Evidence-Based Services and Foster Care Prevention in Virginia:

Policy Alternatives for Scaling Up Parent-Child Interaction Therapy

Prepared for:

Voices for Virginia's Children

Richmond, Virginia

By:

Dillon Wild

Master of Public Policy Candidate

This page was intentionally left blank.

Acknowledgements

First, I would like to thank Emily Griffey and the entire team from Voices for Virginia's Children for providing me the opportunity to work on this project. I have tremendous respect for the work that Voices does and I am incredibly thankful to have the opportunity to contribute to their efforts to improve the lives of Virginia's children. I would also like to sincerely thank Emily for her guidance, insight, and assistance throughout my work on this project.

I would also like to thank Laura Reed, Dr. Lisa Jobe-Shields, Katharine Hunter, and the multitude of other individuals who took the time to answer my calls and emails over the past few months. Their insight and willingness to answer my questions significantly contributed to my learning and to the success of this project.

I would like to offer my deepest gratitude to Andrew Pennock, Assistant Professor of Public Policy at the University of Virginia's Frank Batten School of Leadership and Public Policy, for serving as my APP advisor. Your patience, flexibility, and guidance were indispensable to my ability to navigate the course of this project and your thoughtfulness and investment in your students' success helped me grow as a person, student, and policy analyst.

Lastly, I would like to thank Ainsley Walker for serving as my APP partner. Your feedback and encouragement helped me through the tough points and I am very grateful for your flexibility and assistance.

Disclaimer

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

This page was intentionally left blank.

Table of Contents

Executive Summary

In February 2018, Congress passed the Family First Prevention Services Act (FFPSA), initiating the largest reform effort of the child welfare system in decades. As part of this legislation, states can use Social Security Title IV-E funds to pay for prevention services for children and families at risk of entering the foster care system.

As the Commonwealth of Virginia has begun the implementation process of the FFPSA, child welfare stakeholders have identified a substantial shortage of evidence-based services that will qualify for federal reimbursement. In particular, there is a significant lack of geographically distributed practitioners of Parent-Child Interaction Therapy (PCIT), one of the most effective services for this population.

This report is prepared for Voices for Virginia's Children, a nonprofit children's advocacy organization. In the report, I propose and evaluate policy options designed to expand the availability of PCIT throughout Virginia. I propose three options to expand PCIT availability:

1. Allow DBHDS Training Efforts to Continue Unassisted
2. Establish and Subsidize PCIT Certified Trainers in Virginia
3. Create a Grant Program Dedicated to Infrastructure Requirements

I evaluated each of these alternatives across seven criteria: 1) Total Cost, 2) Effectiveness, 3) Cost-Effectiveness, 4) Political Feasibility, 5) Administrative Burden, 6) Sustainability, and 7) Equity. Measures of cost and effectiveness were quantified and qualitative measures were used to compare alternatives across the remaining criteria.

My analysis revealed that Alternative 2 presents the best means of expanding PCIT availability in a cost effective, sustainable manner. Therefore, **I recommend Voices for Virginia's Children advocate to establish and subsidize PCIT certified trainers in Virginia.** This report concludes with suggestions for implementation and future considerations.

Introduction and Problem Statement

In February 2018, Congress passed the Family First Prevention Services Act (FFPSA), initiating the largest reform effort of the child welfare system in decades. As part of this legislation, states can use Social Security Title IV-E funds to fund prevention services for children, and their families or caregivers, at risk of entering the foster care system. In order for a state to receive federal reimbursement through Title IV-E for these services, the program must be a qualifying evidence-based service included in a federally-funded clearinghouse of approved services. The individual evidence-based prevention services that will qualify for funding fall under the larger categories of substance abuse treatment, mental health services, and in-home skill-based parent training programs. In Virginia, the children and family qualifying as "at-risk of entering foster care" include those who have had contact with the Department of Social Services in the form of a report of abuse or neglect.

In fiscal year 2018, this population encompassed 55, 255 children who were reported as possible victims of abuse or neglect (Virginia Department of Social Services, 2018a). The National Child Abuse and Neglect Data System estimates that only about 25% of children who were confirmed victims of maltreatment in Virginia actually receive services (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2019). This data reveals there is a substantial population in need of services like those financed under the FFPSA. Furthermore, as the Commonwealth of Virginia has begun the implementation process of the FFPSA, stakeholders have recognized a significant lack of qualifying evidence-based services available throughout the state. This lack of evidence-based service availability indicates that many children and families at risk of entering foster care will be unable to access services that may prevent family separation and child removal. In particular, there is a significant lack of geographically distributed practitioners of Parent-Child Interaction Therapy (PCIT), one of the most effective services for this population. This project examines policy options to expand availability of PCIT throughout Virginia.

Background

Foster Care, Family Preservation, and the Motivation for the Family First Prevention Services Act

Over the past century, members of the child welfare system, advocates, lawmakers, and families have debated the merits of institutional, out-of-home group placements for children in comparison to family-centered care. Within the past couple of decades, the research writ large has concluded that children generally do best in the least restrictive setting possible (Stroul & Friedman, 1986), which is most often family-centered care. A meta-analysis of studies related to the debate between institutional, out-of-home placements and home-based, family-centered care concluded that placement in group care settings is not necessary for the vast majority of children in the child welfare system. Furthermore, this analysis found that there is no substantial evidence in support of the value of such institutional care and that the costs of such institutional placements do not justify their use (Barth, 2002). Therefore, the field of child welfare has generally accepted the notion that children do best in home-based, family-centered care (Shatzkin, 2015).

Additional research has found that the process of removing children from their families imposes significant stress and trauma upon children, on top of the initial trauma associated with maltreatment (Schneider & Phares, 2005). In accordance with this research, and previous findings of the benefits of care in the least restrictive environment, the child welfare system transitioned towards a strategy of family preservation, rather than removal, over the past few decades. This strategy includes the expanded use of in-home services designed to reduce the number of children removed from their homes to foster care (Child Welfare Information Gateway, 2014). This shift in focus within the child welfare provider community has been coupled with an advocacy push to expand access to services that prevent the need for removal to foster care for at-risk children and families (Shatzkin, 2015).

During this same time period, the child welfare system began to place increased attention on the use of evidence-based practices and services. Evidence-based practice (EBP) is an approach to service provision that first emerged in the medical field in the early 1990s (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). At its core, EBP involves combining clinician experience, the best available evidence from systematic research, and client preferences to shape the decisions related to delivery of services and treatments to patients and clients. EBP first began to be adopted into the social work and child welfare sector in the early to mid-2000s, as clinicians and service providers began to recognize the need to use research evidence in their practice (Kessler, Gira, & Poertner, 2005). Throughout the mid to late 2000s, the popularity of EBP grew in many fields; however, only limited research was published concerning how EBP best fit into child welfare. One of the primary findings from this research was that although EBP may be difficult to adopt to many areas of child welfare, there are specific areas within the child welfare system in which specific EBPs or interventions fit best. Family engagement and parent training were determined to be the two areas of child welfare best suited for the use of EBPs (Barth, 2008).

Towards the latter half of the 2000s, research regarding the opinions of service providers towards the implementation and use of EBPs in child welfare found that providers are generally open to implementing and using EBPs in child welfare, but that they are often concerned by a number of factors including: the acceptability and fit of the EBP to family's needs, the need to learn and be trained in specific EBPs, and perceived organizational and leadership support (Aarons & Palinkas, 2007). In accordance with these provider opinions, uptake of EBPs in the child welfare system nationally continued slowly during the late 2000s and early 2010s. As evidence regarding the efficacy of specific interventions continued to grow in the mid-to-late 2010s, child welfare advocates began to recognize the desire of legislators to tie funding for programs and services with demonstrated outcomes.

The need for effective interventions has become even more salient as the foster care system has come under increased pressure during the past decade as a result of the growing opioid epidemic. There has been a nearly 10% increase in the national foster care caseload since 2012, which is largely attributable to increasing rates of parental substance abuse (Radel, Baldwin, Crouse,

Ghertner, & Waters, 2018). This has resulted in increased pressure on the foster care system, including overburdened caseworkers and increasing shortages of foster family homes. In Virginia specifically, the percentage of children entering foster care due to parental drug abuse increased from 19% in 2010 to 30% in 2017 (Kavanagh, 2018). The number of substance exposed infants, a significant cause of child removal to foster care, has also increased dramatically in Virginia, from a low of 300 in 2001 to a high of 1957 in 2018 (Virginia Department of Social Services, 2018b). As a result of this growing impact of the opioid epidemic on the foster care system, and in conjunction with the above research conclusions and advocacy efforts, Congress has devoted significantly more attention to child welfare issues in recent years. This attention culminated in the passage of the Family First Prevention Services Act in 2018.

The Family First Prevention Services Act of 2018 (FFPSA)

The Family First Prevention Services Act (FFPSA) was passed in February of 2018 as part of the Bipartisan Budget Act with two primary goals: to reform the federal funding mechanism for foster care to allow funds to be used for services that work to prevent children from entering foster care, and to ensure that children who are removed to foster care are placed in the least restrictive setting appropriate for their needs. The latter of these goals is addressed primarily by provisions that limit states' ability to use federal funds for congregate care placements for children in foster care.[1] While these provisions are an important aspect of the legislation and represent a significant transition in federal financing of foster care, this project is primarily concerned with the first goal of the legislation: states' new authorization to use federal funds to provide prevention services to at-risk children and families.

Under Subtitle A "Investing in Prevention and Family Services" of the FFPSA, states will have the option use Social Security Title IV-E funds for prevention services for eligible children and families. Prior to the passage of this legislation, federal Title IV-E funds were only available to

[1] Under the new law, states will only be able to receive federal room and board funding for children in foster care if that child is placed in a licensed foster family home, a newly-defined Qualified Residential Treatment Program (QRTPs), or in a number of other specified programs defined for special populations such as victims of sex trafficking ("Family First Prevention Services Act (FFPSA)," 2018). These provisions will require states to take additional steps to ensure the necessity of a child's placement in a congregate setting and will require the adoption of additional licensing measures for residential placements in order for facilities to qualify as a QRTP.

states following a child's placement in foster care. Beginning October 1, 2019, states will be able to use Title IV-E funds to pay for mental health and substance abuse prevention and treatment services, in-home parent skill-based programs, as well as kinship navigator programs. These programs must be trauma-informed and they must meet certain evidence-based standards set forth in the legislation (Buchanan, 2017). These standards are broken down into the categories of Promising, Supported, and Well-Supported, as determined by breadth and rigor of the evidentiary basis, modeled after the rating system used by the California Evidence-Based Clearinghouse for Child Welfare (CEBC). Upon implementation, 50% of the federal funding provided for EBS under FFPSA must be used for programs that are considered Well-Supported. (Sprow, 2018). This stipulation serves as an incentive for states to utilize EBS with the best evidence of efficacy for the target outcomes.

