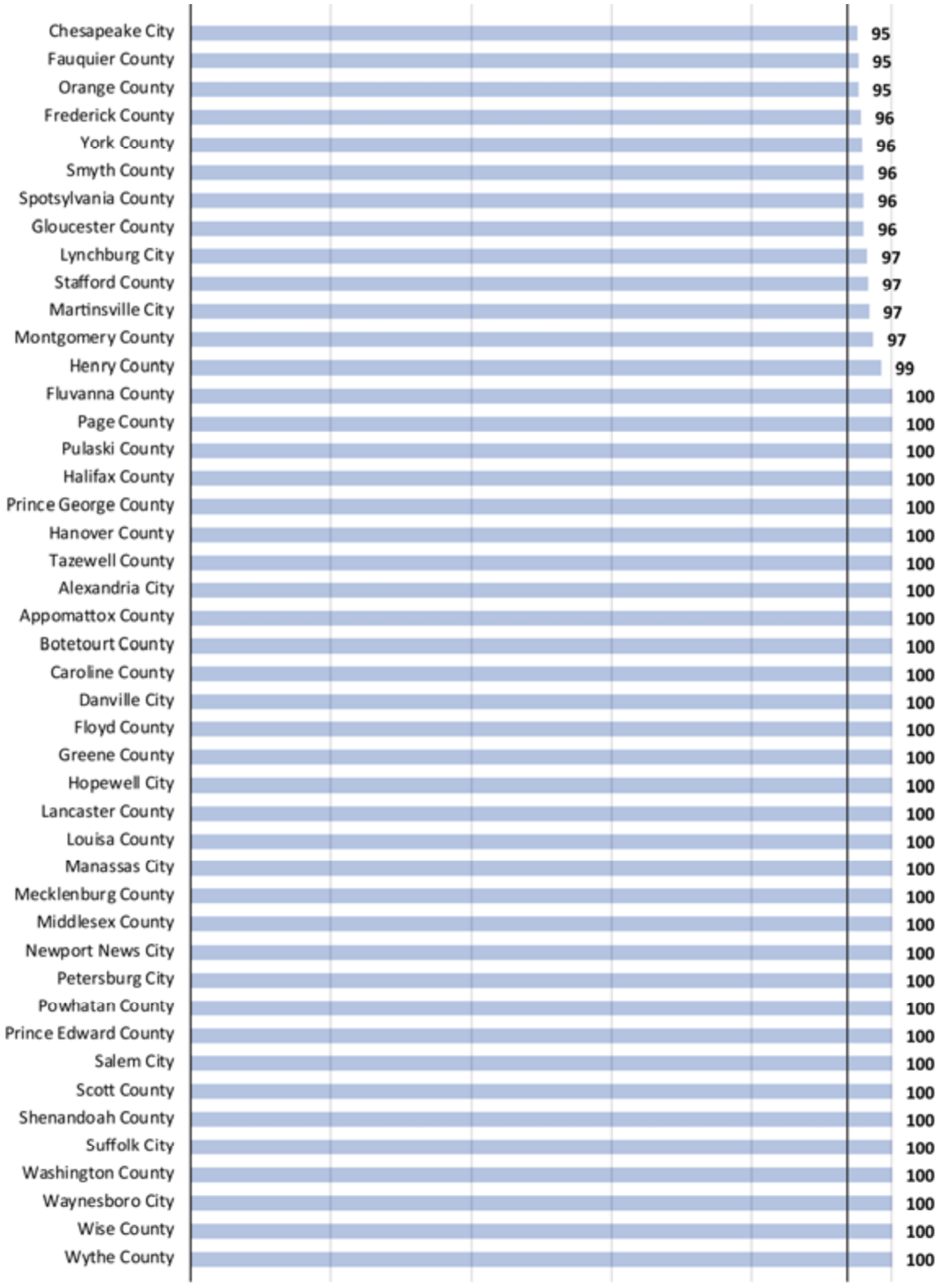




SOURCE: JLARC analysis of Early Childhood Special Education program data.
NOTE: Data on localities is limited to the 64% of localities with more than 10 students reported, to protect confidentiality.

