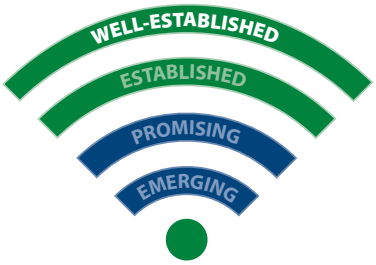

The Smart Start Resource Guide of Evidence-Based and Evidence-Informed Programs and Practices

Smart Start™

A Summary of Evidence

The Smart Start Resource Guide of Evidence-Based and Evidence-Informed Programs and Practices

A Summary of Research Evidence

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Dear Local Partnerships:

Smart Start continually strives for excellence. When the North Carolina legislature introduced the requirement for Smart Start funds to go toward evidence-based and evidence-informed (EB/EI) activities, our system was presented with a new opportunity to re-examine how we dedicate our funds, continuing to reach for excellence.

The North Carolina Partnership for Children, Inc. (NCPC) worked with the Smoky Mountain Research Institute to develop this resource guide. Their research expertise, experience with the realities of community implementation, and patience with the collaborative writing process were invaluable. Several local partnerships provided input into the development of the guide and, for each program included, model experts were consulted. We are deeply grateful for the assistance and expertise offered so generously. The guide compiles the evidence for many key Smart Start funded activities including early care and education quality initiatives, child care subsidy, family support, early literacy, and health initiatives. It also provides the evidence for program coordination, evaluation, and outreach, common across nearly all partnerships. A summary of the programs and practices included in this document is included in Appendix A titled *Programs and Practices At-A-Glance.*

We recognize that some local partnerships currently fund activities that are not in this resource guide. Appendix B titled, *Evaluating the Evidence for Smart Start Programs and Practices: Technical Guide,* found at the back of this document, offers a step-by-step approach to assist partnerships in locating their own evidence and establishing their initiative as EB/EI. In these cases, we also encourage local partnerships to compare their activity to one in the guide and carefully consider how the activity clearly meets the EB/EI definition.

We hope you find this resource guide useful. We look forward to working with local partnerships to develop additional resources that continue to encourage the Smart Start community to learn from one another and to strive for excellence on behalf of the children and families we serve.

Stephanie Fanjul
President
The North Carolina Partnership for Children, Inc.

INTRODUCTION

Why Evidence-Based and Evidence-Informed Practices Are Important

Across the nation there is an increasing focus on the use of evidence-based practices.[1] This movement is across federal agencies such as the Substance Abuse and Mental Health Services Administration (SAMHSA),[2] and the Department of Education,[3] as well as across various fields such as medicine, mental health, and early childhood[4-6]. Research and practice in the field of early childhood are growing to help professionals provide the best services possible to produce real change.

Smart Start and The North Carolina Partnership for Children, Inc. (NCPC) are also focusing on evidence-based and evidence-informed (EB/EI) practices. This approach ensures the Smart Start system strives to meet its vision and mission while taking seriously its role as steward of public funds.

> Vision: *Every child reaches his or her potential and is prepared for success in a global community.*
>
> Mission: *To advance a high quality, comprehensive, accountable system of care and education for every child beginning with a healthy birth.*

For Smart Start to achieve this vision and mission, it is important to strategically fund activities and programs that are most likely to have positive outcomes for the early childhood system, young children, and their families. The first step in this process is to identify activities and programs with research evidence suggesting a greater likelihood they will have the intended positive effect. Such efforts will likely yield greater results from our public investments.

Definitions of Evidence-Based and Evidence-Informed Programs/Practices

The use of evidence-based or evidence-informed practices was mandated by the North Carolina legislation in 2011 for programs that operate using Smart Start funds. The North Carolina General Assembly passed legislation in *Sections 10.5(k) and 1.5(m)* that provides guidance for employing evidence-based and evidence-informed practices. Using this guidance and input from a variety of organizations, The North Carolina Partnership for Children Inc.'s Board of Directors adopted definitions of evidence-based and evidence-informed practices to guide the work of local partnerships.

The following are the definitions that were passed by the Board:

- Evidence-based programs or practices are those that have repeatedly and consistently demonstrated desirable outcomes through application of scientific research methods (replicated experimental, experimental, and quasi experimental).
- An evidence-informed practice is one that is guided by child development theory, and practitioner wisdom, and qualitative studies, and findings from basic research and has written guidelines, and a strong logic model, and a history of demonstrating positive results. They may be rated "Promising" or "Emerging" by at least one source that rates evidence-based programs.

Purpose of the Guide

This guide is intended to provide the research evidence for programs and practices most commonly funded by Smart Start partnerships and primary evidence-based early childhood programs.

The guide has two primary purposes:

- To assist local partnerships with assuring that programs and practices commonly supported in communities are based on research evidence showing a history of positive results. Evidence shared here meets the partnerships' requirement for research evidence for the activities and programs included in the guide.
- To provide guidance in evaluating the research for programs and practices that are not included, and a process for assuring Smart Start's definitions of "evidence-based" and "evidence-informed" are met. North Carolina enjoys great diversity among regions and communities. Often the strategies included in this guide will match a community's needs and capacities, but NCPC recognizes there are exceptions. Innovation based on research is a very desirable aspect of continuing to improve the field's ability to support families and young children's optimal development.

Although this is not a "how-to" guide for doing community planning and systems building, program development, program implementation, and evaluation, these are essential elements for successful services. Partnerships could do a disservice to children and families if they simply select a program from this guide and decide to implement it without a thoughtful, inclusive planning, implementation, and evaluation process.

This is the initial Smart Start Resource Guide and is intended as a foundational document for future additional resources and on-going shared learning. Feedback from partnerships will inform future work.

Our Approach

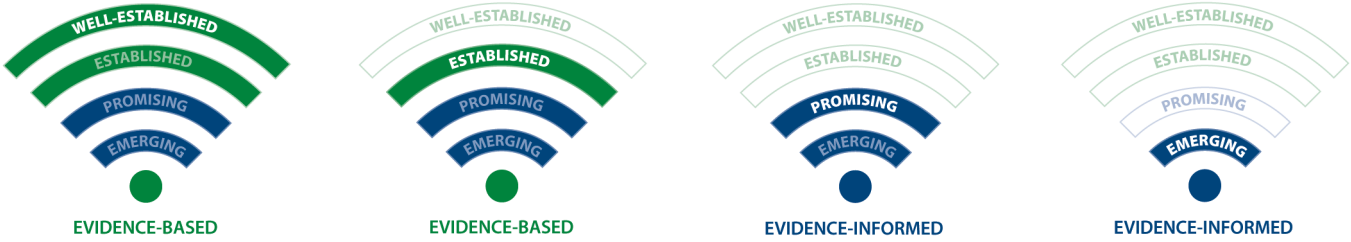
The Smart Start system currently funds many different activities and programs across the state. Some are consistent across counties while others are unique to a particular partnership. This Resource Guide largely targets those activities that multiple partnerships implement or may consider implementing.

Smoky Mountain Research Institute (SMRI) conducted systematic searches of the research literature to identify articles and reports related to the commonly funded Smart Start activities. This is by no means a complete review of all evidence-based and evidence-informed early childhood programs and practices, but rather an initial review focusing on more commonly funded practices. The intent is to revise the Resource Guide in the future to remain current with new research and field practices. The NCPC definitions for EB/EI were used to determine if the level of research evidence for a particular program or practice indicated it was evidence-based or evidence-informed. This guidebook includes activities and programs that meet the evidence requirement of the Smart Start definitions of EB/EI. Note that activities with a level of evidence suggesting evidence-informed must also have strong logic models and "written" guidelines (not provided here) to meet the EI definition. For activities including multiple strategies or programs, each strategy needs to have documented evidence. More information about the determination process is available in Appendix B, *Evaluating the Evidence for Smart Start Program and Practices: Technical Guide.*

There are varying levels of evidence within these broad definitions. NCPC and SMRI worked together to establish four levels of evidence on which to rate each activity. This resulted in two categories for evidence-based and two for evidence-informed. The categories include:

- ***Evidence-Based: Well-Established*** Programs and practices that had strong evidence of their effectiveness across multiple studies. Generally a systematic review or meta-analysis was conducted that included studies with experimental or quasi-experimental designs.
- ***Evidence-Based: Established*** Programs and practices that had at least three studies using an experimental or quasi-experimental design that found evidence of their effectiveness.
- ***Evidence-Informed: Promising*** Evidence-informed programs and practices that had at least one study that compared the effectiveness of the intervention for people who participated in the program and those who did not participate. The level of evidence suggests the intervention would qualify as evidence-informed as long as a strong logic model and "written" guidelines exist.
- ***Evidence-Informed: Emerging*** Evidence-informed programs and practices that had only preliminary data with no comparison group. The level of evidence suggests the intervention would qualify as evidence-informed as long as a strong logic model and "written" guidelines exist.

The following icons are used throughout the text to denote the level of evidence for a program or activity:



How the Guide Is Organized

- The Introduction chapter includes background information for the remaining chapters.
- The Guide is organized by categories of services and service supports. Major categories include program support activities, early care and education, early literacy, family support, and health.
- Within each category, programs and practices are listed in order of strength of research evidence.
- Each category and each program or practice are prepared so they can be pulled out of the document and can stand-alone to be used to assist in program planning.
- The "Research Evidence" table for each program/practice shows the outcomes shown to be positively impacted. This can be helpful in matching a strategy with the result that is targeted by your community.

The Appendices provide additional tools—technical information about evaluating research evidence, a process for determining if programs or practices are evidence-informed, a "quick glance" comparison of the research evidence for strategies and definitions for some of the research terms found in this document.

Essential Program Support Activities: Program Coordination, Evaluation, and Outreach

In order to successfully implement programs and practices to achieve the intended outcome for young children, more than a strong evidence base is required. Smart Start funds two vital activities to support successful services called program coordination/evaluation, and outreach, information, and resources. **Program coordination and evaluation** comprises quality improvement and quality assurance activities including data collection and information management, monitoring, evaluation, technical assistance, and training to support effective implementation of programs and strategies. Model fidelity, defined as implementing a program in accordance with the researched program design, is critical to achieve intended results. Program coordination and evaluation can support components of implementation with model fidelity.[7-9] **Outreach, information and resources** are strategies to build awareness of early childhood development and resources, to strengthen leadership and relationships that increase cooperation, and resources and activities to improve access to and quality and efficiency of services and outcomes for young children.

These two program support activities make common sense as fundamental ingredients for successful community implementation of services. In Smart Start, these activities, combined with proven programs and practices, represent systems building work. Research on systems building lends research evidence to the effectiveness of these two activities, with the systems building components described in the research directly correlating to program coordination and evaluation, and to outreach, information, and resources. Systems building is an area we will be working together to further define in the Smart Start network of partnerships.

What Is Meant by Systems Building and Why Is It Important?