The legislation requires the federal government to produce a clearinghouse consisting of services that meet these criteria and the Administration for Children and Families (ACF) has contracted with Abt Associates to develop and maintain the clearinghouse. The clearinghouse will publish an initial list of approved services, as well as standards and procedures for reviewing future programs and services, and periodically update the list of approved services ("Title IV-E Prevention Services Clearinghouse, 2018 - 2023," 2018). While this clearinghouse is still being developed, the ACF has released a list of the services they will be initially reviewing. These services are included in the table below:

As there has been no indication of when the final clearinghouse will be published, states are currently making implementation decisions based on this preliminary list of services. When the federal funding becomes available for these services on October 1, 2019, the Federal Financial Participation (FFP) rate for the prevention services will be 50% for the first seven years. After October 1, 2026, states will be reimbursed for these services according to their individual Federal Medical Assistance Percentage (FMAP) (Buchanan, 2017).[2] As the October 1, 2019 effective

[2] It is important to note that eligibility to receive this federal financial assistance for prevention services is tied to the new foster care provisions in the legislation. Therefore, states must make the necessary changes to reduce reliance on congregate care for foster children before they are eligible to be reimbursed for prevention services. If states believe they are unable to make the necessary changes by October 1, 2019, they may elect to delay implementation up to two years, during which time the state is not eligible for federal reimbursement for prevention services.

date approaches, individual states must make a number of implementation decisions and actions. The next section details the ongoing implementation efforts occurring in Virginia.

Table 1. Initial Evidence-Based Services Selected for Review

Mental Health	Substance Abuse	In-Home Parent Skill-Based	Kinship Navigator
Parent-Child Interaction Therapy	Motivational Interviewing	Nurse-Family Partnership	Children's Home Society of New Jersey Kinship Navigator Model
Trauma Focused-Cognitive Behavioral Therapy	Multisystemic Therapy*	Healthy Families America	Children's Home Inc. Kinship Interdisciplinary Navigation Technologically-Advanced Model
Multisystemic Therapy*	Families Facing the Future	Parents as Teachers	
Functional Family Therapy	Methadone Maintenance Therapy		

*This service has demonstrated improved outcomes for both mental health and substance abuse issues

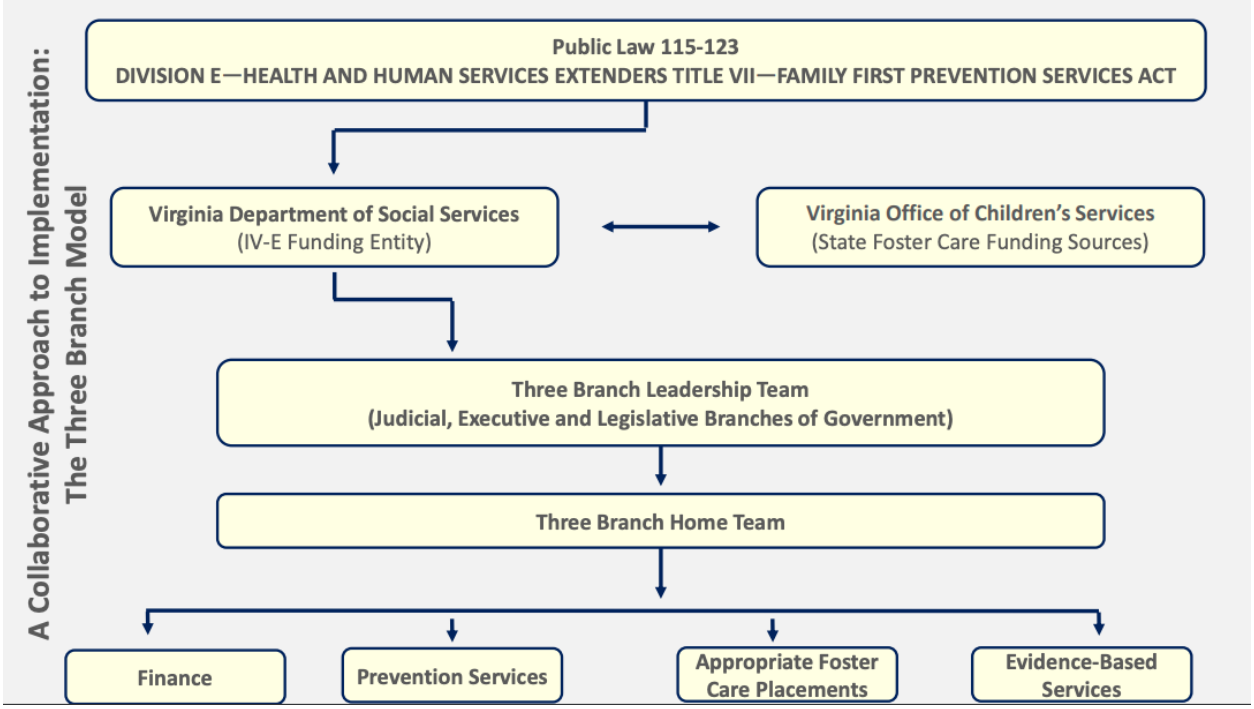
FFPSA Implementation in Virginia

Organizational Structure of Implementation Team

Virginia's child welfare system is made up of a complicated, interconnected network of agencies that provide services to children and families. This network includes the Department of Social Services, Department of Juvenile Justice, Department of Education, Department of Behavioral Health and Developmental Services/Community Services Boards Children's Services Act/Virginia Office of Children's Services, and a vast array of private service providers who receive public funds. Within this network of agencies responsible for serving children, the Department of Social Services (VDSS) is tasked with overseeing the implementation of FFPSA, as they are the agency responsible for Title IV-E funding in the state. VDSS has elected to employ a "Three Branch" model to frame implementation efforts, which brings together members of the legislative, executive, and judicial branches, including stakeholders like advocates and private practitioners. Figure 1 below depicts the organizational structure of the implementation group:

This Three Branch model has been working since mid-2018 to make the decisions necessary to prepare for the effective implementation of FFPSA. Currently, VDSS and the implementation team is operating with the intention to begin implementation at the first available date of October 1, 2019. As depicted above, the Three Branch team has been divided into four primary workgroups, each devoted to an area of FFPSA implementation. The workgroup most applicable to this project is the Evidence-Based Services group, which has been tasked with assisting in the decision-making process necessary to ensuring the availability and accessibility of EBS in Virginia upon implementation of FFPSA.

Figure 1. Virginia FFPSA Implementation Team Organizational Structure



Source: (Ayers, 2018)

EBS Stakeholder Survey Results

As part of the early implementation process, members of the workgroup developed and distributed a survey to examine the current availability of EBS in the state, stakeholder perceptions regarding EBS, current gaps in service availability, and other insights. This survey was administered electronically to over 650 stakeholders throughout the state, including clinicians/service providers, service brokers such as caseworkers, and senior leaders of child-serving agencies and organizations. Senior leaders and brokers were asked specifically about implementation climate in their organizations.

The survey found that there were generally high, positive attitudes towards the use of EBS. However, perceptions of physical aspects of implementation, including educational support and rewards for EBS use, were lower. Similarly, clinicians and service providers were asked about their attitudes and perceptions of EBS and survey findings indicate high, positive attitudes amongst this group, particularly in regard to the appeal of EBS. These results indicate that there

is widespread support for EBS use throughout the state across stakeholders, which is encouraging for implementation of FFPSA.

In addition to the above results, the survey asked all three stakeholder groups about the availability and use of EBS in their organizations and communities. Stakeholders were asked their current use of EBS, and senior leaders were specifically asked about the use of the 31 EBS ranked as Well-Supported by the CEBC. Although more comprehensive, this list included the 6 EBS rated as Well-Supported by CEBC that were selected for initial review by the Administration for Children and Families. The findings of this portion of the survey are included in Table 2 below.

As demonstrated in Table 2, the survey revealed that only 2 of the 6 EBS of interest are currently used in a regular capacity by a majority of respondents. This data is being used by the EBS workgroup to help inform their decision-making process regarding which EBS should be the focus of scale-up efforts leading up to FFPSA implementation.

Table 2. Availability of Well-Supported, Initially Selected EBS in Virginia

EBS Name	# of Senior Leader	Never Heard of It	Heard of It	Don't Offer It, but Available in Community	Have Some Training, or Use It Rarely	Regularly Used at Our Agency
Motivational Interviewing (MI)	59	0 (0.0%)	1 (1.7%)	4 (6.8%)	11 (18.6%)	43 (72.9%)
Multisystemic Therapy (MST)	96	15 (15.6%)	20 (20.8%)	31 (32.3%)	9 (9.4%)	21 (21.9%)
Trauma Focused Cognitive Behavioral Therapy (TF-CBT)	96	1 (1.0%)	8 (8.3%)	13 (13.5%)	14 (14.6%)	60 (62.5%)
Healthy Families America (HFA)	95	41 (43.2%)	20 (21.1%)	20 (21.1%)	6 (6.3%)	8 (8.4%)
Nurse-Family Partnership (NFP)	95	64 (67.4%)	17 (17.9%)	10 (10.5%)	3 (3.2%)	1 (1.1%)
Parent-Child Interaction Therapy (PCIT)	92	31 (33.7%)	31 (33.7%)	10 (10.9%)	13 (14.1%)	7 (7.6%)

*Source: Data drawn from (Jobe-Shields, 2018)

VDSS Legislative Request and General Assembly Action

As part of the implementation process, VDSS put forth a legislative request for funding at the beginning of the most recent Virginia General Assembly legislative session, which occurred between January 9, 2019 and February 23, 2019. The original proposal requested $3,205,750 in total to address three primary areas of FFPSA implementation: EBS startup costs ($851,000), flexible financial assistance for addressing congregate care placements and QRTP requirements ($1,762,500), and startup costs for Evidence-Based Treatment Foster Care ($592,250). As part of this proposal, VDSS indicated that there are already well-established programs functioning in the state, supported by state and federal funds, for the following EBS: Multisystemic Therapy, Healthy Families, and Nurse Family Partnerships (Ayers, 2019). Therefore, VDSS proposed that the $851,000 requested be devoted to the startup costs for expanding Motivational Interviewing (MI), Trauma Focused Cognitive Behavioral Therapy (TF-CBT), and Parent-Child Interaction Therapy (PCIT).

These three EBS were selected primarily due to their applicability to the population that the Virginia child welfare system currently serves and the target population of the FFPSA. MI is a substance abuse treatment primarily serving caregivers of children referred to the child welfare system, although it has been successfully used with adolescents as well (Hettema, Steele, & Miller, 2005). According to the EBS stakeholder survey, MI is the most regularly used EBS among those surveyed. TF-CBT is a mental health treatment targeted at children/adolescents aged 3 to 18 and their parents/caregivers ("Trauma Focused Cognitive Behavioral Therapy," 2016), which represents 74% of the currently served population (Ayers, 2019). TF-CBT is the second most regularly used EBS from the initial list in the state. PCIT is designed to address child behavior problems and increase child social skills for children aged 2 to 7, and improve parenting skills for their parents/caregivers ("Parent-Child Interaction Therapy (PCIT)," 2017), which represents 39% of the currently served population (Ayers, 2019). PCIT has also been shown to reduce the rate of child abuse recidivism among parents with a previous report of abuse (Chaffin et al., 2004). Of the EBS included in the stakeholder survey, PCIT has the second lowest regular usage rate, at only 7.6%. Of note, the EBS workgroup and VDSS has expressed

interest in focusing on providing services to the younger portion of the target population (children 0 to 7 years old) in order to maximize the preventative impact of the services.

Upon conclusion of the General Assembly session, the legislature only fulfilled part of the original VDSS legislative request, allotting $851,000 for the scaling up of EBS (Gilbreath, 2019). Early indications from VDSS are that this limited money will likely be used to address all three primary areas of FFPSA implementation included in the original request, rather than devoting the total to EBS startup cost. This decision indicates that there will likely be need to fund strategies and policies to scale up and expand the availability of EBS beyond this initial funding. Based on this information, as well as current EBS usage rates/availability, the appropriateness/efficacy of the program for the target population, and client preferences, the duration of this project focuses on alternatives to expand the availability of PCIT in Virginia.