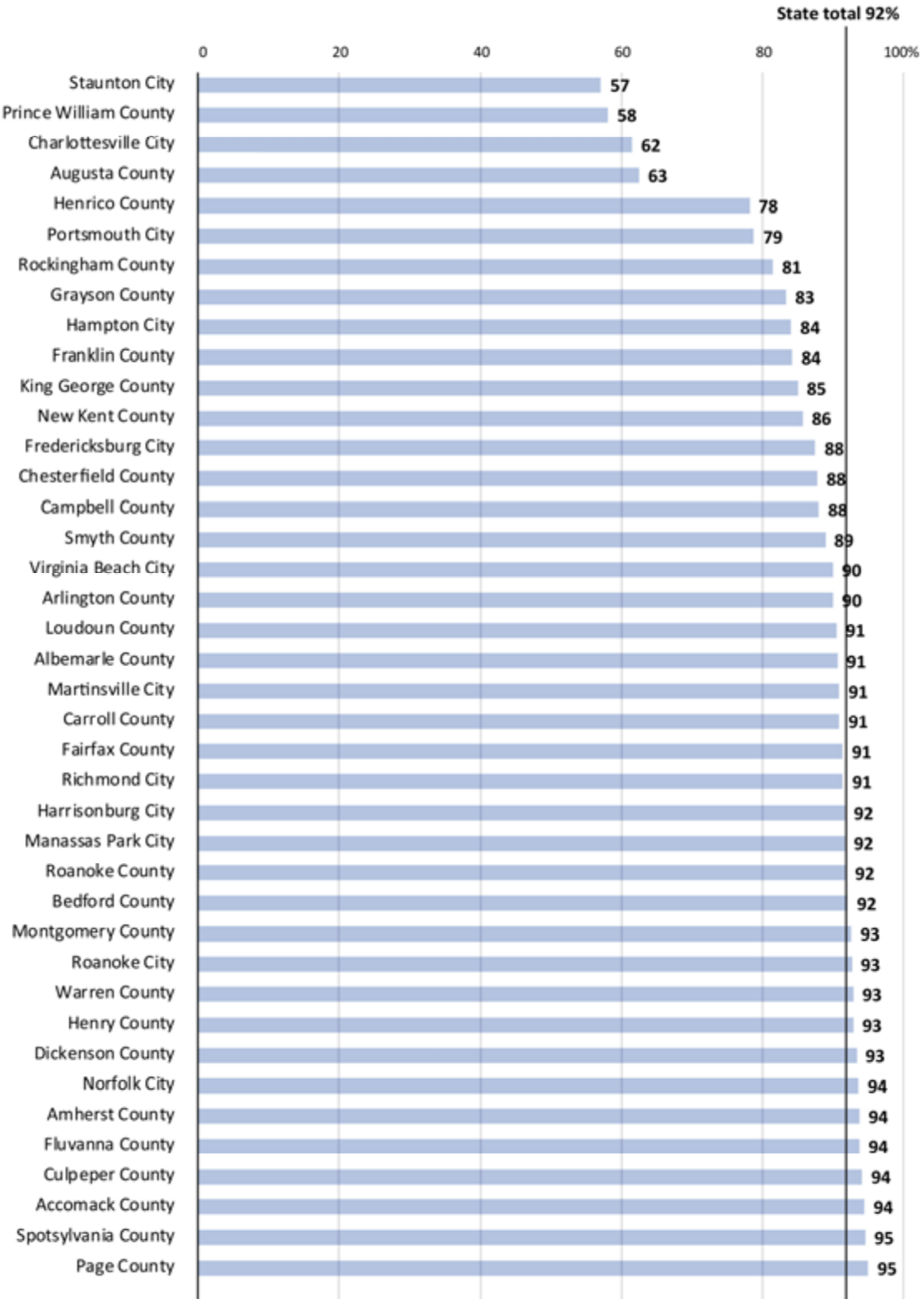
FIGURE H-6
Percentage of participants improving cognitive skills (FY16)