*Systems Building "*refers to building a new system or working to improve an existing system that is fragmented, informal or missing key pieces."[10] System change processes and initiatives include a number of components and practices that, taken together, are designed to improve the ways in which programs, professionals, families, and community members "work together" to improve services to children and families. Coffman[11] describes systems change initiatives as including one or more of the following areas: (1) the *context* in which political will is designed to change or improve systems development, (2) the *key components and practices* of high-quality and high-performing programs, services, or interventions, (3) the *connections* that are made between key players to integrate and align different service programs and organizations, (4) the *infrastructure* changes necessary to achieve systems change, and (5) taking the systems change to *scale* so that it is broadly implemented in a targeted area (e.g., local partnership).[11]

Research Evidence — Systems Building

Four of the five Coffman[11] areas have been the focus of systematic investigation (components, connections, infrastructure, going to scale) for which either quantitative or qualitative evidence is available to support the use of specific types of system change practices and activities to achieve desired outcomes, impacts, and consequences. Both Durlak and DuPre[12] and Fixsen et al.[13], as part of their reviews of research on systems change implementation, found that *specificity* in terms of the goals, practices, activities, and expected outcomes of a systems change initiative were necessary but not sufficient for the initiatives to be successful, and that *monitoring* implementation to ensure it occurs

with fidelity increased the likelihood that systems change was in fact achieved. Fidelity refers to the implementation of a systems change initiative as planned.[14]

As part of Durlak and DuPre's[12] review of more than 500 studies of implementation interventions, they found that a number of factors emerged as important in terms of explaining successful systems change implementation outcomes. These are shown in the accompanying table, where findings from several different research reviews and syntheses are used to show which factors have been found to be evidence-based components and practices of systems change initiative.[13-16] The 10 practices or components of systems change that have been found to be associated with improvements in services to children and families are:

- A positive working climate among systems change partners;
- shared vision among key players;
- shared decision making among key players;
- agreed upon goals for the systems change initiative;
- specification of the practices and activities that are used to produce systems change;
- an understanding of the manner in which different programs and organizations will be interconnected to achieve agreed-upon goals;
- open and frequent communication between partners;
- specification of the outcomes the systems change initiative is expected to produce;
- the provision of training and technical assistance to all systems change partners; and
- frequent and ongoing monitoring of the systems change practices and activities used to produce change.

These 10 evidence-based components of systems change reflect the fundamental work of the Smart Start service system support activities, namely outreach, information, and resources; and program coordination and evaluation. See the table below for a crosswalk between each of the evidence-based systems change components and the Smart Start activity that implements each component.

Factors Associated with Building Early Childhood Services Systems Implementation Initiatives

	System change practices									
Research evidence	Positive working climate	Shared vision	Shared decision making	Agreed-upon goals	Specific activities (components)	Between program connections	Open/frequent communications	Defined outcomes	Training/ technical assistance	Monitoring change
Durlak & DuPre (2008)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fixsen et al. (2005)		✓		✓	✓	✓		✓	✓	✓
Bruner et al. (2001)	✓	✓		✓	✓		✓	✓	✓	✓
Wandersman (2008)			✓		✓	✓		✓		✓

Crosswalk Between Smart Start Service System Support Activities and Key Factors with Evidence Shown To Be Associated with Successful Systems Change Implementation Initiatives

	System change practices									
Smart Start System Support Activity	Positive working climate	Shared vision	Shared decision making	Agreed-upon goals	Specific activities (components)	Between program connections	Open/frequent communications	Defined outcomes	Training/ technical assistance	Monitoring change
Outreach/Information Resources	✓	✓	✓	✓		✓	✓			
Program Coordination	✓		✓	✓	✓	✓	✓	✓	✓	
Evaluation				✓				✓	✓	✓

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EARLY CARE and EDUCATION

Introduction

Research has established the long-term, positive outcomes of high-quality early childhood interventions both for individual program models and system-wide initiatives, such as Smart Start.[1, 2] There is a strong body of research on the components that are important for high-quality early care and education, such as group size, teacher-child ratio, and quality of instruction. Many of the specific program strategies used by Smart Start and other professionals across the nation are aimed at promoting and supporting these high-quality program components. The strategies are usually provided in combination and more research that controls for, or teases apart, these specific strategies is needed.

This chapter identifies common strategies employed by local Partnerships aimed at improving the quality of early care and education and ensuring access for families. These strategies do not operate in isolation and are intended to be integrated with one another as part of a comprehensive system. Current research indicates that a broad range of professional development activities and supports are necessary to increase the quality of early care and education.[3]

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Program Quality

Technical Assistance

Technical Assistance is defined as "the provision of targeted and customized support by a professional(s) with subject matter and adult learning knowledge and skill to develop and strengthen processes, knowledge application, or implementation of service by recipients."[1] This includes consultation/coaching and mentoring. The goals of technical assistance are to provide the following: 1) individualized information and 2) personalized skill building opportunities in order to enhance child care providers' abilities to support the growth and development of young children.

Technical assistance includes mentoring and consultation/coaching which are described below, followed by two common Smart Start consultation/coaching models: Child Care Health Consultation and the Pyramid Model.

Mentoring

Goals:

The goals of mentoring are the following: 1) to enhance the mentee's skills and knowledge and 2) to increase the individual's professional capacity.

Theory of Change:

One approach to enhancing an individual's professional capacity is having a mentor. The mentor is a more experienced individual who is in a similar professional role as the mentee. The mentor uses a relationship-based process to provide guidance and support based on his or her experience in a similar role to the less-experienced mentee.

Practice Features:

Mentoring pairs a new or less experienced EC professional with a peer in the same role, but who has a great deal more experience. The ideal match between a mentor and mentee is one that is agreed upon by both parties since establishing and maintaining a positive, trusting, and respectful relationship is one of the most important features of the mentoring process.[1] The process is enhanced by establishing role clarity, setting goals, and having both planned contacts and unplanned contacts when needed by the mentee. The duration of this process in ongoing and should build on previous learning. Mentoring programs offer new EC professionals a practical and supportive way to learn and grow on the job. For experienced professionals, mentoring programs create an opportunity to advance their own skills, knowledge and career goals.

Target Audience:

Early care and education professionals

Research Evidence:

Research evidence regarding mentoring was found in three meta-analyses[2-4] and two individual studies that examined child care more specifically. In an analysis examining the benefits of mentoring in 43 studies, Allen and her colleagues found that mentoring had a positive effect on protégé satisfaction with career and current job and positively impacted promotions.[2] Kammeyer-Mueller and Judge[3] in a meta-analysis of 120 studies found career satisfaction and job performance were impacted. Ng and his colleagues[4] found that mentorship was positively related to the level of career satisfaction of the protégé.

Fiene (2002) conducted a study that randomly assigned child care programs to two groups; one group received mentoring and one group did not. This study showed that mentoring helped teachers improve quality of the care they were providing and promoted a feeling of professionalism.[5] In addition, a 2007 study found that in 15 child care programs where mentoring of staff and directors occurred, there were improvements in teacher-child interaction.[6]

Research Evidence for Mentoring

Research evidence	Career satisfaction	Job satisfaction or feeling of professionalism	Job promotion	Job performance	Quality of child care	Quality of teacher-child interaction
Allen et al. (2004)	✓	✓	✓			
Kammeyer-Mueller & Judge (2008)	✓			✓		
Ng et al. (2005)	✓					
Fiene 2002		✓			✓	
Korkus-Ruiz (2007)						✓

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Consultation/Coaching

Goals:

The goals of consultation/coaching are the following: 1) to engage in a process where the experience of an expert is used to help a child care professional to address a specific topic or issue and/or 2) to develop a liaison with a child care professional to enhance professional skills and behaviors.

Theory of Change:

Child care professionals are required throughout their careers to learn new skills and behaviors as the knowledge base changes in their field. When an expert who knows how to implement the skills and behavior an individual is trying to learn, can work one-on-one in the individual's specific work context, there is an increased likelihood that the practitioner will make the required changes in their behavior. The longer the practitioner receives the support, the more likely the targeted practitioner behavior will be sustained over time.

Practice Features:

Consultation is defined as a collaborative, problem-solving process between an external consultant with specific expertise and adult learning knowledge and skills and an individual or group from one program or organization. Consultation facilitates the assessment and resolution of an issue-specific concern—a program-/organizational-, staff-, or child-/family-related issue—or addresses a specific topic.[1]

Coaching is defined as a relationship-based process led by an expert with specialized and adult learning knowledge and skills, who often serves in a different professional role than the recipient(s). Coaching is designed to build capacity for specific professional dispositions, skills, and behaviors and is focused on goal-setting and achievement for an individual or group.[1]

Target Audience:

Early care and education professionals

Research Evidence:

A meta-analysis of different types of strategies for increasing the knowledge and skills of adult learners examined 79 studies of which 46 studies used an expert as the provider of coaching.[1] Within these studies there were positive effects on the knowledge and skills of the adult learner as a result of working with an expert. In a study that focused on improving child care quality, programs or caregivers were randomly assigned to receive the coaching intervention or not to receive the intervention. The researchers found significant increases in classroom quality and adult sensitivity when coaching occurred.[2] Other studies that have focused on the social emotional development of children have found similar research evidence for the use of coaching. This evidence shows a positive impact on teachers' knowledge and skills about the social-emotional pyramid model.[3, 4]

Research Evidence for Coaching

	Adult learner outcomes	
Research evidence	Knowledge	Skills
Trivette et al. (2009)	✓	✓
Fiene (2002)	✓	✓
McLean et al. (2011)	✓	✓
Hemmeter et al. (2011)		✓

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Pyramid Model:
Supporting Social-Emotional Competence in Infants and Young Children

Goals:

The goals of the Pyramid Model are to provide early care and education professionals: 1) the information and 2) skills to support the social-emotional competence in young children.

Theory of Change:

Supporting individual teachers through training and coaching to promote the use of strategies and techniques described in the Pyramid Model in their classrooms should lead to the increased use of practices that promote social-emotional development of young children.

Model Features:

The Center for Social and Emotional Foundations for Early Learning designed the Pyramid Model to prevent and address challenging behaviors of young children in group child care settings. The Pyramid Model builds upon a tiered mental health approach to providing universal supports to all children to promote wellness, targeted services to those who need more support, and intensive services to those who need them.

The tiered approach is depicted as a pyramid with:

- The foundation for all of the practices in the pyramid is the systems and policies necessary to ensure a workforce able to adopt and sustain these evidence-based practices.
- Universal supports for all children through nurturing and responsive relationships and high-quality environments.
- Prevention which represents practices that are targeted social-emotional strategies to prevent problems.
- Intervention which is comprised of practices related to individualized intensive interventions.[1, 2]

Several of the developers of the Pyramid Model for Supporting Social-Emotional Competence in Infants and Young Children have designed techniques to enhance teachers' use of Pyramid strategies in early childhood classrooms. These technical assistance strategies include high-quality workshops, on-site coaching, and data collection.[3] Technical assistance is provided to ensure that the Pyramid Model practices are implemented with fidelity.

For more information regarding the Pyramid Model use these links: http://www.challengingbehavior.org and http://csefel.vanderbilt.edu.