Parent-Child Interaction Therapy (PCIT)

What is PCIT?

PCIT is a behavioral intervention for young children with behavioral problems and their parents. It is designed to reduce externalized behavior problems in children, increase child social skills, increase positive parenting behaviors, and improve the overall quality of the parent-child relationship ("Parent-Child Interaction Therapy," 2019). The therapy occurs through coaching sessions in which the therapist observes the interaction between parent and child in a traditional play-therapy setting through either a one-way mirror or live video feed. Therapists then provide coaching on skills used to manage the child's behavior to the parent through an in-ear device that allows for real-time communication ("What is PCIT?," 2018). PCIT is a time-unlimited treatment, meaning sessions can continue until parents demonstrate mastery of outcomes and rate their child's behavior within normal ranges on standardized behavioral assessment. Outcomes can typically be achieved through a course of 12 to 20 weekly, half-hour sessions followed up by a one-hour booster session per month after treatment concludes ("Parent-Child Interaction Therapy," 2019). PCIT has been shown to be effective through an array of rigorous studies at improving child behavior problems, reducing oppositional defiant disorder, and reducing ineffective parenting styles, such as authoritarian parenting and overly harsh parenting. As previously discussed, PCIT has also been shown to be effective at reducing recidivism among parents referred to child welfare systems for abuse (Chaffin et al., 2004), which is one of the target outcomes of FFPSA.

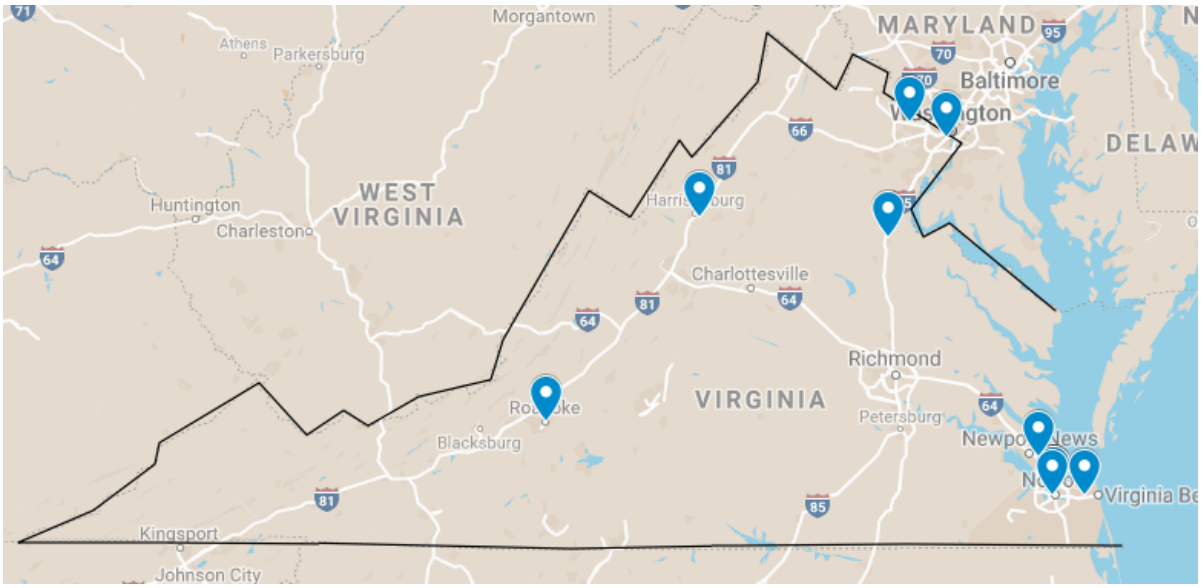
Who Can Practice PCIT and What Are the Training Requirements?

In order to be qualified to become a PCIT Certified Therapist, an individual must have a master's degree or higher in a mental health field and be an independently licensed mental health service provider, or be a psychology doctoral student who has completed the third year of training and is conducting clinical work under the supervision of licensed provider. If these education requirements are satisfied, then an individual must complete Basic Training in PCIT. This

training can be provided in a number of forms, which are fully detailed in **Appendix A**, but generally consists of some combination of 40 hours of face-to-face and online training covering the theoretical and practical components of PCIT with a PCIT International certified Trainer. Following Basic Training, applicants must serve as a therapist for minimum of two PCIT cases that are completed to graduation criteria, during which time the applicant must remain in consultation with a Trainer at least twice a month. In conjunction with this consultation process, the applicant must have their treatment sessions observed and skills reviewed by a certified Trainer to determine mastery of the key skill sets. Detailed competency requirements for these skill sets can be found in **Appendix A** as well. Upon completion of the consultation process, applicants must complete a Certified PCIT Therapist Application either through their trainer or online, complete a review process, and be approved by PCIT International in order to be a Certified PCIT Therapist ("PCIT Certified Therapist Requirements," 2018).

The initial training process typically costs between $3000 and $4000 per individual, with an additional cost of approximately $1,000 for the consultation process, resulting in a total of about $5,000 per certified individual ("Parent-Child Interaction Therapy," 2019). As demonstrated by these numbers and above information, this certification process is time intensive and financially burdensome for many therapists, acting as a significant barrier to entry. As such, the PCIT International website currently lists that there are only 17 Certified PCIT Therapists in the Commonwealth of Virginia. As **Figure 2** depicts below, these therapists are clustered in selected areas throughout the state, with the majority located in the Norfolk/Tidewater region. Among the certified therapists currently in the state, there are none who qualify as Masters or Level II PCIT trainers, which would allow them to train therapists outside of their organizations in PCIT. This lack of certified trainers in the state represents another significant barrier to the dissemination and expansion of PCIT among practitioners in the various child-serving agencies and organizations throughout Virginia.

Figure 2. Current Locations of Certified PCIT Therapists in Virginia

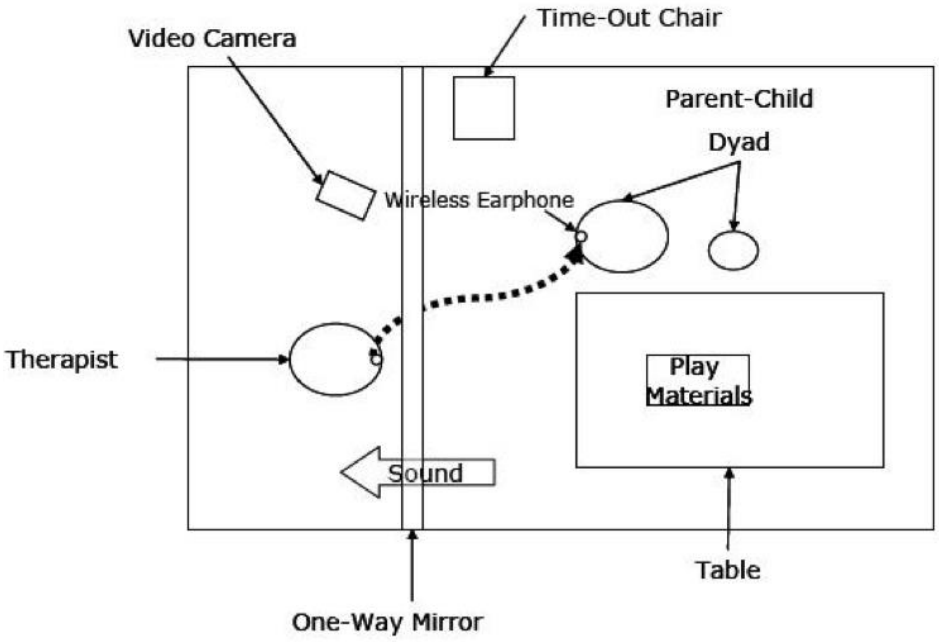


What Are the Other Requirements for PCIT?

In addition to the necessary certification training, there are a number of infrastructure and material requirements necessary to practice PCIT to fidelity. As previously mentioned, conducting PCIT requires the use of either a one-way mirror or live-streaming video equipment. The traditional ideal room set-up is depicted by **Figure 3** below, which employs the use of a one-way mirror to allow therapists to observe parent-child interactions in the treatment room from a separate observation room. In addition to visual observation, a microphone and sound system are required so that therapists are able to audibly observe interactions. An electronic communication device must be used so that therapists may communicate coaching to parents from the observation room. In ideal room set-ups, there is also a smaller, barrier room available to be used for the timeout portions of treatment. In many cases, the availability of such adjoining observation, treatment, and barrier rooms is not feasible. Therefore, alternative arrangements can be made to use video recording equipment with pan-tilt-zoom and live streaming capabilities in nearby rooms. Additionally, in lieu of a barrier room, the treatment room can function as a "swoop-and-go" room from which the parent exits during the timeout portion ("PCIT Room Set-Up," 2018). In addition to the physical infrastructure requirements, PCIT requires a number of

other treatment materials including a physical copy of the protocol, manual, and workbook, a number of specialized reporting documents, PCIT-appropriate toys, storage tubs, and sanitizing materials.

Figure 3. Ideal PCIT Room Set-Up



Source: ("PCIT Room Set-Up," 2018)

Methodology

As demonstrated by the background information presented above, the Commonwealth of Virginia currently possesses a shortage of appropriate EBS that will be eligible for federal reimbursement under the FFPSA. In particular, there are very few providers of PCIT, an EBS that has demonstrated the ability to improve parenting skills and reduce future child abuse among the target population. This shortage is due to a number of barriers to uptake and expansion of PCIT, including high costs of training and certification, a lack of ready access to qualified trainers, and significant physical infrastructure requirements. The following portions of this report serve to put forth and evaluate policy options that Voices may advocate for to facilitate the expansion of PCIT in the state. The goal of these policy alternatives is to increase the number of PCIT providers in Virginia in order to improve access to PCIT services for children and families at risk of entering foster care. The next section presents the evaluative criteria by which the policy alternatives are analyzed, followed by a description of each alternative and evaluation using the aforementioned criteria. This evaluative portion culminates in a recommendation of which alternative to pursue and the report concludes with a discussion of implementation strategies and future considerations.

Evaluative Criteria

The criteria presented below serve as measures used to evaluate the projected outcomes of each of the three proposed policy alternatives put forth in the next section. The criteria have been selected to best evaluate the outcomes that are most relevant to the advocacy efforts of Voices. Comparing the policy alternatives systematically across the same criteria allows for an evidence-based policy recommendation. The goal of the final recommendation is to successfully scale up the availability of PCIT in Virginia to expand access to the service for as many children and families at risk of entering foster care as possible. The criteria are as follows:

1. Total Cost
2. Effectiveness
3. Cost-Effectiveness
4. Political Feasibility
5. Administrative Burden
6. Sustainability
7. Equity

1. Total Cost

The first criteria used to evaluate the proposed policy alternatives is total cost of the alternative. As Voices is primarily an advocacy organization that advocates at the General Assembly level in Virginia, the costs are evaluated in relation to costs incurred by the state if the proposed alternative is pursued. As appropriate, the party responsible for costs is identified in the evaluative discussion of each alternative. Costs are determined through the available literature, conversations with stakeholders, as well as by the use of market rates when appropriate. Major cost categories include costs pertaining to training fees, infrastructure requirements, administrative costs, amongst others. Costs are measured over a 10-year timespan measured in dollars.