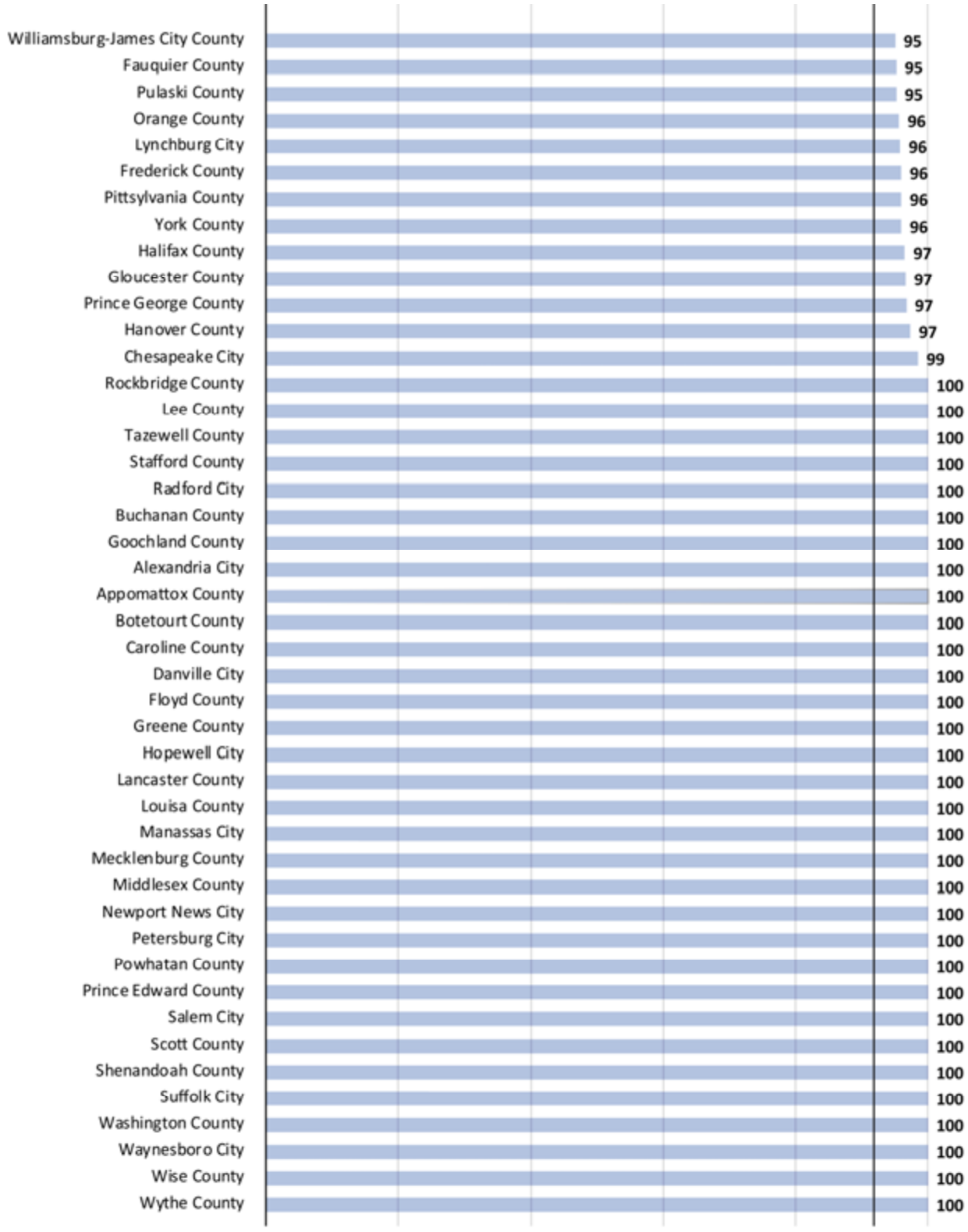




SOURCE: JLARC analysis of Early Childhood Special Education program data.
NOTE: Data on localities is limited to the 64% of localities with more than 10 students reported, to protect confidentiality.

FIGURE H-7
Percentage of participants improving self-care skills (FY16)