Target Audience:

Early care and education professionals

Research Evidence:

Research Evidence for the Pyramid Model

Since this is a tiered model that includes different types of interventions at each level, the research evidence is taken from a literature review and various studies that have been conducted around the different components.[4] In the 2006 literature review, research evidence for the two components found at the universal level (responsive relationships and high-quality environments), the prevention level (social-emotional teaching strategies), and the targeted level, (individualized interventions) was described. Since then, other studies have found similar research evidence for each of the following practices in the pyramid: responsive interactions[5], classroom preventive practices[6], social-emotional teaching strategies[7], and individualized interventions.[8]

Technical Assistance for the Pyramid Model

When the professional development includes high-quality workshops, implementation guides and materials, use of digital recordings, and on-site coaching (observation, debrief, and feedback), the research evidence demonstrates positive results in teachers' implementation of the intervention strategies and in child reading and child social-emotional outcomes.[9-11]

Research Evidence for the Pyramid Model for Supporting Social-Emotional Competence

	Teacher outcomes			Child outcomes			
Research evidence	Responsive interactions with child	Implementation of strategies	Embedded instruction	Increased social skills	Increased engagement	Fewer problem behaviors	Increased language and cognitive skills
Technical assistance using the Pyramid Model							
Hemmeter et al.(2011)		✓		✓		✓	
McLean et al. (2011)		✓	✓				✓
Fox et al. (2011)		✓	✓	✓			
Pyramid Model							
Hemmeter et al. (2006)	✓			✓	✓	✓	
Pianta et al., (2002)	✓						
Brown et al. (2001)		✓					
Vaughn et al. (2004)		✓					
Duda et al. (2004)			✓				

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Child Care Health Consultants

Goals:

The goal of the child care health consultants is to provide information and training on health and safety aspects in child care facilities.

Theory of Change:

Supporting child care programs and staff by providing information and training regarding and health care and safety practices should improve the health and safety outcomes for young children in child care.

Model Features:

A Child Care Health Consultant (CCHC), trained by the NC Child Care Health and Safety Resource Center, is a child health professional who works in partnership with staff from a child care facility. The work of the partnership focuses on resolving a health or safety concern and/or improving the health and safety components of child care programs. The Child Care Health Consultant can provide a variety of services including, but not limited to, the following: observing and assessing health and safety practices, reviewing policies and procedures and health records, training child care providers in appropriate health and safety practices, providing consultation regarding communicable diseases, and providing resource and referral information to parents or providers.[1]

For more information about this model, use this weblink: http://www.healthychildcarenc.org/index.php

Target Audience:

Early care and education directors, staff, and teachers

Research Evidence:

Research has been conducted in several states regarding the impact of CCHC on health and safety policies and standards in child care centers. Two research studies matched child care centers and then randomly assigned them to receive intervention or no intervention. Alkon and his colleagues matched child care centers in five counties in California.[2] On the pre/post test analysis there were statistically significant differences on nine of the ten policies. Although there were differences on four of the six practices, they were very small. Kotch and his colleagues matched child care centers in 3 states. They found differences in child care centers' written policies, children's dietary intake, children's physical activity and children's Body Mass Index.[3]

In a small sample of children who attended a university child care, Ulione found that when a child care nurse consultant provided staff with information concerning childhood illnesses and injuries, there was a decrease in upper respiratory illness and accidental injury rates.[4]

In a recently conducted study of the use of Child Care Health Consultants in North Carolina, evidence from a pre/post single group design study found that there were positive changes in both the quality and completeness of the written health and safety policies when CCH Consultants were actively working in child care centers.[5] Results from the study also demonstrated a positive impact on staff compliance with health and safety standards. Positive impacts were also found in preventive care for children, such as immunizations, health care coverage, and medical homes.[5]

Research Evidence for Child Care Health Consultants

	Child outcomes						Policy outcomes
Research evidence	Increase in access to preventive health care	Improvement in immunization status	Decrease in sedentary activity	Decrease in illness	Decrease in medically attended injury rates	Decrease in proportion of obese children	Increase in number and quality of policies
Isbell et al. (2012)	✓	✓					✓
Alkon et al (2009)	✓				✓		✓
Ulione (1997)				✓	✓		
Kotch et al., (2012)			✓			✓	✓

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Program Quality Enhancement/Maintenance Incentives

Goals:

The goal of program quality enhancement/maintenance incentives is to help programs meet, maintain, and achieve higher quality improvement standards by offering financial incentives.

Theory of Change:

When trying to enhance the quality of services, the use of financial incentives to programs is one mechanism. Often the improvement of quality incurs additional cost for a center (e.g. training for staff, facility upgrades). If the center administrator recognizes the benefit of the enhancement, a financial incentive that helps cover some or all of the cost is likely to increase the probability that the change will occur.

Practice Features:

This includes one-time bonus/awards or periodic/predictable incentives (such as higher reimbursement rate for subsidized care) for centers.

Target Audience:

Child care facilities

Research Evidence:

Although there is a great deal of research on child care quality, there is very little research on the effectiveness of incentives and no contemporary research on the effectiveness of incentives since the beginning of Quality Rating and Improvement (QRIS).[1] In 2002, the United States General Accounting Office published a review of the quality improvement initiatives undertaken by individual states.[2] The authors also report that very little effort has been made to link incentives to improve quality in child care to positive outcomes for children. They report that only three studies examined whether or not states' initiatives were linked to improvements in child development when comparing centers that did and did not utilize quality improvement initiatives. The three states that examined differences were Florida, Massachusetts, and Washington. Of these three, only Florida's quality improvement plan led to gains in children's development as well as the care they received. Florida's quality incentive plan included reducing child-to-staff ratios and increasing early education requirements for center providers. The other two states focused on compensation and retention of teachers and will be discussed in the section on professional quality incentives.

Although there is almost no research directly linking quality incentives to gains in child development, there is some research that has examined how incentives improve quality in the medical field. Lindenauer et al. (2007) found that hospitals that received financial incentives for improving quality had modest but statistically significant improvements compared to hospitals that did not receive quality incentives.[3]

Research Evidence for Program Quality Enhancement/Maintenance Incentives

Research evidence	Child development gains	Quality improvement in hospitals
United States General Accounting Office (2002)	✓	
Lindenauer et al. (2007)		✓

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Education Supports

Goals:

The goal of formal education (the acquisition of a two-or four-year degree in an area related to the development and education of young children) is to provide teachers the opportunity to participate in coursework that leads to the acquisition of college credits and ultimately to a college degree.

Theory of Change:

All professions are built on a foundation of knowledge (e.g., child care is built on child development theory and research) and skills. When working with young children, professionals need to understand child development, and skills and strategies that positively influence early childhood learning. With this knowledge, child care professionals can provide young children with positive and supportive learning environments that enhance children's learning and development.

Practice Features:

One strategy used to promote high-quality early childhood education is supporting early childhood teachers to acquire higher educational qualifications. Smart Start Partnerships have utilized several activities to support access to education including, but not limited to, support for release time so that teachers can attend educational activities; conveniently scheduled courses; on-line courses; and books.

Target Audience:

Teachers

Research Evidence:

Several research reviews found that the level of teacher education did impact the classroom quality in preschool programs.[1-3] Other research studies suggest a more complex relationship between early childhood teacher education and child outcomes. For instance, a more recent research synthesis completed in 2007 of seven studies concluded that increasing teachers' education alone was not enough to improve classroom quality or to maximize children's academic gains.[4] Other researchers further explore this complexity. A review by Zaslow and her colleagues discusses research findings that suggest other factors (e.g., level of support and resources in the program) might influence whether or not a higher educational degree impacts classroom quality and emphasizes the need for sophisticated research in this area.[5] Similarly, a large scale study from the National Institute of Child Health and Development (NICHD) found that the level of teacher education has a positive effect on the quality of the caregiving which in turn has a positive relationship with child cognitive and social outcomes. This suggests an indirect effect of teacher education on child outcomes.[6]

There is also an emerging body of evidence for particular strategies to enhance access to teacher education. Several states including North Carolina have made an effort to increase child care quality

through improving access to education and higher wages through T.E.A.C.H. Early Childhood®. Through scholarships T.E.A.C.H. Early Childhood increases the level of education for child care professionals, with 47% of scholarship recipients completing 15 or more hours toward a Bachelor's degree.[7] Moreover, for scholarship recipients that received an Associate degree turnover rates ranged between 0-12%, far less than the national average.

Professional Development to Enhance Teachers' Educational Qualifications

	Classroom and teacher outcomes					Child outcomes				
Research evidence	Classroom quality	Teacher-child interaction	Instructional activities	Increases in completing education	Decreases in turnover	Receptive language	Pre-reading	Math	Overall cognitive competence	Social behavior
Early et al (2007)										
Kelly & Camilli (2007)	✓									✓
Zaslow et al. (2010)										
NICHD Early Child Care Research Network (2002)									✓	✓
Child Care Services Association (2012)				✓	✓					

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ECE Professional Quality Incentives Including WAGE$

Goals:

The goal of quality incentives for ECE professionals is to help programs improve quality by reducing turnover and increasing teachers' education.

Theory of Change:

When trying to enhance the quality of services, the use of financial incentives to ECE professionals is one mechanism. Increasing quality involves improving conditions for ECE professionals, such as providing higher wages or tuition for courses.

Practice Features:

Financial incentives include bonuses, awards, or stipends for completing education or reducing turnover. The Child Care WAGE$ Project provides education-based salary supplements to low-paid teachers, directors, and family child care providers working with children between the ages of birth and five. The project is designed to provide preschool children more stable relationships with better-educated teachers by rewarding teachers' educational advancement and continuity of teachers in child care situations.[1]

Any child care professional earning at or below the income cap selected by the funding partnership may be eligible to participate. The supplement recipient must work with children ages birth to five at least 10 hours per week in a licensed child care program in a participating county and have some formal child care credential or education beyond a high school diploma.[2] Child Care WAGE$ requires participants at lower education levels to move up an education level on the salary supplement scale in order to continue receiving a supplement. Teachers and directors have two years to advance and home providers have three.[2]

Target Audience:

Early care and education directors and teachers

Research Evidence:

There is some evidence that teacher compensation predicts quality, even when controlling for these other variables. Phillips, Mekos, Scarr, McCartney, and Abbott-Shim (2001) found that the wage of the highest paid teacher in centers predicted child care quality even when ratio, teacher training, and teacher education were removed.[3]

The United States General Accounting Office published a review of the quality improvement initiatives undertaken by individual states and reported on two studies that examined whether or not caregiver wages were linked to higher quality. They report that results from Massachusetts found that caregivers who receive low wages are difficult to hire and retain.[4] This GAO review also cited data from Washington State that examined caregiver compensation and retention and found they had no effect on quality.

Torquati, Raikes, and Huddleston-Cass (2007) also found mixed results when examining the link between teacher compensation and quality.[5] They found, when looking at infant-toddler teachers and preschool teachers combined, that there was a relationship between compensation and quality. When they examined these groups separately, that relationship disappeared. The authors argue that it is possible that more highly-qualified teachers tend to choose programs that offer more compensation and provide higher quality care. Torquati et al. (2007) also argue that program and teacher characteristics work together to support quality.[5]

The evidence concerning the impact of Child Care WAGE$ Project on child care staff comes from the Child Care WAGE$ Project final report for the fiscal year 2011.[6] In this report, staff turnover rate is defined as those active participants in WAGE$ who left their child care program during the fiscal year (p.3). The turnover rate was 12%, which is better than the 25% goal established within Smart Start's Performance Based Incentive System. Regarding the education level of WAGE$ participants, 59% of the active participants who received WAGE$ funding had an Associate's degree in early childhood education compared to 1999 when only 30% of the WAGE$ participants had an Associate's degree.