2. Effectiveness

Effectiveness is used to project the effect of the proposed policy alternative on the number of additional PCIT providers in the state. Effectiveness is also measured over a 10-year timespan to allow for the realization of potential policy changes. Estimates of effect are based on findings from prior literature, as well as insight garnered from conversations with stakeholders.

3. Cost-Effectiveness

Combining total cost of the alternative and the effectiveness measurement allows for a comparison of the cost-effectiveness across alternatives in terms of cost per new potential PCIT case added. An in-depth cost-effectiveness analysis has been conducted, including a description of assumptions and sensitivity analysis, and the results are summarized in detail in **Appendix B**. Further details about this analysis, including the data, may be accessed through the link included in **Appendix B**.

4. Political Feasibility

The evaluative portion includes an assessment of the political feasibility of the proposed alternatives, as the final recommendation is in the form of an advocacy proposal for one of the alternatives. In order to assess the political feasibility, this project first considers recent legislative action and opinions. It also looks at the partisan composition and attitudes of key members of the General Assembly as appropriate, as informed by discussions with Voices. Additionally, an assessment of support among key members of the FFPSA implementation team is factored in. Rank ordering is used to assess the political feasibility across alternatives.

5. Administrative Burden

For the purposes of evaluation, administrative burden is assessed in terms of the magnitude of the burden relative to the other alternatives. In determining the magnitude of the administrative

burden, a number of components are assessed including staffing availability compared with anticipated need, the potential time requirements associated with administering the program, the complexity of the proposed policy, and the technical capacity for implementation. Similar to political feasibility, a rank ordering system of low, medium, and high is used to compare administrative feasibility between alternatives.

6. Equity

Equity of the proposed alternatives, particularly in relation to equity of PCIT accessibility upon implementation, is an aspect of concern. Equity is assessed primarily in regard to geographic equity. Currently, there is significant inequity in the availability of PCIT. This project assesses the equity of the proposed policies by determining where new services are most likely to be adopted and how that impacts current geographic distributions. A scale of *inequitable*, *equitable*, or *uncertain* will be used to score and compare each alternative.

7. Sustainability

In the child welfare, and social services sector more generally, high staff and practitioner turnover rates are a significant concern. Additionally, previous child welfare system reforms in Virginia revealed that initial implementation efforts in scaling up services do not always equate to continued use of new practices over time. As a result of these factors, previous child welfare reforms have struggled to implement sustainable reform. Therefore, it is important to consider sustainability when evaluating the proposed alternatives in this project, specifically in relation to sustainable availability of PCIT over time. Like administrative burden, sustainability is assessed in relative terms and ranked on a scale of low, medium, and high amongst the alternatives.

Policy Alternatives

As Virginia moves closer to the implementation date for the FFPSA, stakeholders, advocates, and legislators must consider strategies to scale up the availability and accessibility of qualifying EBS throughout the state. In particular, they must consider alternatives to expanding the availability of PCIT, which is currently limited in magnitude and geographic distribution in Virginia. The primary barriers to PCIT expansion in the state include high startup costs pertaining to the certification process, lack of accessible trainers, and significant physical infrastructure requirements. The policy alternatives presented below are designed to address these barriers and enhance PCIT availability in Virginia.

Alternative 1: Allow DBHDS Training Efforts to Continue Unassisted

The Virginia Department of Behavioral Health and Developmental Services (DBHDS) is a crucial part of the child welfare system in the state and plays an important role in working to expand and improve Virginia's systems of care for children and youth. DBHDS' current focus in this work is to expand the array and capacity of base levels services for children including crisis response services, case management and intensive care coordination, in-home services, and psychiatric services ("Systems of Care," 2018). The goal of this work shares a common objective with FFPSA: to expand the type and capacity of services accessible to children and youth in order to improve child outcomes across a continuum of indicators. In accordance with DBHDS' work on improving systems of care, the agency was awarded a Systems of Care Expansion and Sustainability Grant from the U.S. Substance Abuse and Mental Health Services Administration to help fund this initiative ("Grant Awards by State," 2016).

Recently, DBHDS has announced their intention to devote a portion of this funding to be used in training a cohort of new PCIT therapists in the state. DBHDS will be partnering with the Center for Child and Family Health (CCFH) at Duke University to provide the training in both Richmond, Virginia and Durham, NC. The agency is still in the planning portion of this project, but their initial intent is to train up to 18 new therapists in PCIT over the next year. An initial

cohort of 12 practitioners will be selected to undergo training sessions occurring within the next six months, with the anticipation that 6 additional practitioners will be selected to travel to Duke to complete training at a later date. In conjunction with the training provided to therapists in order to become PCIT certified, DBHDS plans to train a number of senior leaders from the organizations selected to participate as a means of providing implementation support.

As mentioned, DBHDS is working with the CCFH at Duke University to provide the training. In addition to providing the training and consultation services necessary for PCIT Certification, the CCFH is also assisting in the application and selection process to select qualified therapists to receive the training. The CCFH will be responsible for reviewing applications and completing site visits to assess the readiness of therapists' offices in regard to the physical requirements of PCIT. DBHDS and the CCFH will be focusing on selecting candidates they believe to be most ready to begin delivering PCIT services immediately upon completion of the PCIT training process. DBHDS anticipates that their initial selection of applicants will focus on providers from the 40 state-funded Community Service Boards (CSBs), and that the initial cohort of 12 therapists will likely be selected from up to 6 separate agencies. DBHDS will be providing the training at no cost to agencies; however, DBHDS will not be providing any funding related to travel or to the infrastructure requirements associated with PCIT.

This alternative proposes allowing this plan to provide training through DBHDS to proceed with no additional action. As currently formulated, this alternative would result in the certification of up 18 new PCIT therapists in the state, which would approximately double the number of current providers. From initial estimates, these new practitioners would most likely be located in up to 6 of the 40 CSBs across the state, although the locations are still unknown.

Evaluation

1. Cost

The total cost for this alternative were calculated based on the current budgetary appropriations from the Department of Behavioral Health and Developmental Services. The primary costs

associated with this program include face-to-face training fees, follow-up fees for consultation and video review, and the primary administrative costs of conducting the training. The costs for this program will be incurred primarily by DBHDS and the department has currently allotted **$91,715** in their budget for this program. Allowing this program to go forth without further intervention would require no additional expenditure.

2. Effectiveness

The DBHDS training program will train a cohort of 12 new therapists in the Richmond, VA area and an additional 6 therapists at the Center for Child and Family Health at Duke University for a total of 18 new PCIT practitioners. With an estimated caseload of 20 PCIT cases per week and an average treatment duration of 15 weeks per case, this program will result in a discounted benefit of approximately **10,110 cases** over a 10-year period. This represents an approximate doubling of the current PCIT caseload capacity in Virginia.

3. Cost-Effectiveness

Based on the total present value of costs and potential caseload capacity calculated for this alternative, the DBHDS program will spend approximately **$9.07** for every new PCIT case.

4. Political Feasibility

The DBHDS training program has already been approved by the agency and implementation is currently ongoing. Allowing this program to continue without further intervention will not require additional legislative or bureaucratic action and is therefore considered **high** in politically feasibility.

5. Administrative Burden

As previously mentioned, administrative burden is assessed in relative terms across each alternative. DBHDS is currently in the process of implementing this program and does not

anticipate the need to bring in any additional staff beyond their current resources to assist with the program. Many of the technical aspects of the program, including application development and review, the training itself, and fidelity monitoring will be carried out in conjunction with the Center for Child and Family Health at Duke. This reduces some of the potential administrative burden on DBHDS staff, although project managers and program administrators are necessary to oversee program implementation. Due to a combination of the above factors, as well as the substantial progress already made towards administering this program, allowing the DBHDS program to continue unassisted has a **low** administrative burden.

6. Sustainability

This alternative is a one-time training program with no current plans for additional cohorts to receive training in future years. Without additional training cohorts, in conjunction with high turnover rates within the child welfare service sector, it is likely that the PCIT caseload capacity gains made this program will not persist at the same level over time. Therefore, the sustainability of this alternative is **low**.

7. Equity

Although the participants in both the Richmond and Duke training cohorts have yet to be selected, DBHDS anticipates selecting applicants who demonstrate that their agency already has the physical infrastructure in place in order to practice PCIT upon therapist training. This limits the number of potentially qualifying applicants and will likely result in the selection of applicants from agencies that already have at least one practicing PCIT therapist. This limits the potential for increasing the geographic distribution of PCIT providers in the state and, therefore, this alternative is considered **low** in terms of equity.

Alternative 2: Establish and Subsidize PCIT Certified Trainers in Virginia

As discussed in the PCIT section above, training of individuals in PCIT must be completed by a PCIT International certified trainer. There are currently three levels of trainers recognized by

PCIT International: Master, Level 2, and Level 1. A Master level trainer is qualified to train any clinician meeting the requirements for PCIT training in national and international mental health delivery systems, as well as any Level 1 or Level 2 certified trainer. Level 2 trainers are able to conduct training and consultation of qualified clinicians within regional delivery systems, which are typically designated as states or metropolitan areas. Level 2 trainers may also train Level 1 trainers within their geographic region. Level 1 trainers are certified PCIT practitioners who have received additional training which allows them to teach and supervise therapists at their own program or agency, limited to the physical location ("Certified PCIT Trainers," 2018).

While there are currently 17 certified PCIT practitioners in Virginia, PCIT International does not recognize any Level 2 or Master level trainers in the state. The nearest trainers eligible to provide training to interested and qualified therapists in Virginia are located at the Center for Child and Family Health at Duke University in North Carolina and West Virginia University in Morgantown, WV. Furthermore, the organization only identifies two Level I trainers in the state, located at Shenandoah Psychological Services in Harrisonburg and the Children's Hospital of the King's Daughter in Norfolk ("Certified PCIT Trainers," 2018). This information indicates that there is a significant lack of access to certified PCIT trainers in the state. This alternative proposes establishing an application program to incentivize the use of the "train-the-trainers" model in order to expand access to PCIT training in Virginia.

Under this alternative, Voices would advocate for the provision of funds to establish an application-based program that will select candidates to receive training to become PCIT certified trainers. Through this initiative, Voices will seek dedicated funds in order to establish an annual training program for Level 1 trainers. This program will select 5 candidates to be trained as Level 1 trainers each year for a duration of 5 years. In order to qualify for Level 1 training, a practitioner must already be certified in PCIT and have conducted at least 4 cases to successful completion. Therefore, the magnitude and duration of this program is based on current PCIT capacity in the state, anticipated addition of practitioners, and conversations with Master trainers regarding feasibility and practitioner eligibility.

This program would be administered through the Division of Family Services of VDSS, which is the lead division of VDSS in FFPSA implementation. The training necessary under this program will need to be provided by either a Master trainer or Level 2 trainer in accordance with PCIT International. Due to the current lack of such trainers in the state, this program will require contracting with a Master trainer outside the state. The trainers from the Center for Child and Family Health at Duke University are likely the most accessible and have experience working within the Virginia system as a result providing training in other service models through DBHDS in the past. Additionally, this program would prioritize applicants who plan to practice in geographically underserved areas in the state, particularly those who would practice in either of the two DSS service regions that currently have no PCIT practitioners.