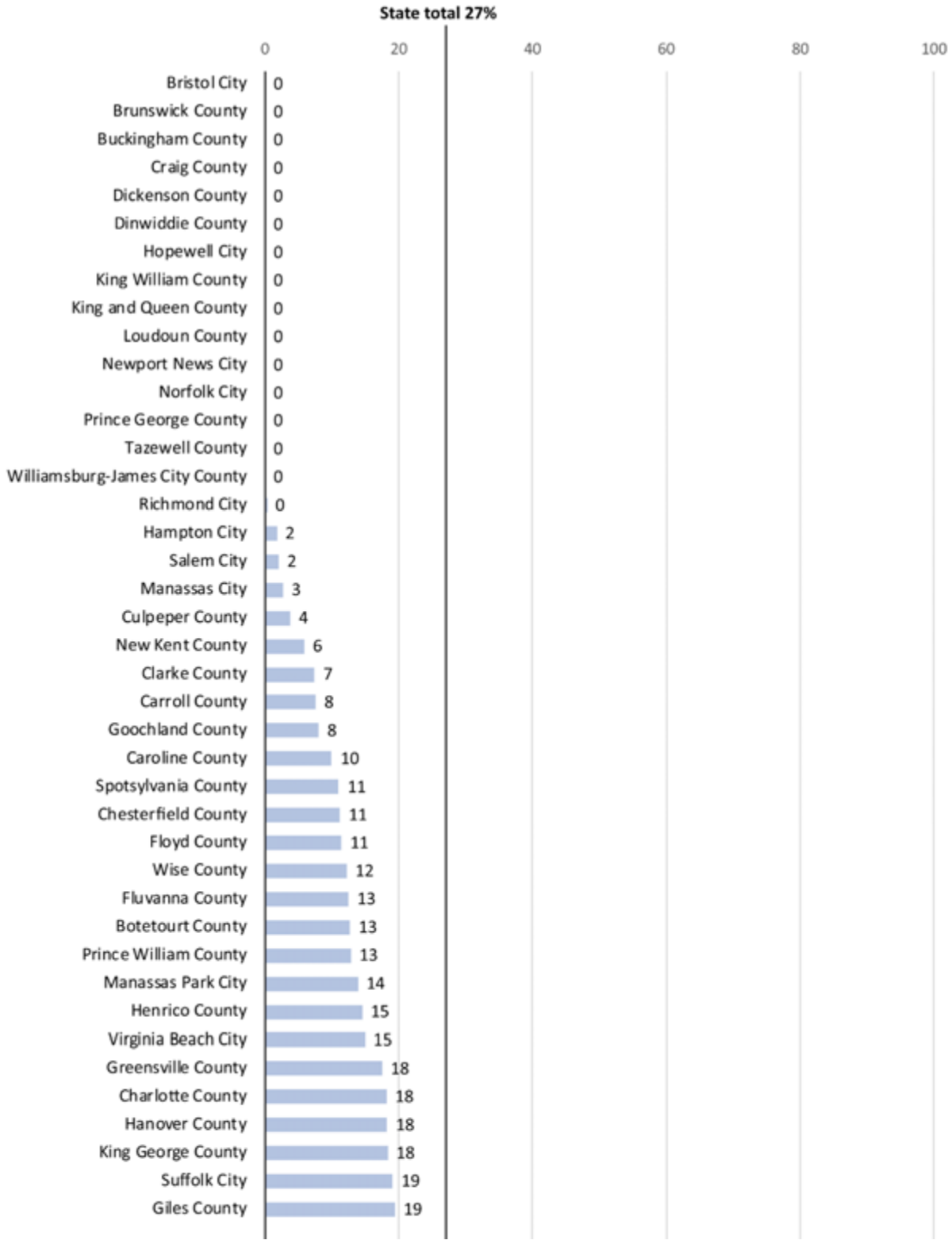
SOURCE: JLARC analysis of Early Childhood Special Education program data.
NOTE: Data on localities is limited to the 64% of localities with more than 10 students reported, to protect confidentiality.