Research Evidence for ECE Professional Quality Incentives

Research evidence	Program quality	Low wages linked to hiring and retention difficulties	Increases in education level of WAGE$ participants	Decreases in turnover
Phillips et al. (2001)	✓			
United States General Accounting Office		✓		
Torquati et al. (2007)	✓			
Child Care Services Association (2011)			✓	✓

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Other Child Care Supports

Child Care Subsidy

Goals:

The goals of child care subsidies are the following: 1) provide child care for children whose families meet financial or situational criteria 2) support parental employment, and 3) improve continuity of care, and 4) improve child development outcomes for children.

Theory of Change:

High quality child care is linked to increased school readiness in young children. Low-income parents spend more on child care and use on average lower quality care than higher income families. Therefore, when low income families are able to access high quality child care for their children, they are more likely to become and remain employed, and children are likely to achieve better developmental outcomes.

Practice Features:

In North Carolina, child care subsidies are available through state-administered Child Care and Development Fund (CCDF) and state Smart Start funds. Subsidies are available either as vouchers or as subsidized slots in contracted child care settings. This allows parents to choose care that is accessible to them and can include care in centers, family child care homes, or informal care provided by a relative, friend, or neighbor.

North Carolina limits subsidies to programs that have at least a three star rating based on the state's adopted Quality Rating Improvement Scale, with exceptions granted for religious-affiliated programs or programs actively pursuing three-star or higher licensure. Parents in this state must also meet situational and financial criteria. Parents must be income eligible and be working or looking for work or in school or a job training program. Children are eligible for subsidies if they are receiving child protective services or child welfare services, or their family is experiencing a crisis, and the family pays no parent fee. All other families are required to pay a portion of child care expenses based on their income.

Smart Start funds are often used to enhance subsidy payment for the highest quality of care or to extend the subsidy period for seeking employment or education. Other examples of subsidy activities include serving specific child populations or a targeted geographic area with very low resources, and to support more children attending NC PreK.

For more information about subsidy, see http://ncchildcare.dhhs.state.nc.us/parents/pr_sn2_ov_fa.asp.

Target Audience:

Parents and children ages birth-5 years

Research Evidence:

The research on child care subsidy comes from several studies that examine whether subsidy receipt affects quality of care, continuity of care, and parental employment. Tarnai (2011) compared outcomes for families that do and do not receive subsidies.[1] Tarnai interviewed parents and child care directors to assess the impact of subsidies on continuity of care as well as the quality of care. When compared with families who were eligible but not receiving subsidies, children from families who were receiving subsidies were more likely to be in enrolled in child care centers, were more likely to be in licensed facilities, and were more often in centers that had a child care curriculum. Parents also reported that the subsidies had a positive impact on the stability of their child's care. In addition, a third of child care directors reported that the subsidies had a positive impact on the continuity of care for children in their programs.

Johnson, Ryan, and Brooks-Gunn (2012) also compared families who received subsidies with families who did not, and controlled for these characteristics that make families different before they begin to seek out care.[2] They found that families who receive subsidies use higher quality care when compared to nonrecipients *who use no other publicly funded care*. However, subsidy recipients used lower quality care compared to nonrecipients who instead *used Head Start or public pre-k*.

Forry and Hofferth (2011) examined the degree to which subsidy receipt improves employment stability for parents when compared with parents who are eligible but not receiving subsidies.[3] They found that child-care related work disruptions are less likely among subsidy recipients. Blau and Tekin (2001) also found that mothers are more likely to be employed or in school if they receive a child care subsidy.[4]

Research Evidence for Families Who Receive Subsidies

	Parent outcomes						Director outcomes
Research evidence	Choose higher quality care	Higher levels of children enrolled in centers	Higher levels of children enrolled in licensed centers	Higher levels of children enrolled in centers with curriculum	Positive impact on continuity of care	Increased employment or school attendance	Positive impact on continuity of care
Tarnai (2011)		✓	✓	✓	✓		✓
Johnson et al. (2012)	✓						
Forry and Hofferth (2011)						✓	
Blau and Tekin (2001)						✓	

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Child Care Resource and Referral

Goals:

The goals of Child Care Resource and Referral (CCR&R) are the following: 1) to increase families' awareness of child care options, 2) to increase families' access to high quality child care, 3) to increase availability of affordable child care, 4) to offer training to child care professionals, 5) to engage in research, and 6) to advocate for child care policies that positively impact families.

Theory of Change:

Providing parents with more knowledge about the characteristics of high quality child care and information about how to access this care as well as providing support and training to practitioners should improve families' access to better care and improve children's developmental outcomes.

Model Features:

There are four major components of CCR&R: 1) consumer education and referral, 2) technical assistance, 3) training, and 4) professional development advising.

1. **Consumer education and referral**—Child care resource and referral programs (CCR&R) collect updated information on the supply and quality of child care so they can provide consumer education to parents of young children regarding what quality child care is in general and specific information about the level of quality of individual child care programs. They also inform families about the availability of subsidies and other community resources.

   Target Audience:

   Parents of children ages 0-5

2. **Technical Assistance (TA)** includes the provision of targeted and customized supports by a professional(s) with subject matter and adult learning knowledge and skills to develop or strengthen processes, knowledge application, or implementation of services by recipients. This includes consultation, coaching, and mentoring.

   Target Audience:

   Early care and education professionals

3. **Training**—This type of group training is often referred to as in-service or workshop training. The content of this training is usually narrow in focus, providing updates on policies or procedures rather than developing a complex set of skills. Frequently the sessions occur once or twice and in a two-hour format.

   Target Audience:

   Early care and education professionals

4. **Professional Development Advising (PD)**—Advising involves providing information to teachers or staff such as which college courses may enhance their learning or are needed as part of a certificate or degree. Advising may also include information about scholarships, grants, or loans available to teachers. Advising is done by college faculty or staff, child care center staff, or other child care

professionals. In addition to factual information about coursework, advising can also include guidance and support. An advisor guides teachers as they try to balance work and school and provides encouragement and help to teachers. Advisors also help teachers link their education to opportunities for promotions and increases in wages.

Target Audience:

Early care and education teachers

Research Evidence for Child Care Resource and Referral

While there has not been research on CCR&R as a combination of services, evidence is available for the components of CCR&R. These are discussed below.

Consumer Education and Referral

Although there is a lot of information about CCR&Rs and what they do for families, there is not a lot of research examining the child care choices of families who do and do not use CCR&Rs. There is evidence from one study that parents do benefit from the use of CCR&Rs:

Fuqua and Schieck (1989) examined the consumer behaviors of 107 parents currently using child care to determine whether or not differences in the way they selected child care were associated with the use of a child care resource and referral program (CCR&R). Fifty-two percent of the families had used a CCR&R when selecting child care and 48 percent had not.

Those who used CCR&Rs used more reliable sources of information about child care arrangements, spent more time looking for child care, and visited more settings. Nevertheless, these differences did not translate into CCR&R participants being better-informed consumers of child care than nonusers of a CCR&R, nor into the children of CCR&R participants receiving better quality care than children of nonusers of a CCR&R.[1]

Research Evidence for Parent Outcomes for Consumer Education and Referral

	Parent outcomes	
Research evidence	Used more reliable sources of information about child care arrangements	Spent more time looking for child care and visited more child care settings
Fuqua & Schieck (1989)	✓	✓

Technical Assistance

Research suggests that there are positive effects on the knowledge and skills of the adult learner as a result of working with an expert. Please see the Technical Assistance section for a complete review of the research evidence.

Training

Research evidence regarding in-service or workshop training is found in a meta-analysis and two reviews of research literature.[1-3] These studies examined the effects of training defined as being limited in frequency of occurrence, limited in length, generally very limited in active learner involvement in the training, and most frequently having no follow up to the initial training. Burke and Day[1] in an analysis of 70 articles that examined workshop training found there was a positive effect of workshops/in-service training participants self -reported of their knowledge, but there was not an effect when an objective measure of learning was used to assess the outcome. In a review of in-service training for social workers; researchers found that in 20 studies the impact of the training on their satisfaction or knowledge was positive, but there was no impact on their behavior. Dunst and colleagues[3] found that in early childhood trainings there was an increase in participants' reports of satisfaction.

Research Evidence for Training

Research evidence	Self –report of satisfaction	Self-report of knowledge	Self-report of attitudes
Burke & Day (1986)		✓	
Clarke (2001)	✓	✓	
Dunst et al. (2011)	✓		

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Professional Development Advising

Professional Development Advising is defined as "a one-on-one process through which an advisor offers information, guidance, and advice to an individual about professional growth, career options, and pathways to obtain or meet required qualifications."[1]

A review of the research on community college advising finds that it has a positive effect on student retention. Students tended to remain in community college longer when they received counseling, especially those students who were considered to be at higher risk for dropping out.[2]

Other studies have focused specifically on advising for those in the early childhood field. Deutsch and Tong (2011) found that some of the most valuable professional development advising may come from child care center directors.[3] The authors found that career mentoring by directors was related to college enrollment of staff. Career mentoring consisted of behaviors such as telling the staff member about his or her strengths and how they apply to work, taking time to talk to a staff member about his or her career and opportunities for promotion, and encouraging a staff member to meet his or her professional goals. Moreover, staff members who received this kind of career mentoring encouragement from child care center directors specific to educational attainment were more likely to be enrolled in school.[3]

Many child care teachers who return to school are nontraditional students. They are often 25 years or older and are often first generation college students. Directors provide encouragement to boost teachers' sense of self-efficacy.[4] Matus-Grossman and colleagues (2002) report that support from family, college staff, and accommodating employers are leading factors influencing community college students' abilities to enroll in college, to stay in college, and to complete their programs.[5]

Bridges and colleagues (2011) examined preschool staff who participated in California's Child Care Retention Incentive (CRI).[6] They found that participants completed more college courses when they worked in programs that provided stronger career advising and professional activities.

Research Evidence for Professional Development Advising

Research evidence	College enrollment	Higher levels of coursework	Student Retention
Summers (2003)			✓
Deutsch & Tong (2001)	✓		
Bridges et al. (2011)		✓	

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EARLY LITERACY

Introduction

This chapter covers evidence for the effectiveness of one widely-used early literacy practice, shared reading. There are many practices used to promote early literacy. Shared reading is one evidence-based practice that has been widely recommended to encourage language and other early literacy skills in young children.[1] The focus in the next section in this chapter is on information about the following early literacy programs: Reach Out and Read, Raising A Reader, Every Child Ready to Read, Dolly Parton's Imagination Library, and Motheread/Fatheread.

Shared Reading

Goals:

The goals of shared reading are the following: 1) to promote early literacy experiences for young children and 2) to increase parents' understanding of strategies they can use to enhance children's reading experiences.

Theory of Change:

There are strategies that parents can use that help ensure children's active involvement in reading and that encourage children's learning of new skills. When parents have the skills to both keep children engaged in the reading experience and provide opportunities that enhance the children's learning, the parent-child shared book reading will increase children's early literacy.