This alternative focuses on Level 1 trainers as a means of increasing sustainability and institutional knowledge in relatively efficient manner. Level 1 training is a standardized process that requires 8 additional hours of face-to-face training, followed up by approximately a year of at least monthly consultation calls with their trainer. Level 2 trainer certification is a much less standardized and much longer process, typically taking about 6 to 7 years of one-on-one consultation and work with a Master trainer. Additionally, costs for Level 2 training are largely unknown and quite variable based on individual situations. Therefore, focusing on Level 1 training represents a more feasible and efficient program. Through this alternative, the accessibility of PCIT training would be significantly improved in the state. This would remove one of the largest barriers to PCIT expansion and facilitate the adoption of PCIT by qualified therapists throughout Virginia.

Evaluation

1. Cost

As the DBHDS training program will occur regardless of additional action, other costs evaluated are considered as incremental costs in addition to the DBHDS program. Costs for this alternative primarily include the one-day, face-to-face training session necessary for a previously certified PCIT therapist to become certified as a Level 1 trainer. This cost is estimated at $1700 per

therapist. With a program duration of five years and 5 therapists trained per year, total present value of costs is estimated at **$43,351.68** over 10 years.

2. Effectiveness

This alternative assumes that each certified Level 1 trainer is able to oversee the training of an additional 2 therapists within their organization annually. The assumption of an average weekly caseload of 20 PCIT cases and an average treatment duration of 15 weeks is maintained in this alternative as well. Under these assumptions, it is projected that the present value of additional PCIT caseload capacity over 10 years is **18,455 cases**.

3. Cost-Effectiveness

Based on the total present value of costs and potential caseload capacity calculated for this alternative, this program would require spending **$2.35** for every new PCIT case.

4. Political Feasibility

In the past legislative sessions, the Virginia General Assembly demonstrated support for scaling up evidence-based services, including PCIT, by appropriating $851,000 towards such efforts. Implementation of this alternative would require either dedicating a portion of these funds to the program or additional monetary appropriations from the Virginia General Assembly in the next session. Based on this previous legislative support, in conjunction with the relative cost effectiveness of this program, this alternative has **medium** politically feasible.

5. Administrative Burden

Administering this program will require staff effort and oversight within VDSS in order to develop and implement the application-based program. Staff will be needed to develop the application, contract with trainers, and organize the training process. Additionally, VDSS staff will need to coordinate with DBHDS program staff in order to streamline the candidate selection

process from the pool of PCIT certified practitioners. Once the face-to-face training is complete, little further administrative action from VDSS will be necessary and current technical capacity should be sufficient for implementation. Therefore, this program is considered to have a **medium** administrative burden.

6. Sustainability

One of the most attractive features of this alternative is the inherent sustainability in the train-the-trainer model. As this program functions over time, the number of trainers and, in turn, PCIT practitioners compounds and significantly increases caseload. Additionally, certifying Level 1 trainers within organizations works mitigate the issue of high turnover within child welfare agencies by ensuring organizational capacity to train new practitioners. Therefore, this alternative is **highly sustainable**.

7. Equity

In conjunction with the DBHDS training program, the train-the-trainer model has the potential to expand the availability of PCIT providers throughout the state, particularly if applicants from geographically underprovided areas are given preference in the selection process. This serves to increase equitable availability of PCIT by increasing overall PCIT capacity. However, in order to qualify to be trained as a Level 1 Trainer, a therapist must already be certified in, and practicing, PCIT. This requirement limits the applicant pool and reduces the potential of this alternative to expand PCIT availability into areas where there is currently no capacity. Therefore, this alternative can be considered somewhat equitable in the short-term, ranking as **medium** for the purposes of this evaluation.

Alternative 3: Create a Grant Program Dedicated to Infrastructure Requirements

A third alternative to consider is to advocate for the establishment of a grant program dedicated to funding the physical infrastructure needs associated with PCIT. As depicted in the PCIT description above, there are a number of significant physical requirements associated with

practicing PCIT to fidelity. The most significant of these requirements is the need to have either side-by-side rooms with a one-way mirror between them or a sophisticated camera system that allows for live streaming and remote control of the camera. In addition to these requirements, PCIT practitioners must also possess a communication system that allows them to speak in real time with the parents undergoing treatment, as well as PCIT appropriate toys for play therapy and a number of administrative materials. This alternative focuses on the costs associated with the live streaming video room design, as its likely more feasible for most agencies. According to estimates from PCIT International, market rates, and conversations with current practitioners, the costs associated with the equipment, modifications, and materials necessary are typically between $5,000 and $6,000 ("Parent-Child Interaction Therapy," 2019).

Based on findings from the literature and discussions with stakeholders regarding PCIT implementation, the physical space requirement and costs associated with necessary modifications are some of the most significant barriers to adoption of PCIT by individual practitioners. This alternative proposes the use of state funds through a grant program to alleviate this financial burden on practitioners as a means of reducing this barrier to adoption. Similar to the second alternative, this grant program would be administered by the Office of Family Services within VDSS, but would entail advocacy efforts by Voices to secure the necessary funding from the General Assembly to finance the grant program and related administrative expenses.

In developing the grant application, considerations of the geographic location and population served by the applicant should be strongly considered. In addition, the applicant should demonstrate that they are committed to practicing PCIT once this barrier is removed through grant funding, i.e. a demonstrated commitment to, or enrollment in, a future training program for PCIT. This alternative is distinct in that it does not provide state funds for PCIT training costs and rather focuses on alleviating an initial barrier to provider adoption of PCIT. Through this alternative, a primary barrier to PCIT adoption is removed for qualifying practitioners, incentivizing more widespread adoption of the practice.

Evaluation

1. Cost

One of the biggest challenges in analyzing this alternative is determining the potential scope of the subsidy program without data on the demonstrated need for such subsidies. Therefore, this analysis evaluated the costs associated with fully equipping and setting up one PCIT room per year over the course of 10 years. This analysis evaluates the costs associated with the video streaming style of PCIT room design, as opposed to one-way mirror design, as this option is more widely feasible in terms of space requirements. The total cost for setting up one such PCIT room in 2019 is approximately $5,766, which includes required PCIT documentation materials, audio visual equipment, installation materials, and labor. The total present value setting up one room per year for 10 years is estimated at **$46,263.97**.

2. Effectiveness

Due to the lack of available data, quantifying the outcomes of this alternative is particularly difficult. From the literature and stakeholder insight, it is apparent that the cost of the physical infrastructure requirements of PCIT is a significant barrier to adopting the practice. Removing this barrier has the potential to increase practitioner adoption of PCIT, particularly in resource constrained agencies and geographically underserved areas. However, additional barriers may still exist, including the costs associated with training and PCIT certification. Due to these remaining barriers, the effectiveness of this alternative is considered **low**.

3. Cost-Effectiveness

Without the ability to accurately quantify the outcomes of this alternative, a cost-effectiveness ratio cannot be calculated. Therefore, break-even analysis was utilized to determine what level of effectiveness would be necessary for this alternative to be at least as cost-effective as the train-the-trainers model. This break-even analysis revealed that the infrastructure subsidy program

would need to produce an increased caseload capacity of at least **19,695 new cases** over a 10 years period to be at least as cost-effective as the train-the-trainers model.

4. Political Feasibility

Cost and cost effectiveness are important considerations in political feasibility. Although the total cost of this alternative is relatively small in the scope of overall state spending, it is anticipated that this alternative is less cost-effective than the train-the-trainer model. The uncertainty surrounding the potential outcomes of this alternative also detracts from its political feasibility, as demonstrable evidence of effectiveness has grown as an important consideration for many legislators. Additionally, the anticipated administrative burden of this alternative is relatively high. Therefore, the relative political feasibility of the infrastructure subsidy program is considered **low**.

5. Administrative Burden

Similar to the second alternative, this alternative would require VDSS staff to establish, implement, and administer the application-based program. In addition to these initial administrative requirements, this alternative would also require significant oversight in terms of sight visits and approval of room design. This oversight would likely require travel for sight visits, as well as the potential addition of staff with the necessary technical expertise to review and approve PCIT room setup. This additional administrative requirement represents a significantly larger burden compared to the other alternatives and may require the acquisition of additional staff members to fulfill the needed technical roles. Therefore, the administrative burden of this alternative is **high** in comparison to the other alternatives.

6. Sustainability

This alternative proposes awarding the subsidies for infrastructure needs on annual basis over the next 10 years. The duration of this alternative helps to ensure that the potential for growth of PCIT caseload capacity continues over time as additional agencies and therapists are awarded the

subsidies. However, this alternative does little to address the issue of practitioner retention, as it is possible that PCIT practitioners may leave the agency or organization that had previously received the subsidy at any point. If the PCIT practitioner leaves, the room may possible sit dormant or underused. Therefore, this alternative is assessed as **medium** in terms of relative sustainability.

7. Equity

This alternative seeks to remove one of the significant cost barriers associated with adopting PCIT amongst practitioners. Removing such a barrier has the potential to encourage previously resource-constrained agencies and therapists to consider practicing PCIT. This alternative may be particularly effective in lower socioeconomic portions of the state, which often overlap with the geographically underserved areas of the state. Additionally, the application process in this alternative would emphasis the selection of potential providers from underserved areas. Therefore, this option is considered **high** in terms of equity.

Summary Outcomes Matrix

Policy Alternative	Cost	Effectiveness	Cost-Effectiveness	Political Feasibility	Administrative Burden	Sustainability	Equity
Allow DBHDS Training Efforts to Continue Unassisted	$91,715.00	Medium (~10,110 new cases)	$9.07/new case	High	Low	Low	Low
Establish and Subsidize PCIT Certified Trainers in Virginia	$43,351.68	High (~18,455 new cases)	$2.35/new case	Medium	Medium	High	Medium
Create a Grant Program Dedicated to Infrastructure Requirements	$46,263.97	Low	Crossover Requirement= ~19,695 new cases	Low	High	Medium	High

Recommendation

I recommend that Voices for Virginia's Children choose to pursue *Alternative 2: Establish and Subsidize PCIT Certified Trainers in Virginia*, in conjunction with the ongoing DBHDS training efforts. In order to reach this conclusion, I evaluated the three alternatives across seven criteria: total cost, effectiveness, cost effectiveness, political feasibility, administrative burden, sustainability, and equity. The results of this analysis are summarized in the outcomes matrix included above. As the matrix demonstrates, Alternative 2 had the lowest total cost, highest projected effectiveness, best cost-effectiveness ratio, and best sustainability rating. Additionally, it ranked in the middle of the other two alternatives across the remaining three criteria: political feasibility, administrative burden, and equity. Pursuing Alternative 2, in conjunction with the ongoing DBHDS training efforts, will serve to significantly increase the caseload capacity for PCIT in Virginia in a cost-effective and sustainable manner.

Alternative 1, Allowing DBHDS Training Efforts to Continue Unassisted, is not recommended primarily due to low ratings in terms of sustainability and equity. While these training efforts will serve to approximately double the current PCIT caseload capacity in the state, it is essentially a one-time shot with limited potential for sustainability. The child welfare system is plagued by high rates of turnover, particularly among child and family facing providers. The current DBHDS training efforts do not provide a mechanism to expand institutional knowledge and training capacity to help combat this over and maximize sustainability of PCIT provision. Additionally, candidates eligible for this training must demonstrate readiness for immediate provision, which essentially limits eligibility to organizations that already have approved PCIT rooms. This requirement reduces this alternatives ability to address the current geographic inequities in PCIT availability.