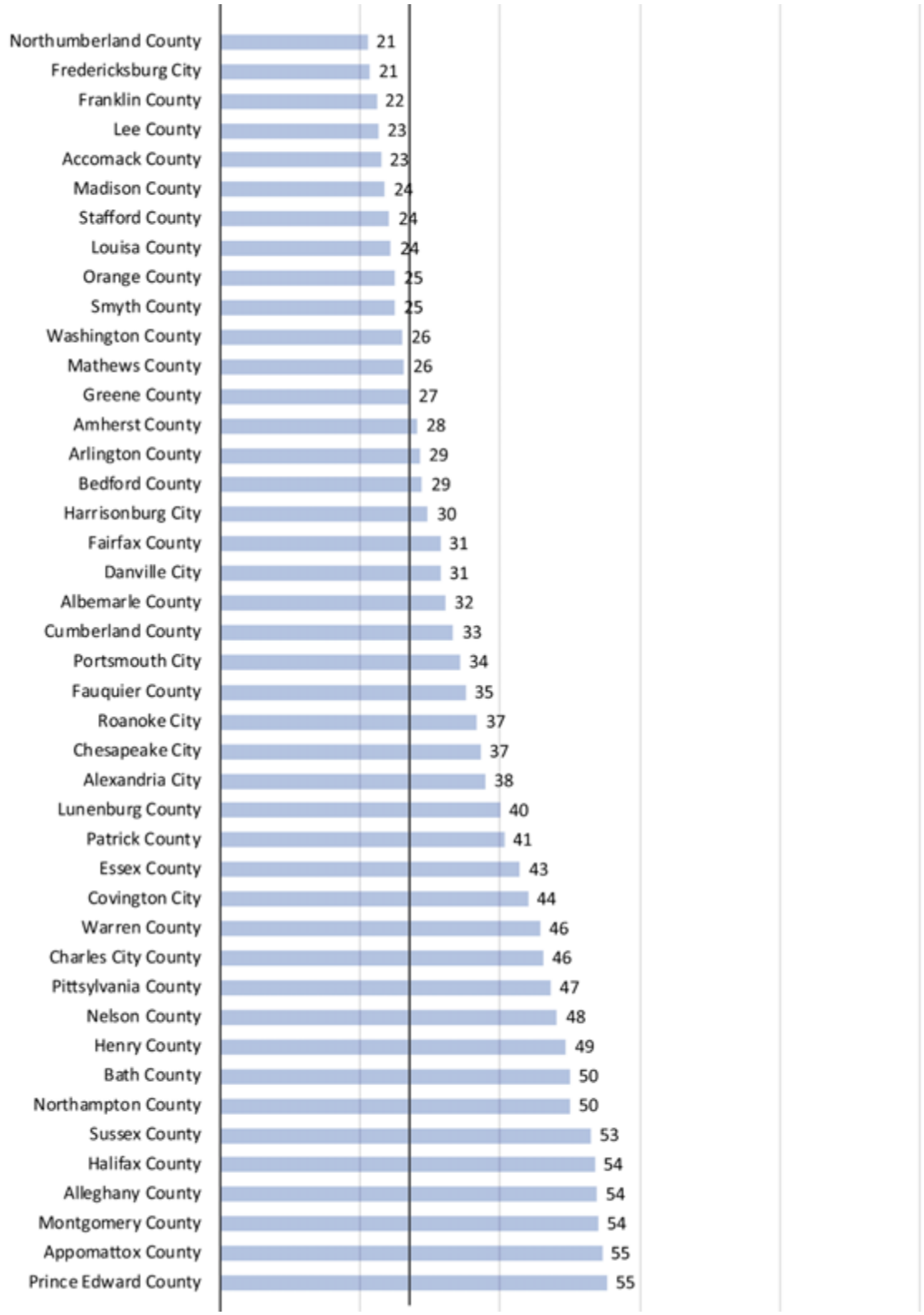
Inclusion

Federal law requires states to report data on the settings in which children are receiving ECSE services. Providing services in inclusive settings is an evidence-based approach to supporting children's skills development. Providing services in inclusive settings is required by federal law, unless those settings hinder the effectiveness of ECSE services for a particular child.

The figure below indicates the percentage of ECSE participants receiving the majority of their special education services in an inclusive setting and attending that inclusive setting at least 10 hours per week. Inclusive settings are defined as early childhood programs that serve a majority of children who do not participate in ECSE, such as public preschools, private child care centers, and Head Start.

FIGURE H-7
Percentage of Early Childhood Special Education participants in inclusive settings (FY16)