Practice Features:

Dialogic reading, *interactive reading*, and *joint reading* are some of the common terms used to describe the shared reading experience between an adult and a child. The *degree of interaction* between the adult and child or the type of guidance from the adult to the child during shared reading generally differentiates these terms from one another.[2, 3]

Some of the key characteristics of shared reading are described here.[3] Dialogic reading includes five types of prompts to elicit child responses to different questions and queries (e.g., who, what, where, when, why) where a child's response to the adult is used to further prompt for elaborations and expansions. Interactive shared book reading involves multiple techniques used before, during, and after book reading, including asking the child for answers to questions, providing explanations to the child's questions, encouraging the child to "read" the story, and pointing to and explaining how pictures are connected to words, etc. Joint book reading can involve an adult reading to a child, rereading a story, and providing the child the opportunity to retell the story.[3]

Target Audience:

Parents of children birth to 5 years of age

Research Evidence:

The evidence around the effectiveness of shared reading practices on early literacy outcomes for young children comes from one syntheses and two meta-analyses.[1-5] The synthesis on shared reading practices done by the National Early Literacy Panel contained 19 studies in which shared-reading interventions included parents, teachers, or the combination of parents and teachers.[1] These results found that shared reading interventions in general had moderate effects on oral language and print knowledge outcomes for young children and that shared reading interventions which were more intensive in frequency and interactive in style had the most significant impact on the outcomes.[1]

The first meta-analysis examined the effect sizes in 21 studies using dialogic reading, interactive shared book reading, or shared book reading to determine which characteristics of books and book reading experiences contribute to young children's language development.[4] Results from this synthesis found that the interventions that more actively involved young children in reading sessions resulted in more positive literacy outcomes than the interventions where young children played a non-interactive role during reading sessions. Questions and queries (e.g., Wh questions) where a child's response to the adult is used to further prompt expansions and explorations of print have positive impacts on language and vocabulary development and print awareness.[4] Another meta-analysis of 11 studies looked specifically at the impact of children's story retelling, an interactive practice used in shared reading. [5] Findings indicated that children's story retelling significantly impacted story-related comprehension and expressive vocabulary outcomes as well as non-story-related receptive language and early literacy outcomes.[5]

Research Evidence for Shared Reading Practices

	Child outcomes				
Research evidence	Comprehension	Expressive (oral) language	Receptive language	Linguistic processing	Print related/ print knowledge
NELP (2008)		✓			
Trivette, Dunst & Gorman (2010)		✓	✓	✓	✓
Dunst, Simkus & Hamby (2012)	✓	✓	✓		

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Reach Out and Read (ROR)®

Goals:

The goals of Reach Out and Read (ROR) are the following: 1) to promote early literacy to young children and their parents and 2) to improve school readiness.[1]

Theory of Change:

Increasing children's access to books and encouraging parents to read more often to young children will likely increase children's literacy experiences. Parents are likely to view the doctor as an authority and therefore follow through on the "prescription" to read to their children.

Being read to frequently by adults helps children learn new concepts and new words. Book reading also lets young children learn about the principles of print, such as how pages are turned, that print is read left to right, and that different words have different meanings. Improving the number of words children understand and their knowledge of print material will improve their readiness for school.

Program Features:

Reach Out and Read works through medical provider offices to promote early literacy and school readiness with the distribution of new books to children starting at the six-month checkup, and by talking with parents about the importance of reading aloud to their children.[1] Reach Out and Read utilizes the relationship between parents and medical providers to encourage the development of critical early reading skills in young children.

A Reach Out and Read site is a healthcare facility that provides primary pediatric care. An interested medical practice applies to participate through the Reach Out and Read organization. Medical providers must then participate in the ROR training about the importance of reading aloud and age-appropriate tips about reading strategies. Members of the medical staff provide every child a new book to take home. The medical provider then talks to the parent and child about the importance of reading and reading strategies. The waiting room has displays, books, and information about Reach Out and Read. When possible, sites are encouraged to have volunteers in the waiting room to read to children and to model the appropriate reading techniques. The pediatric care sites report regularly on their progress to the National Center and their Region/Coalition.

For more information regarding Reach Out and Read use this link: http://www.reachoutandread.org.

Target Audience:

Children 6 months to 5 years of age and their parents, with special emphasis on children growing up in low-income communities

Research Evidence:

Four recent research reviews that contain multiple studies showed that Reach Out and Read (ROR) has a positive impact on child language outcomes, including receptive and expressive vocabulary, as measured by standardized assessment tools.[2-5] Two of these reviews also reported that the longer a family participated in ROR, the greater the increase in literacy outcomes for children.[3, 4] All four reviews found that parents who participated in ROR reported an increase in the frequency of reading out loud with their children. Parents also reported an increased awareness of the importance of shared reading for their children's literacy development and an increase in their own enjoyment of shared reading with their children. Most studies showed that positive effects were most significant for high-risk children and low-income families[6], but there were also significant effects for families in general, including multilingual families.[5]

Though ROR aims to improve both the quality and quantity of reading between parents and children, the quality of parents' reading is not one of the measures included in the studies.[4] Additionally, not all study sites provided reading volunteers in the waiting room to model good shared reading practices.[4] The four reviews reported concern over this inconsistency in the use of volunteers since the evidence suggests that programs like ROR greatly improve positive effects for family and child literacy outcomes by providing parent training in appropriate shared-reading techniques.[7]

Research Evidence for Reach Out and Read

	Child outcomes			Parent-reported parent outcomes		
Research evidence	Increased receptive & expressive vocabulary	Dose-dependent effect	Increased shared reading frequency	Improved home literacy	Increased awareness of shared reading importance for literacy development	Increased shared reading enjoyment
Goldfeld et al. (2011)	✓		✓		✓	
Zuckerman (2009)	✓	✓	✓	✓	✓	✓
Needlman et al. (2004)	✓	✓	✓	✓	✓	
Kuo et al. (2004)	✓		✓			

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Raising A Reader

Goals:

The goals of Raising A Reader (RAR) are the following: 1) to improve the reading readiness of children birth to third grade, 2) to promote parents' use of effective book sharing practices, and 3) to promote family literacy habits.[1]

Theory of Change:

Providing families a rotation of books ensures that they have access to books that are age appropriate with a range of vocabulary words. Providing families with training regarding effective strategies for book sharing experiences will increase the participation of young children in the reading experience. Encouraging library visits and improving the connection between families and libraries should encourage a lifetime habit of reading. These practices, taken together, are likely to improve reading readiness outcomes for young children.

Program Features:

Raising A Reader is a family engagement and early literacy program that is designed to improve the reading readiness skills of children birth through third grade.[1] RAR promotes the literacy of children from birth through kindergarten by means of a weekly rotation of bags filled with books sent to children's homes, providing children and families access to over 100 books per rotation cycle. Book rotation is supplemented with parent training and materials promoting effective book sharing, family literacy habits, and family language skills. Families are linked with their local public library, and children receive a blue bag at the end of the program to encourage library visits.

Raising A Reader is a program that can be started in child care centers, libraries, or other community centers or agencies. Child care centers can also partner with a library. Centers have flexibility in how they implement RAR. Each affiliate must have a trained coordinator in order to access RAR materials.

For more information regarding Raising A Reader use this link: http://www.raisingareader.org.

Target Audience:

Families with children ages birth through third grade

Research Evidence:

Evidence from a recent literature review examined 22 individual program evaluation reports and summaries gathered over the last 10 years.[2] Included in the review are two studies that compared families that receive RAR services and families that did not received RAR services. There were also four studies that examined the change in families before and after they got RAR services. The evidence shows that RAR participation increases parent-reported outcomes including the child's increased

enjoyment of shared reading, increased language skills (vocabulary), increased emergent literacy skills (print awareness, letter naming, etc.), increased parent awareness of the importance of shared reading for literacy development, increased shared reading with the child, increased access to books or number of books in the home, and increased use of libraries.

A few studies measured the quality of shared reading, and found positive results correlating RAR participation to increased interactive book reading behaviors, book discussion, asking and answering questions while reading, and playing word games, among other behaviors. One multi-year evaluation showed positive child literacy outcomes when combined with repeated parent training sessions in dialogic and interactive reading techniques, which has led to recent incorporation of additional parent training to RAR's required program curriculum.[2]

Research Evidence for Raising A Reader

	Parent-reported child outcomes			Parent-reported family outcomes		
Research evidence	Increased child enjoyment of shared reading	Increased oral language development (vocabulary)	Increased emergent literacy skills	Increased parent awareness of importance of shared reading	Increased shared reading	Increased use of library
Kreider (2011)	✓	✓	✓	✓	✓	✓

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Motheread®/Fatheread

Goals:

The goals of Motheread/Fatheread are the following: 1) to teach parents critical literacy skills and 2) to provide children with a structured environment for learning reading, critical thinking, and problem-solving skills.[1]

Theory of Change:

Providing adults with literacy skills in an environment that encourages their feelings of competence and worth should increase adults' literacy. Teaching parents why reading is important and how to be reading role models increases the likelihood that adults will read with their children. Providing teachers, parents, and caregivers with strategies to increase children's reading comprehension, vocabulary, and translation from spoken language to the written word should increase children's literacy.

Program Features:

Motheread, Inc. offers training and intergenerational adult and child literacy curricula that combine literacy skill instruction with a focus on child development and family empowerment.[1] Using a group based format, adult classes help parents learn to be effective and engaging story readers, writers, and tellers. Motheread curriculum is appropriate for all adults, regardless of reading ability or educational experience. They offer a variety of curricula, including Motheread/Fatheread, Birth and Beginning Years (B.A.B.Y), and F.a.t.h.e.r.

All lessons in each adult curriculum provide comprehensive skill development, allow teacher flexibility to individualize instruction and meet adult students' personal goals, promote group learning for social support and self-efficacy, and contain multiple opportunities for students to practice skills.

Each of the children's lessons builds vocabulary and promotes higher-level comprehension skills, follows an intentional and focused process that incorporates conversation and activities with book reading, provides interactive literacy materials to use with parents and children together, encourages children to link prior knowledge and real-life experience to book reading, and supports federal emergent literacy instruction guidelines.

Story Exploring, one of many Motheread programs, provides teachers, parents, and caregivers with strategies to increase children's reading comprehension, vocabulary, and translation from spoken language to the written word. The curriculum also includes take-home materials to help parents extend the Story Exploring experience into the home.

For more information regarding Motheread/Fatheread use this link: www.motheread.org.

Target Audience:

Parents, early care and education professionals, and children ages birth to 5 years

Research Evidence:

The research evidence on Motheread/Fatheread program outcomes was gathered from three individual studies. Two of the studies involved parent participants in Motheread adult literacy classes and included parent report. These studies did not include a comparison group of parents who did not receive Motheread/Fatheread. The third study looked at Story Exploring training for early child care professionals and does compare children whose providers did receive training with children whose early care professionals did not.