Alternative 3, A Grant Program Dedicated to Infrastructure Requirements, is not recommended primarily due to costs and lack of clear understanding of the potential need and possible effectiveness. While the literature and stakeholder opinions demonstrate that the costs associated with the necessary infrastructure modifications are a significant barrier, there is simply no data regarding the potential interest in, or need for, such funds amongst potential providers in

Virginia. Additionally, administering such a program would require extensive effort from VDSS employees and may be significantly costly. Such certainty also hinders political feasibility, as legislators and implementers often desire clear projections of outcomes before allocating funds to such a project. Therefore, this alternative is not recommended at this time.

Alternative 2 represents the best means of establishing a sustainable model of PCIT provision in a relatively cost-effective manner throughout Virginia. Therefore, **I recommend that Voices for Virginia's Children pursue advocacy efforts directed at securing funding to establish and subsidize PCIT certified trainers in Virginia. This program, in conjunction with the DBHDS training, has the potential to increase PCIT caseload capacity by nearly 18, 455 cases over 10 years at a cost of approximately $2.35 per case.** Suggestions regarding these efforts, implementing the program, and considerations for potential future actions are discussed in the next section.

Implementation Strategies and Future Considerations

Administrating and Funding the Program

As outlined in the alternative, it is anticipated that the application program will be administered and overseen by the Division of Family Services with VDSS, as this is division tasked with implementing FFPSA. I recommend that Voices for Virginia's Children initially advocate within this DFS-led Family First implementation team to build support for this program. Part of this advocacy effort may be directed at securing a portion of the legislatively awarded funds to be dedicated to the initial implementation of this program. Recent polling of the Three Branch implementation team revealed support among the group for devoting a portion of the appropriated $851,000 to scaling up PCIT in particular. However, this funding must be spent by year end; therefore, it will be necessary to advocate for additional funding for the duration of the training program, likely in the form of a dedicated appropriation from the General Assembly in the next legislative session.

As part of the Family First implementation assistance granted by the General Assembly, VDSS anticipates adding up to six employees. The addition of these employees represents an opportunity to advocate for dedicated staff for the train-the-trainer program. Administering the program would not require a full-time staff member, but including this program as part of the outlined responsibilities of one of these new hires would be beneficial to the sustainability of the program. While this decision ultimately rests with VDSS, Voices may advocate and advise VDSS to consider such a provision during the hiring process.

Advocating for, and implementing, this program will require close coordination with both the Family First implementation team within DSS and the DBHDS team in charge of the ongoing PCIT training effort. As discussed, the DBHDS program is anticipated to train up to 18 new practitioners over the next 18 months or so. This cohort will likely serve as one of the primary applicant pools for the first few years of the train-the-trainers program. DBHDS is currently contracting with PCIT trainers from the CCFH at Duke University to provide this initial training.

Contracting with the same group to provide the Level 1 Trainer certification would allow for better integration and continuity of training. This group is led by Dr. Robin Gurwitch, who is responsible for training many of the current PCIT providers in the state and is one of the leading experts on PCIT training and implementation. I advise that Voices advocate for the continued use of Dr. Gurwitch and her team in implementing this alternative.

Medicaid Reimbursement Considerations for PCIT

Traditionally, Medicaid has been the primary funding source of PCIT. Despite the additional expenditures involved in standing up PCIT and the time-intensive process of delivering the service, PCIT is typically billed at the same rate as other outpatient mental health treatments ("Parent-Child Interaction Therapy," 2019). This lack of specialized reimbursement rate for PCIT can serve as a disincentive not only to the initial standing up of PCIT, but also to electing to actually deliver the service once a therapist is certified in PCIT, due to the additional reporting and administrative requirements associated with the service. While the FFPSA creates a new funding stream separate from Medicaid for prevention services like PCIT, Medicaid still serves as an important policy lever in considering incentivizing expansion of PCIT in Virginia. A higher rate of reimbursement through one of the primary funders like Medicaid will serve to reduce the financial burden of undertaking the initial startup costs associated with PCIT for providers, and will more appropriately reimburse providers for the additional administrative requirements associated with PCIT. Therefore, in conjunction with the above recommendation, I advise Voices for Virginia's Children to pursue opportunities to advocate for enhanced Medicaid reimbursement for PCIT in the future.

Sustainability Strategies and Considerations

One of the major themes in the literature on implementing EBS dealt with the need for institutional and senior leader support throughout implementation. The PCIT training team from the CCFH at Duke University works to build this support by incorporating senior leaders from each practitioner's agency during their initial training program. These senior leaders are taught

the basics of PCIT and strategies for assisting and supporting therapists in the provision of the therapy, at no additional cost to the agencies. When contracting with this group to provide Level 1 Trainer certification, I advise requesting they incorporate aspects of their senior leader portion in the training process. Bringing senior leaders into this process will help ensure both greater practice fidelity and sustainability over time.

While the DBHDS training program is one-time shot at expanding PCIT capacity, the subsidized train-the-trainers program is a longer-term strategy focused on maximizing sustainability of PCIT provision in the state. This project focuses on incentivizing the certification of Level 1 Trainers specifically due to the current capacity of PCIT providers in Virginia. In the long run, the sustainability of PCIT can be further enhanced by the certification of one or more Level 2 trainers in Virginia. Such a Level 2 trainer would be authorized to conduct initial PCIT trainings throughout the state without the physical organization limitations placed on Level 1 trainers. However, the certification process for Level 2 is significantly more arduous and lengthy than Level 1 training, and there are currently no eligible candidates in the state. In the future, Voices should advocate that VDSS work to identify potential candidates for Level 2 training and encourage the potential recruitment of currently certified Level 2 trainers from outside the state to help maximize sustainability.

Equity Considerations

In conjunction with the DBHDS training, this program has the potential to improve the current inequitable distribution of PCIT providers, but will require explicit provisions in the application process in order to have the greatest impact. Currently, PCIT is largely unavailable in the Central and Western DSS service regions, while most practitioners are located in the Northern and Eastern regions. As the train-the-trainer program is implemented and the application process developed, priority should be given to providers who currently serve, or plan to serve, regions with lower provider availability. However, the ability of this program to fully address this equity issue is limited, as only those who are already certified in PCIT may become Level 1 trainers, thereby limiting the potential applicant pool. Voices should advocate that DBHDS explicitly consider geographic location during their selection of applicants for initial training, in

conjunction with the implementation of the train-the-trainers program, in order to maximize the likelihood that current geographic inequity may be improved.

Data Needs and Uncertainty

One of the most significant challenges in conducting this analysis was a lack of thorough, available data in a number of areas. In particular, there is still little data available on specific provider needs related to EBS and PCIT specifically. Going forward, better data may be gathered or provided that will allow for better insight into provider needs. This data may give greater motivation to Alternative 3 if there is a demonstrated need among a substantial portion of qualified providers for such infrastructure funding. If such data is found, Voices may consider advocating for the implementation of Alternative 3 in combination with the ongoing train-the-trainers program. A combination of these programs has the potential to further expand capacity, but would require the procurement of significantly more funds.

In addition to a lack of data on provider needs, there is little information available regarding potential administrative costs. As discussed in the evaluative portion of each alternative above, we are able to estimate and project the relative magnitude of the administrative burden across the alternatives, but the uncertainty around specific administrative cost projections was too large to make accurate estimates. Based on projections of administrative burden, variation in administrative cost is not expected to change the recommended alternative. However, administrative costs should be tracked upon implementation of the program and decisions to continue the program should consider whether the addition of administrative costs significantly alters the cost-effectiveness ratio of the program.

Further Considerations and Future Program Evaluation

The policy alternatives presented in this analysis are focused on expanding the availability of PCIT; however, increasing availability does not necessarily guarantee greater utilization of the service. As the implementation of Family First continues in the coming years, many decisions will be made and actions will be taken that have the potential to significantly impact the

utilization of PCIT. Of these decisions and actions, considerations of referral protocols and guidance to service brokers, like case managers, will be an important aspect of determining how many children and families can actually be served by PCIT. Through their role in the Three Branch team, Voices should advise VDSS and other stakeholders to consider these protocols and advocate for the collection of data regarding referral and utilization rates of PCIT.

Additionally, this program should be reevaluated in the future using retrospective analysis to determine the extent to which it is meeting its goals. This retrospective analysis should look to assess whether the caseload capacity of PCIT has expanded on par with the projections established in this analysis, as well as the rates at which children and families actually complete PCIT treatment. As the ultimate goal of this program, and the FFPSA in general, is to prevent the need for foster care amongst at-risk children and families, the future analysis should also seek to measure the rates at which children and families who receive PCIT services are being diverted from foster care placements. The results of this future evaluation will allow for an evidence-based decision regarding whether the appropriation of funds to this program should be continued or diverted to other programs.

Appendix A

Training Requirements for Certification as a PCIT Therapist

These requirements were developed by the PCIT International Training Task Force in collaboration with the PCIT International Board of Directors. This document should be considered "dynamic" in that the training and certification requirements will evolve as new research arises in intervention, training, and dissemination. Currently, there are several formats used in training therapists to deliver PCIT effectively with adherence to its essential elements. These training requirements reflect the minimum training necessary within any of these formats to develop competence as a PCIT Therapist using the 2011 PCIT Protocol (Eyberg & Funderburk, 2011).

I. Definition

Certified PCIT Therapists are individuals who have received appropriate and sufficient PCIT training to be qualified to provide PCIT services to children and families.

II. Training Requirements for Certified PCIT Therapists.

In order to apply for certification as a PCIT therapist, therapists must document applicable graduate education, basic PCIT training, and consultation training which includes completing two cases as described below.

A. Graduate Education.

1. Have a master's degree or higher, or an international equivalent of a master's degree, in a mental health field

AND

2. Be an independently licensed mental health service provider (for example, licensed psychologist, psychiatrist, licensed marital and family therapist, licensed practicing counselor, licensed clinical social worker, etc.) or be working under the supervision of a licensed mental health service provider.

OR

1. Be a psychology doctoral student who has completed the third year of training and be conducting clinical work under the supervision of a licensed mental health service provider.

2. **Special Note Concerning Timing of Training:** Students may receive PCIT training before completion of their master's degrees. However, they cannot be certified as PCIT therapists until their master's degree is complete or until they have completed the third year of their doctoral training.

B. Basic Training. To apply for status as a Certified PCIT Therapist, an applicant must demonstrate appropriate Basic Training, as evidenced by:

1. 40-hours of face-to-face training with a PCIT Level II or Master Trainer that includes an overview of the theoretical foundations of PCIT, DPICS coding practice, case observations, and coaching with families, with a focus on mastery of CDI and PDI skills, and a review of the 2011 PCIT Protocol. The 40 hours of training may be conducted via didactic training, a mentorship model, or any combination of the two. PCIT training is ideally offered over a period of time rather than limited to one timepoint, for example CDI training at one time, followed by PDI training at a later date.

OR

2. 10 hours of online training from a program endorsed by PCIT International and 30 hours of face-to-face contact with a PCIT Level II or Master Trainer. Online training must be supplemented with skills review from a PCIT Trainer. Therefore, the 30 hours of face-to-face training may be conducted in didactic training, a mentorship model, or any combination of the two. This training will include an overview of the theoretical foundations of PCIT, DPICS coding practice, case observations, and coaching with families, with a focus on mastery of CDI and PDI skills, and a review of the 2011 PCIT Protocol.