Northumberland County 21
Fredericksburg City 21
Franklin County 22
Lee County 23
Accomack County 23
Madison County 24
Stafford County 24
Louisa County 24
Orange County 25
Smyth County 25
Washington County 26
Mathews County 26
Greene County 27
Amherst County 28
Arlington County 29
Bedford County 29
Harrisonburg City 30
Fairfax County 31
Danville City 31
Albemarle County 32
Cumberland County 33
Portsmouth City 34
Fauquier County 35
Roanoke City 37
Chesapeake City 37
Alexandria City 38
Lunenburg County 40
Patrick County 41
Essex County 43
Covington City 44
Warren County 46
Charles City County 46
Pittsylvania County 47
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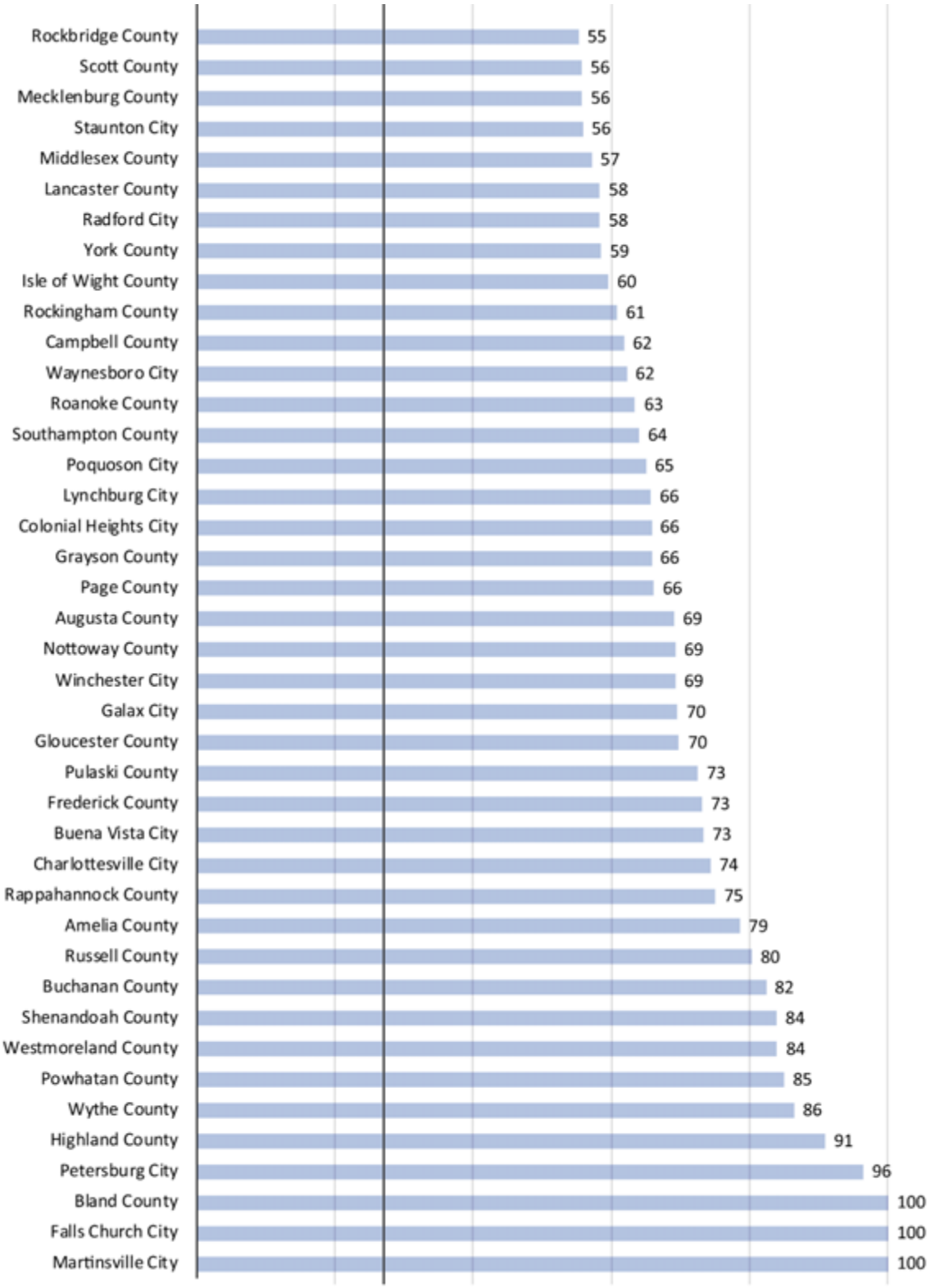
Alleghany County 54
Montgomery County 54
Appomattox County 55
Prince Edward County 55



SOURCE: JLARC analysis of Early Childhood Special Education program data.
NOTE: Data on localities is limited to the 94% of localities with more than 10 students reported, to protect confidentiality.

Appendix I: Agency responses

As part of an extensive validation process, the state agencies and other entities that are subject to a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff sent an exposure draft of this report to the Secretaries of Education and Health and Human Resources as well as the Departments of Health, Behavioral Health and Developmental Services, Education, Social Services, and Taxation. Exposure copies were also sent to the University of Virginia and the Virginia Early Childhood Foundation. Sections of the report were sent to other entities as appropriate.

Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report. This appendix includes response letters from the following:

- Curry School of Education, University of Virginia
- Department of Health
- Department of Behavioral Health and Developmental Services
- Secretary of Education
- Department of Education
- Department of Social Services

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Robert C. Pianta, Dean

December 1, 2017

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

I write to commend you on the report of the Virginia Joint Legislative Audit and Review Commission (JLARC) on early childhood development, *Improving Virginia's Early Childhood Development Programs.* After reviewing the report and participating in some of the interviews, I was impressed with the very thorough methodology and the insightful conclusions that are presented. As is noted in the report, Virginia is at a crossroads with regard to its policy and program support for the education and development of its youngest citizens. Having made a substantial and positive investment through programs such as the Virginia Preschool Initiative as well as support for children in child care, Virginia now faces questions about how to improve the impact of those investments, so that the children affected have the very best chance of success in school and life. It is my impression that the report's recommendations focus on the key leverage points – program design and curriculum, workforce development, and data use – that will be necessary to address the challenges and opportunities that Virginia faces right now. The report outlines a set of policies that, in my experience, reflect the very best and forward-looking work that is taking place in other states, and that have proven to deliver results. Having the credibility of JLARC behind those recommendations will, I hope, help make them a reality.

Thank you for the opportunity to be part of this effort and thank you for the good work of your staff on this important initiative.

Sincerely,

Robert C. Pianta, Dean
Novartis US Foundation Professor of Education
and Professor of Psychology

COMMONWEALTH of VIRGINIA

Department of Health

Marissa J. Levine, MD, MPH, FAAFP
State Health Commissioner

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RICHMOND, VA 23218

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December 4, 2017

Hal E. Greer
Director, Joint Legislative Audit and Review Commission (JLARC)
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for providing the Virginia Department of Health (VDH) with the opportunity to review the JLARC report, *Improving Virginia's Early Childhood Development Programs*. I appreciate the willingness of your staff to thoughtfully consider the comments and suggestions provided by VDH staff. VDH is in general agreement with Recommendation 2 of the report, which pertains to VDH.

I greatly appreciate the professionalism and courtesy displayed by JLARC staff throughout the study process. Please let me know if you require anything further. You can reach me at (804) 864-7009 or Marissa.Levine@vdh.virginia.gov.

Sincerely,

Marissa J. Levine, MD, MPH, FAAFP
State Health Commissioner

COMMONWEALTH of VIRGINIA

JACK BARBER M D
INTERIM COMMISSIONER

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December 4, 2017

Hal E. Greer
Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and provide comments to the exposure draft of *Improving Virginia's Early Childhood Development Programs*. The report is comprehensive in scope and identifies several recommendations that would improve early childhood development programs in Virginia if implemented. We appreciated the opportunity to provide input, data, and information to the JLARC staff during the development of the report and recommendations.

The Department of Behavioral Health and Developmental Services (DBHDS) operates the Early Intervention program, which is the Commonwealth's Individuals with Disabilities Education Act (IDEA) program for children from birth through age 2. The report shares important information about the program's growth as well as that of the Early Childhood Special Education (ECSE) program operated by Virginia Department of Education. These two locally-implemented programs provide services to over 27,000 children with a goal of increasing a variety of skills to help children learn and grow during the critical early childhood years.

DHBDS supports the recommendations in Chapter 6 of the report related to Early Intervention and ECSE programs. Improving the quality of data and validity of scores, consistently collecting data about the use of evidence-based practices, and working to increase the number of ECSE children served in inclusive settings is critical to continuing to advance the quality of these two programs. We look forward to further discussion about these recommendations with JLARC members and legislators.

DBHDS is also responsible for the administration of Project LINK, a home visiting program for pregnant and postpartum women who have a substance use disorder or are at-risk of a substance use disorder.

Project LINK differs from the other home visiting programs discussed in the report in that the mother, not the infant, is the intervention target. The program seeks to address the health of the

substance using mothers with the goals of helping her reach recovery and improving her ability to parent. DBHDS has been able to support thousands of women over the last 25 years through Project LINK.

Chapter 3 of the report finds the Project LINK program lacks reliable evidence of effectiveness and lacks nearly all components of an effective program. The authors recommend additional resources as well as transformation of Project LINK to an evidence-based program. DBHDS has administered this program with limited resources for many years. The limitation in resources has made it difficult to monitor sites for consistency in operation and adherence to evidence-based practices. As noted, we have not even had sufficient funding to retain a full time program administrator despite the growing need for this vital program.