The first study looked at parents and early childhood educators (40-60 total participants) that attended Motheread adult literacy and instructional shared-reading classes. Comparisons before and after intervention found an overall increase in average adult reading level measures, as well as an improved parent/educator awareness of children's emotional and developmental needs.[2] Parents and educators reported increased confidence with reading out loud, increased reading to the child, and increased bonding or relating with the child or class.[2]

The second study included interviews with 32 Hmong participants in a multi-year Motheread project.[3] Parents reported improvements in their child's reading skills, including child comprehension of story content, increased child interest and inquisitiveness during shared reading, and improvements in their own literacy skills and in relating to their child.[3]

The third study evaluated the impact of Motheread training on 18 child care professionals, with a comparison of child outcomes for 121 children under the care of child care professionals who did receive the training with children whose providers did not receive the training.[4] Results showed improvements in child literacy outcomes, including vocabulary and story retelling.[4]

Research Evidence for Motheread/Fatheread

	Adult-reported child outcomes				Adult-reported parent outcomes				
Research evidence	Improved reading outcomes	Increased interest in shared reading	Increased inquiry/ understanding during shared reading	Increased shared reading frequency	Increased awareness of literacy development	Improved bonding/ relating with child	Increased frequency of reading for themselves	Improved self-confidence	Improved parent literacy
Gorham (2001)					✓	✓	✓	✓	✓
Wilder Research Center (2002)	✓	✓	✓			✓			✓
Cleven (2005)	✓								

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Dolly Parton's Imagination Library

Goals:

The goals of Dolly Parton's Imagination Library (DPIL) are the following: 1) to increase young children's access to books, 2) to increase kindergarten readiness, 3) to increase parent-child reading frequency, and 4) to increase community collaboration.[1]

Theory of Change:

Increasing young children's access to books will increase the opportunities children have to be exposed to early literacy experiences. The availability of age-appropriate books in the home will make it easier for parents to use appealing reading material with their children. If the book is of interest to the child, there is an increased likelihood that parents and children will read together frequently. Increased reading experiences improve the number of words children understand and will improve their readiness for school.

Program Features:

Dolly Parton's Imagination Library is an early literacy program that mails age-appropriate books to registered children on a monthly basis. The books are mailed in the child's name in an effort to create a sense of excitement about getting new books. Children can receive the books from birth to their fifth birthday, regardless of family income. DPIL is often coordinated through a local nonprofit organization, such as a library. The sponsoring organization selects a geographic area to target for book distribution and raises the funds to cover the cost of the books. Parents can also register children online.[1]

For more information regarding Dolly Parton Imagination Library use this link: http://www.imaginationlibrary.com/.

Target Audience:

Children birth to 5 years of age

Research Evidence:

The evidence of the impact of Dolly Parton's Imagination Library comes from four studies that gathered data from parent surveys. Across several studies, parents reported that the amount of time they read with their children increased as a result of participating in DPIL. Parents also reported that their children were very interested in and enjoyed the time they spent reading together.[2-5] One study found that longer participation of families in DPIL increased parents' reports of daily shared reading as well as more frequent parent and child discussions of stories read.[5] In other studies, parents reported an increased use of public libraries and an increase in their children's literacy skills as a result of participation in DPIL.[2, 3]

Another study found a positive but statistically insignificant relationship between longer DPIL participation and improved home literacy environment, including the child's interest in books or shared reading or the number of books in the home.[6] This study did not find a positive relationship between DPIL program participation and reading achievement, as measured at kindergarten entry, when compared to students who did not participate in DPIL.[6] As with other literacy programs that focus largely on book distribution, the recommendations for improving positive literacy child outcomes include parent training in literacy awareness activities and effective practices during the shared-reading experience.[6, 7]

Research Evidence for Dolly Parton's Imagination Library

	Parent-reported child outcomes		Parent-reported family outcomes		
Research evidence	Increased child enjoyment/ interest in shared reading	Increased oral language/ vocabulary development	Increased shared reading	Increased access to books	Increased use of library
Ridzi, et al. (2011)			✓		
Gordon (2010)	✓		✓		
Thomason (2008)	✓		✓	✓	✓
Fong (2007)	✓	✓	✓		

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Every Child Ready to Read®

Goals:

The goals of Every Child Ready to Read @ your library® (ECRR) are the following: 1) to increase library staff's work with parents and caregivers to improve children's literacy outcomes and 2) to increase parents' and child care providers' use of practices that will develop language and pre-reading skills in young children.[1]

Theory of Change:

In the past public libraries have strived to improve children's literacy by employing programming that targets children, such as story hours. Public library associations now recognize that public libraries could have a greater impact on early literacy by focusing on educating parents and caregivers. If the primary adults in a child's life can learn more about the importance of early literacy and how to nurture pre-reading skills at home, then the effect of library efforts on improving children's literacy skills can be increased.

Program Features:

ECRR is a parent-education program which stresses that early literacy begins with the primary adults in a child's life. The ECRR curriculum was developed to be used by library staff to teach parents and caregivers ways to use public libraries to support their child's early literacy development. It is also available to early childhood specialists, preschool teachers, and child care providers.

ECRR is a tool kit that contains a CD with an introduction to ECRR and multiple power point presentations that include topics, such as early literacy workshops for parents, fun with letters for parents and children, and creating an effective literacy environment for library staff. There are also posters, brochures for parents, and bookmarks that libraries can distribute that stress the importance of parents' role in providing literacy opportunities for their children.

For more information regarding Every Child Ready to Read use this link: http://www.everychildreadytoread.org/.

Target Audience:

Families with children birth to 5 years of age

Research Evidence:

All of the evidence for ECRR is based on four studies that were conducted on the *first* edition of the program. The ECRR promotes a *second* edition which is based upon findings from evaluations of the first edition. To date, there are no studies or evaluations of the second edition.

The strongest study providing evidence for the first edition of ECRR involved *significant*

supplementation to ECRR, and involved only home child care providers. This study used randomly assigned child care providers to an ECRR intervention group or non intervention group. Supplements to the program included 1) additional readiness and literacy workshops,

2) use of hands-on materials, such as puppets and music CDs, 3) follow-up support newsletters, and 4) phone conversations between trainers and providers.[2] The standardized assessments reported increased scores in children's reading comprehension, phonological awareness, and print concepts. Adult outcomes included increased knowledge of early literacy development.[2]

Four studies of ECRR without supplemental program components were conducted. These studies were done only with adults who got the intervention. The participants reported increases in parents' awareness of literacy development, the value of shared reading, library visits, increases in parents' encouragement of their child to name objects or the likelihood of parents to talk with their infant to help build the child's vocabulary, and an improved library community collaboration with schools.[3-5] These evaluations found this first edition of ECRR to be a successful way to reach out to parents, but struggled with retention. These studies reported that implementing the ECRR program at community locations other than the library, such as schools, parent program centers, or hospitals, was more effective for reaching parents.[3, 4]

Research Evidence for Every Child Ready to Read

	Child outcomes			Adult outcomes				Other outcomes
Research evidence	Increased comprehension	Increased phonological awareness	Increased print concept	Increased awareness/ interest in literacy development	Increased shared reading	Increased library visits	Increased encouragement for child to name objects/build vocabulary	Library community and/or institutional collaboration
Czarnecki et al. (2008)*	✓	✓	✓	✓				
Everhart (2010)				✓	✓	✓	✓	
Neuman & Celano (2010)								✓
Laughlin & Associates (2003)					✓	✓	✓	✓

* Indicates ECRR with supplemental program components, with home early child care providers exclusively

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FAMILY SUPPORT

Introduction

This chapter describes two types of family support programs. The first section focuses on the group-based parent education and support programs and the second section focuses on programs that provide support to families through home visits. Many of these programs require application and training from the national office prior to implementation.

Group-Based Parent Education and Support

This section provides a general overview of the effectiveness of group parent education and/or support programs. The next section then provides research evidence for the effectiveness of specific group parent education and support programs. The programs included in this section are Incredible Years, Triple P, Nurturing Parenting Program, Baby FAST and Pre-K FAST, and Circle of Parents.

Goals:

The goals of group-based parent education and support programs are typically one or more of the following: 1) improving healthy child social-emotional development, 2) improving attachment between the child and parent, 3) enhancing family functioning, 4) improving positive disciplinary approaches, and 5) improving overall parenting skills.

Theory of Change:

Young children need positive parenting experiences throughout their early years to develop a strong social-emotional foundation. The key characteristics of positive parenting experiences focus on parent-child interactions that encourage an attachment between parents and children and the use of positive disciplinary approaches. Group-based parent education and support programs help parents learn the skills and strategies to develop positive parent-child interactions, and positive disciplinary approaches.

Group-Based Parent Education and Support Features:

Group-based parent education and support is an approach that is used for delivering parenting information to parents who are concerned about their parenting skills and helping them find support from other parents who are having some of the same struggles. These programs vary in a number of dimensions; for example, the target audience, number and length of the sessions, and the focus or content of the program. Generally, during group meetings, a staff member teaches parenting skills, asks parents to practice these skills during the meeting and/or practice the skills with their child before the next meeting, and allows parents opportunities to talk about their successes and failures so they can support each other.

Research Evidence:

Research evidence for group-based education and support was found in two meta-analyses. The first meta-analysis examined 77 studies of programs in which parents actively acquire parenting skills

through mechanisms such as homework, modeling, or practicing skills.[1] The focus of this meta-analysis was the specific content and delivery method of programs that were or were not effective.

This meta-analysis found that several components were related to better parent outcomes. One content component related to positive parenting focused on teaching parents emotional communication skills. These skills included helping children recognize their feelings, labeling and identifying emotions, and appropriately expressing and dealing with emotions. A second content component related to positive parenting outcomes was teaching parents to interact with their children in non-disciplinary situations (e.g., everyday activities) and to engage in child-selected and child-directed play activities. In addition to the content of programs, results revealed that the delivery method of requiring parents to practice skills with their child during program sessions was related to both positive parenting outcomes and decreases in externalizing behaviors.[1]

A second meta-analysis examining the results of 142 randomized controlled trials that focused on promoting effective parenting in the transition to parenthood found that parenting-focused interventions are effective with expectant and new parents.[2] On average, interventions had relatively small significant effects on parenting; parental stress; child abuse; health-promoting behavior of parents; cognitive, social, and motor development of the child; child mental health; parental mental health; and couple adjustment. Most of the effects were maintained at follow-up. Effects varied by onset of the intervention, delivery mode, qualification of the intervener, length of intervention, intervention goals, and gender distribution.

Research Evidence for Group-Based Parent Education

	Parent outcomes			Child outcomes		
Research evidence	Improved parenting	Positive interaction with child	Mental health	Mental health	Cognitive development	Motor development
Kaminski et al. (2008)	✓	✓				
Pinquart & Teubert, (2010)	✓		✓	✓	✓	✓

References

1. Kaminski, J.W., et al., *A meta-analytic review of components associated with parent training effectiveness.* Journal of Abnormal Child Psychology, 2008. **36**: p. 567-589.
2. Pinquart, M. and D. Teubert, *Effects of parenting education with expectant and new parents: A meta-analysis.* Journal of Family Psychology, 2010. **24**: p. 316-327.

Incredible Years®
Preschool/Early Childhood BASIC

Goals:

The goals of the Incredible Years programs are the following: 1) to provide parents and teachers strategies that reduce children's challenging behaviors (e.g., aggression, acting-out behavior) and 2) to provide parents with strategies to increase children's social and self-control behaviors (e.g. responding appropriately to adult requests).[1]

Theory of Change:

Children often enter kindergarten with limited social-emotional skills which can be a risk factor for the development of violence, school failure, delinquency, and substance abuse. Providing parents and teachers with effective strategies to help them assist the child in developing strong social and emotional skills should improve both parenting and child outcomes.