OR

3. 40 hours of PCIT training with a PCIT International Level 1 Trainer using a combination of didactic training and live co-therapy and supervision. Training from a PCIT Level 1 Trainer must include a minimum of 20 hours of co-therapy and/or live case supervision and continue until the trainee meets CDI and PDI coaching competencies. Video review or phone consultation cannot be used in lieu of the co-therapy or live-supervision requirements. This training will include an overview of the theoretical foundations of PCIT, DPICS coding practice, case observations, and coaching with families, with a focus on mastery of CDI and PDI skills, and a review of the 2011 PCIT Protocol.

C. Consultation Training.

1. Until the two PCIT cases meet graduation criteria, the applicant must remain in contact via real-time consultation (e.g., telephone conference or live, online, or telehealth observation) or video review with feedback with a certified PCIT Trainer at least twice a month.

2. The applicant must serve as a therapist for a minimum of two PCIT cases to graduation criteria as defined by the 2011 PCIT Protocol. At least one of the cases must be conducted with the applicant as the primary therapist (e.g., lead therapist or equal co-therapist).

D. Skill Review

Applicants must have their treatment sessions observed by a certified PCIT Trainer. Observations may be conducted in real time (e.g., live or online/telehealth) or through video recording. Level I Trainers can only use video review after trainees have met competencies in CDI and PDI (see B.3. above).

1. To demonstrate skill development, the applicant's competence will be observed by a PCIT Trainer in the following sessions conducted by the applicant:
    a. CDI Teach
    b. PDI Teach
    c. CDI Coach
    d. PDI Coach

2. The PCIT Trainer will review these sessions and determine whether the applicant has demonstrated mastery of each skillset; as such, the applicant must be prepared to provide additional session observations as necessary to document adequate skill.

III. Therapist Competency Requirements

A. Assessment Skills. By the end of the training process, the applicant should be able to:

1. Administer, score, and interpret the required standardized measures for use in assessment and treatment planning. (Required measures: Eyberg Child Behavior Inventory (ECBI); Recommended measures: Therapy Attitude Inventory (TAI), Parenting Stress Index-Short Form (PSI-SF), Sutter-Eyberg Student Behavior Inventory-Revised (SESBI-R), and Behavior Assessment Scale for Children (BASC) or Child Behavior Checklist (CBCL)

2. Administer behavioral observations from the DPICS-IV Coding System.

3. Achieve a minimum of 80% agreement with a PCIT Trainer using the DPICS-IV during 5minutes of either live coding or continuous coding with a criterion video recording.

B. CDI-Related Therapist Skills. By the end of the training process, an applicant should be able to:

1. Conduct the CDI Teach session, adequately explaining all items on the treatment integrity checklist in the 2011 PCIT Protocol as observed by the PCIT Trainer.

2. Meet the parent criteria for CDI skills (10 labeled praises, 10 behavioral descriptions, 10 reflections; 3 or fewer negative talks, questions, plus commands) in a 5-minute interaction with a child or a 5-minute role-play with an adult portraying a child.

3. Demonstrate for the PCIT Trainer how to determine the coaching goals for a CDI session by interpreting the DPICS-IV data from the CDI Progress Record.

C. PDI-Related Therapist Skills. By the end of the training process, an applicant should be able to:

1. Present the PDI Teach Session, adequately explaining all items on the treatment integrity checklist in the 2011 PCIT Protocol as observed by the PCIT Trainer.

2. Effectively manage a PDI Coach session and accurately demonstrate the discipline sequence with a child in treatment. In the case when a full discipline sequence does not occur or cannot be video recorded, the applicant must demonstrate the skills through video role-play.

3. Demonstrate the ability to explain the discipline procedure in concise, developmentally appropriate terms to a child (or ability to coach a parent through this).

4. Accurately explain the House Rules procedure as described in the 2011 PCIT Protocol. Accuracy can be assessed through role-play, and does not require observation of an actual session.

5. Accurately explain the Public Behaviors procedure as described in the 2011 PCIT Protocol. Accuracy can be assessed through role-play, and does not require observation of an actual session.

D. General Coaching Skills

1. By the end of the training process, an applicant is expected to demonstrate adequate and sensitive coaching as observed by the PCIT Trainer.

2. By the end of the training process, an applicant is expected to model CDI skills during all interactions with parents and children throughout the treatment.

IV. Application Requirements

A. Upon completion of Consultation Training, an applicant for Certified PCIT Therapist status must complete the Certified PCIT Therapist Application (available from PCIT International Certified Trainers or at www.pcit.org.)

B. Following acceptance of the Certified PCIT Therapist Application, the applicant must successfully complete the PCIT Certification Experience which reviews concepts covered in Basic and Continuation Training (available at www.pcit.org).

C. Final decisions about certification of PCIT Therapists will be made by PCIT International.

V. Responsibilities of Certified PCIT Therapists

A. Use the 2011 PCIT Protocol and 2013 Clinical Manual for DPICS-IV as disseminated by PCIT International.
B. Remain current in PCIT research by activities such as attending conferences, reading research or practice articles for continuing education credit, or conducting research.

C. Certified PCIT Therapists are required to obtain at least 3 hours of PCIT Continuing Education credit every 2 years through educational activities sponsored by the PCIT International Task Force on Continuing Education. PCIT International is an APA-approved CE sponsor and provides continuing PCIT education through its online educational and conference programming.

VI. Maintaining Certification

A. Certification Period. Therapists are certified for 2 years from the beginning date on their Certified PCIT Therapist Certificate.

B. Re-Certification. Certification as a PCIT Therapist is renewable every 2 years. To renew, Certified PCIT Therapists must submit a brief application for re-certification and document successful completion of 3 hours of PCIT Continuing Education in programs of learning that have been preauthorized by PCIT International. The Certification Experience is required only for the initial certification application.

Appendix B

Summary of Cost-Effectiveness Analysis

In order to assist in my evaluation, I conducted a cost effectiveness analysis to compare alternatives. The outcome of interest is increased PCIT capacity, as measured by the number of new potential cases. As the DBHDS training functions as a baseline, this analysis examines the incremental costs above this baseline of the other two alternatives.

Identification of Costs and Benefits

The costs associated with the DBHDS training program include the following:

- Cost of Face-to-Face Training sessions
- Cost of PCIT Materials (specialized documentation and manuals)
- Cost of Training Consultation Calls
- Cost of Video Session Review
- Cost of Required Continuing Education Units
- Cost of Implementation Support from CCFH
- Cost of Trainer Travel
- Cost of Space Rental, Lunch, and Administrative Fees (incorporated into DBHDS' previous workforce development contract with Virginia Tech)
- Cost of DBHDS Administration and Oversight (project overseen by Program Specialist)

In regard to the second alternative of funding a train-the-trainer model, the costs are as follows:

- Cost of One Day Level 1 Trainer Face-to-Face training
- Cost of Consultation Calls
- Cost of Video Session Review
- Cost of Program Administration through Department of Social Services

The costs associated with the subsidies for start-up infrastructure costs are as follows:

- Cost of Required PCIT Manuals and Documents
- Cost of PCIT Appropriate Toys for play portion of therapy
- Cost of Eyberg Child Behavior Inventory Materials
- Cost of In-Ear Communication Device
- Cost of Audio Equipment/Speaker System
- Cost of Video Recording Device
- Cost of Pan-Tilt-Zoom Camera
- Cost of Monitor with Built-In Audio
- Cost of Mounting and Control Systems
- Cost of Audio-Visual Equipment Installation
- Cost of Program Administration through Department of Social Services

As previously mentioned, the primary benefit of all of these alternatives is increased PCIT caseload capacity in the state. The true outcome of interest is children prevented from entering the foster care system; however, this outcome is very difficult to estimate and is influenced by a number of other potential confounding factors. Therefore, the use of an instrument to measure the impact of these alternatives is necessary. Caseload capacity represents an appropriate instrument for measuring the impact of the alternatives as it is the direct result of the potential policy changes and gets as close as possible to measuring the outcome of interest.

Valuation and Tabulation of Costs and Benefits

The valuation of costs in this analysis is done primarily through the use of monetary prices as dictated by the market and published by PCIT International and practicing PCIT professionals. Specifically, the market rates for training were provided by the Master PCIT trainers out of CCFH at Duke, which is the most likely group to provide training and materials to therapists in Virginia. Cost estimates for specialized PCIT materials and audiovisual equipment were derived from market prices as provided by PCIT International, as well as from established PCIT programs in other states. In many cases, PCIT Master level trainers offer bundled pricing for training programs that include the cost of face-to-face training, consultation calls, video review, and necessary PCIT documentation and materials. When possible, this bundled pricing has been

broken down to cost out each of the components separately. For the DBHDS training program, the majority of cost estimates were provided by the project lead within the department and the values are based on the department's current budget allocations for the specified categories of costs.

All dollar values are presented in 2018 dollars and a discount rate of 7.00% was selected to account for differences in present and future value, as 7.00% is approximately the average of private return on capital investment in the United States. Physical benefits, in terms of increased caseload potential, have been discounted to account for differences in present and future value of physical benefits, although this outcome measure is not monetized in this analysis. The third alternative, physical infrastructure subsidies, proved especially difficult in terms of projecting potential outcomes due to significant uncertainties in regard to the number of potential applicants and subsidy recipients, as well as uncertain administrative costs. Therefore, a total cost per room set-up was calculated based on current estimates and breakeven analysis is used to determine how effective the program would need to be in order to be recommended. Administrative costs, in general, remain largely uncertain across all three alternatives, and have therefore been excluded from the initial analysis. The impact of administrative costs is further discussed in the sensitivity analysis portion.

Specific costs of individual components of each alternative can be provided upon request, along with the spreadsheet containing the in-depth analysis. **Table 1** below depicts the annual costs and benefits of the alternatives, as well as the cost effectiveness ratios and results of the breakeven analysis. The fully detailed cost-effectiveness analysis, complete with assumptions and data, is available through the following link: .Cost-Effectiveness Analysis Spreadsheet

Table 1. Costs and Outcomes of Alternatives to Expand PCIT Availability

	DBHDS Program		Train the Trainers		Infrastructure Subsidies	
Year	Costs	# of New Cases	Costs	# of New Cases	Cost Per Room	Breakeven # of Cases/Room
0	$ 91,715.00	1260	$ 8,500.00	0.00	$ 5,766.00	2454.56
1	0.00	1177.57	$ 7,943.93	654.21	$ 5,388.79	2293.99
2	0.00	1100.53	$ 7,424.23	1222.81	$ 5,036.25	2143.91
3	0.00	1028.54	$ 6,938.53	1714.23	$ 4,706.77	2003.66
4	0.00	961.25	$ 6,484.61	2136.11	$ 4,398.85	1872.58
5	0.00	898.36	$ 6,060.38	2495.45	$ 4,111.08	1750.07
6	0.00	839.59	0.00	2332.20	$ 3,842.13	1635.58
7	0.00	784.66	0.00	2179.62	$ 3,590.78	1528.58
8	0.00	733.33	0.00	2037.03	$ 3,355.86	1428.58
9	0.00	685.36	0.00	1903.77	$ 3,136.32	1335.12
10	0.00	640.52	0.00	1779.22	$ 2,931.14	1247.78
Total	$ 91,715.00	10109.71	43351.68	18454.65	46263.97	19694.40
Cost Effectiveness Ratio	9.07		2.349			

Upon completing this analysis, I found that the DBHDS training program will result in an increased PCIT capacity of nearly 10,101 cases at a total of cost of $91,750 over the next ten years. This program will result in the capacity of one new PCIT case for every $9.07 spent. The train-the-trainer model may result in a total increased capacity of nearly 18,455 PCIT cases in addition to the DBHDS model, at a ratio of one case for every $2.35 spent above the DBHDS amount. In order for the physical infrastructure alternative to be at least as effective as the train-the-trainer model, the alternative must result in an increased capacity of at least 19,694 PCIT cases over the next ten years.