We believe it is critical to explain that DBHDS applied for and received one of three grants available from the Substance Abuse and Mental Health Services Administration (SAMHSA) in September 2017 to provide--in addition to the $850,000 in current program funding--$1 million each year for three years to improve Project LINK. The grant, "State Pilot Grant Program for Treatment of Pregnant and Postpartum Women," was awarded to assist DBHDS and Virginia in taking the following actions:

- Expand the program from 9 sites to 11 sites;
- Standardize implementation protocols across all 11 sites:
- Fund a part-time evaluator from Virginia Commonwealth University.
- Ensure accountability by designating local site administrators to report directly to DBHDS Project LINK director;
- Hire a full-time DBHDS Project LINK director to oversee the program;
- Report and monitor monthly program performance, service, and outcome data;
- Utilize SAMHSA-designed Government Performance and Results Act (GPRA) tools to evaluate and maximize the efficient and effective implementation of Project LINK, clinically and operationally, during the three-year grant period ; and
- Participate in a SAMHSA-led cross site evaluation.

These changes will ensure that, consistent with Recommendation 3 in the report, Project LINK will operate as an evidence-based, well-designed, and consistently-implemented home visiting program. We recommend the General Assembly allow DBHDS to implement the elements of this new grant before pursuing other models discussed in the report. Introducing a new model while we work to improve and bolster the current Project LINK program, which has shown positive outcomes, would likely be disruptive and further stymie progress in this high need area.

Thank you for the opportunity to review and provide comments to this report. We look forward to working with JLARC staff and members of the General Assembly to improve and advance early childhood development programs across the Commonwealth.

Sincerely,

Jack Barber, M.D.

COMMONWEALTH of VIRGINIA

Office of the Governor

Dietra Y. Trent, Ph.D.
Secretary of Education

December 5, 2017

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission
919 East Main Street
Suite 2100
Richmond, VA 23219

Dear Mr. Greer:

Thank you for the opportunity to review the draft report *Improving Virginia's Early Childhood Development Programs*. I want to thank your staff for their thorough research, insightful findings, and practical recommendations.

Early childhood development and education programs are of critical importance to the children and families they serve, as well as the long term economic well-being of the Commonwealth. As noted in the report, Virginia's programs have demonstrated their ability to improve outcomes for many vulnerable children; but more can be done to strengthen their quality assurances mechanisms, to measure their effectiveness, and maximize state investments in this important arena. There are always opportunities to improve, and we look forward to determining how best to incorporate the report recommendations to maximize positive outcomes for young children served by these programs around the state.

Sincerely,

Dietra Y. Trent

COMMONWEALTH of VIRGINIA

Steven R. Staples, Ed.D.
Superintendent of Public Instruction

DEPARTMENT OF EDUCATION
P.O. BOX 2120
Richmond, Virginia 23218-2120

Office: (804) 225-2023
Fax: (804) 371-2099

December 5, 2017

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the Joint Legislative Audit and Review Commission's draft report on *Improving Virginia's Early Childhood Development Programs.* The draft report provides a comprehensive review of Virginia's early childhood development programs and recommendations for improvements to these programs.

We appreciated the opportunity to meet with you and your staff to review and discuss the draft report, including the state and local resources needed to support the recommendations, and the embedding of early childhood programs for students with disabilities into early childhood education programs for all students.

Sincerely,

Steven R. Staples

SRS/ZR/bj

COMMONWEALTH of VIRGINIA
DEPARTMENT OF SOCIAL SERVICES
Office of the Commissioner

Margaret Ross Schultze
Commissioner

December 4, 2017

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street
Suite 2101
Richmond, Virginia 23219

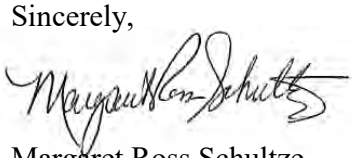
Dear Mr. Greer:

The Department of Social Services thanks you and the staff of the Joint Legislative Audit and Review Commission for their professional efforts as they undertook the research and preparation of this report titled *Improving Virginia's Early Childhood Development Programs*. We also appreciate the opportunity to review the exposure draft of the report and have provided comments and information under separate cover that we trust will be useful as you finalize this report.

Recent changes in federal law and regulation concerning child care have stimulated significant changes in state-level Child Care Programs. We look forward to continuing Virginia's forward progress in serving young children to promote their school readiness while at the same time assisting their parents as they work or participate in education and training to better support their families. In particular, we look forward to further exploring the notion of tiered reimbursement, based on quality, for the Child Care Subsidy Program as addressed by the JLARC staff.

Thank you again for the opportunity to review the draft report. Should have any additional questions, please feel free to contact me.

Sincerely,



Margaret Ross Schultze

cc: The Honorable William A. Hazel Jr., Secretary of Health and Human Resources

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