Program Features:

Incredible Years programs were developed to help caregivers meet the needs of children, specifically children with challenging behaviors or conduct problems.[1] The components of these programs include the following: 1) strengthening children's social skills, emotional regulation, and school readiness skills; 2) using praise and incentives to encourage cooperative behavior; 3) using positive discipline to respond to inappropriate behavior; and 4) handling misbehavior with positive parenting responses.

Incredible Years includes multiple programs for parents, children, and teachers. Many of these programs include children birth to 5 years of age and their parents or teachers. *Preschool/Early Childhood BASIC* series is for parents of children 3 to 6 years of age. These programs include strengthening children's social, emotional and school readiness skills, and teaching parents to use praise and other positive discipline techniques. The Incredible Years also includes a coach's and parent's manual. This program is evidence-based. Other programs in it that have less evidence include:

- *Advanced Series* is for parents of children 4 to 12 years of age. This series builds on the BASIC School Age Parent Training Program by focusing on parent interpersonal issues such as effective communication and problem solving skills, anger management, and ways to give and get support.
- *Attentive Parenting Program* is for all parents of children 2 to 6 years of age. This program is a brief, six-session, "universal" parenting group-based program that can be offered to all parents to promote their children's social and emotional competence, self-regulation skills, problem solving, reading and academic readiness.
- *Dina Dinosaur Curriculum* is designed for preschool classrooms or small groups. The general prevention program can be offered by teachers to the entire classroom. It consists of 20- to 30-minute circle-time lessons, followed by small-group practice activities and the teacher's promotion

of skills throughout the school day.

- *Teacher Classroom Management Program* is designed for all classrooms. This program focuses on classroom management strategies, promoting children's pro-social behavior, and reducing classroom aggression and noncooperation. Additionally, the intervention focuses on ways teachers can effectively collaborate with parents to support their school involvement and promote consistency from home to school.
- *The Incredible Years Treatment Program* focuses on difficult or highly aggressive children 4 to 6 years of age. This program is delivered in weekly two-hour small-group sessions (six children per group) lasting 18-20 weeks. Ideally it is offered in conjunction with the two-hour weekly parent group sessions. Group leaders explain to parents a variety of ways they can foster their children's learning in their interactions with them at home.

For more information regarding Incredible Years use this link: www.incredibleyears.com.

Targeted Audience:

Parents of children 3 to 6 years of age

Research Evidence:

Evidence for Incredible Years comes from a meta-analysis and several research reviews. Sougstad conducted a meta-analysis of 39 studies, which compared the effect sizes across the studies.[2] The findings show the program yields the greatest effect for children with established behavior problems. The results showed a small benefit in the reduction of conduct problems when Incredible Years was used for primary prevention, but studies that focused on "target groups where parenting and/or child functions are known to be at least somewhat problematic" (pp. 77-78) found small to moderate decreases in child conduct problems. Studies examining program use with the most severe and clinically significant forms of child conduct problems showed moderate to large effects on the reduction of child conduct problems. Sougstad reports that this meta-analysis provides evidence for the robustness of the Incredible Years Parent Training Program.[2]

The What Works Clearinghouse also reports that there is some evidence that the use of Incredible Years programs with adults and children can have a positive impact on the children's external behavior and social outcomes.[3] In a Cochrane Collaboration review of group-based parenting programs, two of the intervention studies used Incredible Years. Positive effects were found on children's behavior in the classroom.[4]

In addition, the developer of the Incredible Years Programs, Webster-Stratton, et al., cites research on the programs' effectiveness.[5] The authors report that six randomized control group evaluations of the parent program indicated increases in positive parent affect, reduced use of harsh discipline, increases in effective parent limit-setting, reductions in parental depression, increases in self-confidence, increases in positive family communication, and reductions in conduct problems in children's interactions with parents.

Research Evidence for the Incredible Years

	Child outcomes			Parent outcomes			
Research evidence	Positive behavioral adjustment	Positive social outcomes	Reduced conduct problems	Increased positive parenting	Decreased negative parenting	Improvement in parenting affect	Increases in positive family communication
Sougstad (2012)			✓	✓	✓		✓
What Works Clearinghouse (2011)	✓	✓					
Barlow & Parson (2007)	✓						
Webster-Stratton et al. (2001)	✓	✓	✓	✓	✓	✓	✓

References

1. Incredible Years. *The Incredible Years parents, teachers, and children training series*. [Website] 2012 Retrieved from http://www.incredibleyears.com/.
2. Sougstad, J.R., *Transforming everyday practices using scientific evidence: Meta-analysis of a parent training program.* Dissertation Abstracts International: Section A: Humanities and Social Sciences, 2012. **72**(8): p. 2684
3. What Works Clearinghouse, *The Incredible Years*. 2011, Author: Rockville, MD.
4. Barlow, J. and J. Parsons, *Group-based parent-training programmes for improving emotional and behavioural adjustment in 0-3 year old children.* Cochrane Database of Systematic Reviews, 2002. **4**.
5. Webster-Stratton, C., et al., *The Incredible Years: Parent, teacher and child training series*. Blueprints for violence prevention, ed. D.S. Elliot. Vol. Book 11. 2001, Boulder, CO: Institute of behavioral science.

Triple P — Positive Parenting Program®

Goals:

The goals of the Triple P – Positive Parenting Program are the following: 1) to prevent behavioral, emotional, and developmental problems in children, 2) to enhance the knowledge, skills, and confidence of parents, and 3) to reduce the use of corporal punishment.[1]

Theory of Change:

Parents have different parenting styles, and children have different behavioral styles. Parents need different types of parenting education and support, depending on their styles and their children's behavioral needs. Providing education and support that matches the needs of both parent and child enhances positive parenting behavior and positive parent-child interaction. This improvement in parents' knowledge, skills, and confidence improves children's behavior and emotional development.

Program Features:

The Triple P uses a multi-level parenting and family support strategy.[1] The program targets the developmental periods of infancy, toddlerhood, pre-school, elementary school, and adolescence. Within each developmental period, the intervention varies from being very broad (targeting an entire population) to quite narrow (targeting only high-risk children). Triple P incorporates five levels of intervention of increasing strength for parents.[1] Triple P includes universal and group parent education, as well as home-visiting strategies. Although it is included under Parent Education, the model also includes practices generally reviewed in the Home-Visiting Programs section.

- Level 1 is a form of universal prevention that delivers information on parenting skills to interested parents using print and electronic media.
- Level 2 involves brief, individual or seminar-based consultation with parents and caregivers. These interventions provide topic-specific guidance to parents of children with mild behavior difficulties with the aid of parenting tip sheets and videotapes that demonstrate specific parenting strategies.
- Level 3 is a four-session intervention targeting children with mild to moderate behavior difficulties and includes active skills training for parents.
- Level 4 interventions are more intensive and are conducted with individual parents, groups of parents, or by guiding parents who are using a Triple P self-help parenting book. Level 4 interventions last from 8 to 10 sessions and are for parents of children with more severe behavioral difficulties.
- Level 5 is for parents and caregivers experiencing relationship conflict, parental depression, or high levels of stress. These parents often benefit from a more intensive family intervention program.

For more information regarding Triple P – Positive Parenting Program use this link: http://www.triplep-america.com.

Target Audience:

For the first intervention level, all parents of children birth through preschool are the target audience. For the other intervention levels, parents of children birth through preschool with behavioral, emotional, and developmental problems are the target audience.

Research Evidence:

A meta-analysis of the findings from 55 studies was done to evaluate the impact of the Triple P – Positive Parenting Program on parent and child outcome measures. This analysis, which compared the effect sizes across the studies, indicated that the use of Triple P results in positive changes in parenting skills, child problem behaviors, and parental well-being in the small to moderate range, depending on the intensity of the intervention, though larger effects were found when researchers used parent report as compared to observational measures. Authors reported more improvement when the programs used more intensive formats and were used with more distressed families. The analysis clearly identified several strengths of the Triple P system, most importantly its ability to effect meaningful improvement in parents and children.[2]

Research Evidence for Triple P Parenting Program

	Adult outcomes		Child outcomes
Research evidence	Improved parenting styles	Improved parent well being	Reduced child problems
Nowak & Heinrichs (2008)	✓	✓	✓

References

1. Triple P America. *Triple P America*. [Website] n.d. Retrieved from http://www.triplep-america.com.
2. Nowak, C. and N. Heinrichs, *A comprehensive meta-analysis of Triple P-Positive Parenting Program using hierarchical linear modeling: Effectiveness and moderating variables*. Clinical Child and Family Psychology Review, 2008. **11**: p. 114-144.

Nurturing Parenting Programs

Goals:

The goals of Nurturing Parenting Programs (NPP) are the following: 1) to prevent recidivism of abuse and neglect in families receiving social services, 2) to stop the intergenerational cycle of child abuse by teaching positive parenting behaviors, and 3) to lower the rate of multiple teenage pregnancies.[1]

Theory of Change:

The positive and negative impact of life's past events shape our cognitive, emotional, and neurological responses to current events.[2] Nurturing Parenting Program instruction is based on learning approaches that help parents take old patterns of thought and behavior and consciously replace them with newer, healthier parenting patterns. NPP believes that change occurs in parenting behavior through "re-parenting", where the intervention helps parents learn new knowledge and skills and incorporate the knowledge, understanding, and skills into their daily lives. Parents learn new ways to view parenting and new ways to interact with their children that reduce the likelihood of abuse and neglect.

Program Features:

The Nurturing Parenting Programs are family-based programs that can be offered in a group setting, in a home-visiting setting, or as a combination of both group meetings and home visitation.[1] Components of the program include 1) developing empathy, facilitating parent-child bonding and attachment; 2) teaching parents appropriate expectations of children's growth, particularly ways to promote children's feelings of self-worth, trust, and security; 3) employing discipline that promotes the dignity of children and adults; 4) empowering adults and children to nurture themselves, others, and their environment; 5) promoting positive self-worth; and 6) helping all family members develop a meaningful level of self-awareness and acceptance.

Parent education programs that are designed to prevent the development of poor parenting behaviors are short-term, approximately five to 18 sessions in length. Parenting intervention programs are designed to "intervene" to prevent escalation in the early stages of maltreatment. These are generally from 12 to 20 sessions. Parenting treatment programs are designed to "treat" abusive and neglectful parent-child or parent-teen dysfunctional interactions. These are generally 15 to 25 sessions.

For more information regarding Nurturing Parenting Programs use this link: http://nurturingparenting.com.

Target Audience:

The Nurturing Parenting Programs target all families at risk for abuse and neglect with children birth to 18 years of age. The programs have been adapted for special populations, including Hmong families, military families, Hispanic families, African-American families, teen parents, foster and adoptive families, families in alcohol treatment and recovery, parents with special learning needs, and families with children with health challenges.