Recommendation

The findings of this cost-effectiveness analysis support my recommendation that Voices for Virginia's Children advocate for funds to establish the train-the-trainer program. The DBHDS training program will occur regardless of Voices' action and has the potential to nearly double the current PCIT caseload capacity in the state. Building off of this program, the train-the-trainer program represents a highly cost-effective option of building even greater capacity. The DBHDS program has a cost effectiveness ratio of 9.07, compared to a ratio of 2.349 for the train-the-

trainers program. This demonstrates that the train-the-trainers program has the potential to vastly increase caseload capacity at a relatively low cost. The physical infrastructure subsidies would need to increase capacity by more than 1,240 cases compared to the train-the-trainers model over the same period of time to be at least as cost-effective. Due to the substantial uncertainty about the impact of the subsidies on caseload capacity, and the impressive cost-effectiveness ratio, the train-the-trainer alternative is recommended.

Sensitivity Analysis and Uncertainty

Due to the substantial differences in cost-effectiveness ratio between the baseline DBHDS training program, the relatively small amounts of money involved, and higher level of confidence in the majority of original cost estimates, sensitivity analysis did not reveal a likely scenario in which the recommendation of policy alternative would change. Summarized results of the sensitivity analysis are included below and more details are available in the spreadsheet linked above.

One important variable that was tested in the sensitivity analysis was discount rate. The original discount rate selected was 7.00%. When testing at discounts rates of 3.00% and 5.00%, the cost-effectiveness ratio of the Train-the-Trainers program remained significantly lower than allowing the DBHDS training to continue unassisted. At each of these levels, the Infrastructure Subsidies alternative would have to result in an even greater number of cases per room in order to be at least as effective as Train-the-Trainers, which is infeasible.

When looking at other important assumptions, there are not many in which significant variability can be expected, as most are fairly standardized by PCIT International and Master trainers. One potential variable in the Train-the-Trainers alternative is the annual trainee capacity of each trainer. The original assumption was a capacity of 2 trainees per year. Testing the sensitivity of this assumption at levels of 1 and 3 annual trainees still produced low cost-effectiveness ratios of 3.022 and 1.921, respectively. At a capacity of 1 annual trainee, the Infrastructure Subsidies would need to result in ~15,307 total cases per room over 10 years, which is still relatively infeasible.

In regard to the Infrastructure Subsidies alternative, many of the individual technological components can vary significantly in price. The original analysis assumed a mean price for each component to compute an average total cost per room of $5,766 in 2019, which would result in the need for ~19,694 total cases over 10 years to be as cost-effective as Train-the-Trainers. When using the lower end of the range of costs for a total room cost of $4,291, the crossover requirement falls to ~14,656 total cases. Using the upper end of the range, room cost would be $7,341 and the crossover requirement would rise to ~25,074 cases. Even at the lower range of costs, this total number of cases per room seems relatively infeasible based on annual trainer capacity and would not alter the recommendation.

One variable that contains vast uncertainty is administrative costs. Projecting the potential administrative costs in terms of a monetary estimate would require more guesswork than estimation and, therefore, these costs were excluded from the initial analysis. However, the relative administrative burden can be assessed in relative terms as follows: DBHDS Training program= Low, Train-the-Trainers=Medium, and Infrastructure Subsidies=High. In addition, the crossover requirement technique can be applied here to determine what level of administrative costs would result in a different recommendation. Due to the already estimated higher costs and anticipated high administrative burden of the Infrastructure Subsidy program, it is excluded from this analysis. Holding the cost-effectiveness ratio constant for the DBHDS Training program, which excludes any additional administrative costs, the Train-the-Trainers program would have to incur a total administrative cost of more than $167,383.66 to be less cost-effective. As this total is approximately four times the total costs of all other components of the program, and we can anticipate at least some additional cost associated with administrating the DBHDS program, we can assume that these administrative costs are somewhat unrealistic. If administrative costs do exceed this level, further consideration should be given to operating the Train-the-Trainer program.

References

Aarons, G. A., & Palinkas, L. A. (2007). Implementation of Evidence-based Practice in Child Welfare: Service Provider Perspectives. *Administration and Policy in Mental Health and Mental Health Services Research*, *34*(4), 411–419. https://doi.org/10.1007/s10488-007-0121-3

Ayers, C. (2018, November). *Family First Prevention Services Act and Implementation Updates*. Presented at the Virginia Commission on Youth. Retrieved from http://vcoy.virginia.gov/FFPSA%20Overview%20Commission%20on%20Youth%2011-20-18.pdf

Ayers, C. (2019). *Family First Prevention Services Act Legislative Request*.

Barth, R. P. (2002). *Institutions vs. Foster Homes: The Empirical Base for the Second Century of Debate* (p. 40). Retrieved from School of Social Work, Jordan Institute for Families website: http://ssw.unc.edu/jif/events/GroupCare.pdf

Barth, R. P. (2008). The Move to Evidence-Based Practice: How Well Does it Fit Child Welfare Services? *Journal of Public Child Welfare*, *2*(2), 145–171. https://doi.org/10.1080/15548730802312537

Buchanan, V. *Family First Prevention Services Act of 2017*. , Pub. L. No. H.R. 253 (2017).

Certified PCIT Trainers. (2018). Retrieved March 11, 2019, from PCIT International website: http://www.pcit.org/find-a-trainer.html

Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., … Bonner, B. L. (2004). Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology*, *72*(3), 500–510. https://doi.org/10.1037/0022-006X.72.3.500

Child Welfare Information Gateway. (2014). *In-Home Services in Child Welfare* (p. 13). Retrieved from U.S. Department of Health and Human Services, Children's Bureau website: https://www.childwelfare.gov/pubs/issue-briefs/inhome-services/

Family First Prevention Services Act (FFPSA). (2018, May 15). Retrieved March 1, 2019, from National Conference of State Legislatures website: http://www.ncsl.org/research/human-services/family-first-prevention-services-act-ffpsa.aspx

Gilbreath, A. (2019, February 25). Big Year for Foster Care Reform: 2019 Legislative Wrap Up. Retrieved March 10, 2019, from Voices for Virginia's Kids website: https://vakids.org/our-news/blog/big-year-for-foster-care-reform-2019-legislative-wrap-up

Grant Awards by State [Text]. (2016). Retrieved March 11, 2019, from Substance Abuse and Mental Health Services Administration website: https://www.samhsa.gov/grants/awards/2016/SM-16-009

Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational Interviewing. *Annual Review of Clinical Psychology*, *1*(1), 91–111. https://doi.org/10.1146/annurev.clinpsy.1.102803.143833

Jobe-Shields, L. (2018). *EBPs in Virginia Child Welfare: Preliminary Results from Stakeholder Survey*.

Kavanagh, M. (2018, October 27). Experts: Opioid crisis puts strain on Virginia foster care system. Retrieved March 7, 2019, from WTKR.com website: https://wtkr.com/2018/10/27/experts-opioid-crisis-puts-strain-on-virginia-foster-care-system/

Kessler, M. L., Gira, E., & Poertner, J. (2005). Moving Best Practice to Evidence-Based Practice in Child Welfare. *Families in Society*, *86*(2), 244–250. https://doi.org/10.1606/1044-3894.2459

Parent-Child Interaction Therapy. (2019). Retrieved March 10, 2019, from Blueprints for Healthy Youth Development website: https://www.blueprintsprograms.org/factsheet/parent-child-interaction-therapy

Parent-Child Interaction Therapy (PCIT). (2017, July). Retrieved from The California Evidence-Based Clearinghouse for Child Welfare website: http://www.cebc4cw.org/program/parent-child-interaction-therapy/

PCIT Certified Therapist Requirements. (2018, January 25). Retrieved March 10, 2019, from PCIT International website: http://www.pcit.org/therapist-requirements.html

PCIT Room Set-Up. (2018). Retrieved March 10, 2019, from PCIT International website: http://www.pcit.org/pcit-room-set-up.html

Radel, L., Baldwin, M., Crouse, G., Ghertner, R., & Waters, A. (2018). *Substance Use, the Opioid Epidemic, and the Child Welfare System: Key Findings from a Mixed Methods Study* (p. 9). Retrieved from U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation website: https://aspe.hhs.gov/pdf-report/substance-use-opioid-epidemic-and-child-welfare-system-key-findings-mixed-methods-study

Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *BMJ*, *312*(7023), 71–72. https://doi.org/10.1136/bmj.312.7023.71

Schneider, K. M., & Phares, V. (2005). Coping With Parental Loss Because of Termination of Parental Rights. (Cover Story). *Child Welfare*, *84*(6), 819–842. (ehh:19549504).

Shatzkin, K. (2015). *Every Kid Needs A Family* [Kids Count Policy Report]. Retrieved from The Annie E. Casey Foundation website: http://www.aecf.org/m/resourcedoc/aecf-EveryKidNeedsAFamily-2015.pdf

Sprow, S. (2018). Family First Prevention Services Act 2018 - Detailed Summary. Retrieved March 8, 2019, from Children's Defense Fund website: https://www.childrensdefense.org/wp-content/uploads/2018/08/family-first-detailed-summary.pdf

Stroul, B. A., & Friedman, R. M. (1986). *A System of Care for Severely Emotionally Disturbed Children & Youth*. Retrieved from CASSP Technical Assistance Center, Georgetown University Child Development Center website: https://eric.ed.gov/?id=ED330167

Systems of Care. (2018). Retrieved March 11, 2019, from Virginia Department of Behavioral Health and Developmental Services website: http://www.dbhds.virginia.gov/developmental-services/children-and-families/system-of-care

Title IV-E Prevention Services Clearinghouse, 2018 - 2023. (2018). Retrieved March 8, 2019, from Office of Planning, Research & Evaluation | ACF website: https://www.acf.hhs.gov/opre/research/project/title-iv-e-prevention-services-clearinghouse

Trauma Focused Cognitive Behavioral Therapy. (2016, April). Retrieved March 10, 2019, from The California Evidence-Based Clearinghouse for Child Welfare website: http://www.cebc4cw.org/program/trauma-focused-cognitive-behavioral-therapy/

U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2019). *Child Maltreatment 2017*. Retrieved from https://www.acf.hhs.gov/cb/research-data-technology/ statistics-research/child-maltreatment.

Virginia Department of Social Services. (2018a). *CPS Fact Sheet SFY 2018*. Retrieved from http://www.dss.virginia.gov/files/about/reports/children/cps/all_other/2018/CPS_Fact_Sheet_SFY_18__2.pdf

Virginia Department of Social Services. (2018b). *Substance Exposed Infant Counts*. Retrieved from http://www.dss.virginia.gov/geninfo/reports/children/cps/all_other.cgi

What is PCIT? (2018). Retrieved January 31, 2019, from PCIT International website: http://www.pcit.org/what-is-pcit.html