Research Evidence:

The majority of research on the Nurturing Parenting Programs (NPP) employs a pre-test/post-test design, but there are a few studies that have compared parents who participated in the NPP with parents in a control or comparison group. One study found parents who completed the Birth to Five NPP had significantly higher nurturing post-test mean scores in each of the five areas of the Adult-Adolescent Parenting Inventory-2 (AAPI-2) than parents in the non-Nurturing Parenting Program groups. The AAPI-2 measures parent expectations of children, empathy towards children's needs, use of corporal punishment as a means of discipline, parent-child role responsibilities, and children's power and independence.[3] An additional study included interviews with a group of parents who participated in the NPP and a group who were on a waiting list. Parents who participated in the NPP were more able to suggest positive parenting strategies when presented with a difficult parenting situation in a vignette than parents in the waiting list group. The NPP parents reported an increase in self-esteem since beginning in the program. There were no differences in the groups' abilities to identify children's physical and emotional needs, developmentally appropriate strategies, and emotions.[4]

A third study examined data from 199 parents with active child abuse cases referred to the NPP by a family reunification program. The sample included 104 NPP graduates and 95 non-graduates who had been reunified or had ongoing unsupervised contact with at least one child in the family. Results showed significantly less recidivism within the NPP graduate group as compared to the non-graduate group. Time sustained without recidivism was significantly longer for NPP graduates than for non-graduates. Physical abuse was reduced by almost 50 percent (50%) for graduates with recidivism offenses. NPP graduates appear to be at lower risk for repeated child abuse, appear to use less physical violence when recidivism does occur, and sustain longer periods of time without recidivism than non-graduates.[5]

Research Evidence for Nurturing Parenting Program

	Parent outcomes							
Research evidence	More realistic expectations of children	Empathy towards children's needs	Reduced use of corporal punishment as a means of discipline	Parent-child role responsibilities	Children's power and independence	Positive parenting strategies	Increase in self-esteem	Reduction of recidivism of physical abuse
Bavolek & Weikert (2005)	✓	✓	✓	✓	✓			
Safe Child (2002)						✓	✓	
Wagner (2001)								✓

References

1. Family Development Resources. *Nurturing Parenting Program*. [Website] 2011. Retrieved from http://nurturingparenting.com/about.html.
2. Family Development Resources, I., *The nurturing parenting programs comprehensive review*. 2012, Author: Park City, UT.
3. Bavolek, S.J.K., R. Weikert, P., *The Florida Study: A Comparative Examination of the Effectiveness of the Nurturing Parenting Programs*. 2005.
4. Safe Child, "*An Evaluation of the Nurturing Parenting Program at Safe Child"*. 2002.
5. Wagner, K.F., *Parenting Education and Child Welfare Recidivism: A Comparative Study of the Nurturing Parenting Program Graduates and Non-Graduates of Fresno County*. 2001.

Baby FAST and Pre-K FAST™

Baby FAST

Goals:

The goals of Baby FAST are the following: 1) to reduce family conflict and stress, 2) to improve parents' awareness of how to care for an infant, 3) to improve family unity and communication, including extended family, 4) to improve parenting skills, and 5) to improve parental self-esteem and social skills.[1]

Theory of Change:

Providing support to all caregivers of a child and to their extended family should help vulnerable first-time mothers and their families provide optimal care for children. Baby FAST improves outcomes for children by identifying risks early in a child's life and by increasing parents' knowledge about optimal family functioning and parenting.

Program Features:

Parents commit to participate in Baby FAST for eight weeks.[1] Parents meet with other parents and a FAST team leader. Sessions last for two and a half hours and often meet in child care centers. Programs include a graduation, after which parents work together as a virtual community and meet regularly to support each other.

Content of Baby FAST includes family-strengthening activities, maternal treatment (emotional, interpersonal, and self-esteem), optimizing floor play, baby massage, dialogic reading techniques, father coaching and interaction, grandparent support skills, and sibling support time.

For more information regarding Baby FAST use this link: http://www.familiesandschools.org/programs/faby-fast.php.

Target Audience:

First-time mothers with infants and toddlers (ages birth-3) and their extended families

Pre-K FAST

Goals:

The goals of Pre-K FAST are the following: 1) all children have a chance to enter school ready to learn and 2) all children will be capable of achievement at their own level.[2]

Theory of Change:

Providing a good learning and developmental environment early in children's lives impacts how

well they will do in school, allowing them to reach important milestones in their early elementary years. Children who are doing well in school, meeting expectations, and finding good friendships are developing appropriately. Helping parents through guidance about how to strengthen their family, improve communication, work on problem solving, as well as linking families to community resources, and giving parents an opportunity to work though issues with peers should lead to improved family functioning and better outcomes for children.

Program Features:

Parents commit to participate in Pre-K FAST for 10 weeks.[2] Parents meet with other parents and a FAST team leader. Sessions last for two and a half hours and often meet in child care centers. Programs include a graduation, after which parents work together as a virtual community and meet regularly to support each other.

Content of Pre-K FAST includes family strengthening activities and family communication exercises (e.g., talking about feelings, nonverbal communication, creative expression, and family engagement). Parents and children also participate in breakout groups. Parent groups include group problem-solving and mutual support, presentations from community service providers, and parent-to-parent peer communications and support. Breakout groups for children include personal and group play and problem-solving, team activities and recognition of children. Parents and children also participate in joint breakout sessions.

For more information regarding Pre-K FAST use this link: http://www.familiesandschools.org/programs/ed-fast.php.

Target Audience:

Children 3 to 6 years of age and their caregivers

Research Evidence:

The evidence for Baby FAST consists of assessments of parents' attitudes before and after their participation in Baby FAST.[3] Parents reported improvements in their relationships within their families, with community relationships, with their feelings of competence, with their sense of social support, and with children's behavior.

Additional anecdotal evidence comes from participants' perceptions about the value of Baby FAST. Parents have commented that it minimized their negative parenting and helped them interact with their infant "without getting upset." Parents reported that they felt their relationships with their children improved when they learned about their children and better understood what their children want. They found information about keeping their children safe and learning about baby massage helpful. Parents reported improvements in their interactions with partners and their parents (the children's grandparents). Parents also reported that their children played more after participating in Baby FAST.[3] Evidence for Pre-K FAST comes from teacher assessments.[4] Teachers reported that parents were more involved in their children's education and that the children's behavior improved.

Research Evidence for Baby FAST and Pre-K FAST

	Parent outcomes						Child outcomes	
Research Evidence	Baby FAST parents report improved relations within their families	Baby FAST parents report improved community relations	Baby FAST parents report increased self-efficacy	Baby FAST parents report increased social support	Baby FAST parents report increased reciprocal support	Pre-K FAST teachers reported increased parent involvement in child's education	Pre-K FAST teachers reported improed child behavior	Baby FAST parents report improved child behavior
Families and Schools Together (2012)	✓	✓	✓	✓	✓			✓
Families and Schools Together (2012)						✓	✓	

References

1. Baby FAST Overview. *Baby FAST*. [Website] 2012. Retrieved from: http://www.familiesandschools.org/programs/baby-fast.php.
2. Pre-K FAST Overview. *Pre-K FAST*. [Website] 2012. Retrieved from: http://www.familiesandschools.org/programs/ec-fast.php.
3. Families and Schools Together, Inc., *Baby FAST summary outcomes*. 2012, Author: Madison, WI.
4. Families and Schools Together, Inc., *Pre-k FAST aggregate report: 2004-2012 FASTcycles statistical outcomes*. 2012, Author: Madison, WI.

Circle of Parents®

Goals:

The goals of Circle of Parents are the following: 1) to prevent child abuse and neglect and 2) to strengthen families.[1]

Theory of Change:

Parenting young children can offer many challenges. Giving parents the opportunity to engage in parenting groups with others who face similar challenges can provide emotional support and opportunities to learn new parenting skills. When parents hold the leadership roles in these groups, they gain new skills and confidence in themselves that are likely to have a positive influence on their understanding of and interactions with their children.

Program Features:

Circle of Parents is a confidential support group for parents at risk of child abuse or neglect. The focus of the program is prevention.[1] Meetings are conducted weekly, are free of charge, and foster an open exchange of ideas, support, information, and resources. Instead of formal training or advising, these parents engage in shared leadership of the meetings, helping support each other, and brainstorming solutions to parenting challenges.[1]

Children's programs are offered as part of Circle of Parents programming. Children's programs provide an additional incentive for parents to attend Circle of Parents meetings by providing an entertaining and educational place for their children. Children's programs are staffed by child care workers who have been screened and trained by individual programs.

The Circle of Parents support groups belong to the parents who attend. These parents are encouraged to take ownership of the group by, for example, setting goals for the group. Group members work with professionals to build successful partnerships and share responsibility for the group.

For more information regarding Circle of Parents use this link: http://www.circleofparents.org/.

Target Audience:

Open to all parents but targets parents at risk of abuse or neglect

Research Evidence:

The evidence for Circle of Parents comes from pre-post parent assessments from several states.[2] These parents were asked about their perceived parenting and management skills, quality of family interactions, support awareness, and use of community resources. Significant improvements were noted in several parenting domains, including parents' reports of having more appropriate expectations for

their children and better self-management skills. In Florida, North Carolina, and Washington, parents reported an increase in the awareness and use of support systems. The Washington evaluation also demonstrated that improvements in parental outcomes grew with the number of sessions attended.

Circle of Parents was originally called Parents Anonymous and under that name was evaluated through interviews with parents who were in the program to determine the impact the program had on them.[3] A majority of parents reported that the program provided them with the services needed to raise a healthy child, allowed them to form relationships with other parents, helped make parenting easier, and changed the way they parent their children. The most at-risk parents reported even greater change. These parents reported less parenting distress, less parenting rigidity, and less psychological aggression. In this evaluation, too few parents had involvement with Child Protective Services for there to be analyses examining whether actual levels of abuse and neglect changed over time.[3]

Research Evidence for Circle of Parents

	Parent outcomes					
Research evidence	Increased appropriate expectations for children	Enhanced self-management skills	Increased awareness of community resources	Increased use of support systems and community resources	Perceived parenting as easier	Reduced harsh parenting and risk factors such as drug and alcohol use
Falconer et al. (2008)	✓	✓	✓	✓		
National Council on Crime and Delinquency (2007)				✓	✓	✓

References

1. Circle of Parents Overview. *Circle of Parents*. [Website] n.d. Retrieved from: http://www.circleofparents.org/.
2. Falconer, M.K., et al., *Evaluation of support groups for child abuse prevention: Outcomes of four state evaluations.* Social Work with Groups, 2008. **31**: p. 165-182.
3. National Council on Crime and Delinquency, *Outcome evaluation of parents anonymous*. 2007, Author: Oakland, CA.

Home-Visiting Programs

This section covers evidence for the effectiveness of home-visiting programs. The following section then provides research evidence for specific home-visiting programs (Healthy Families, Nurse Family Partnerships, and Parents as Teachers). Triple P, which includes group parent education strategies as well as z, is discussed in the prior section on Group-Based Parent Education and Support.

Goals:

The goals of home-visiting programs are typically one or more of the following: 1) to provide family support, 2) to build parenting skills, 3) to enhance cognitive development of children, 4) to promote a safe and healthy home environment for children, and 5) to prepare children for school.

Theory of Change:

The home environment, both physical and emotional, impacts either positively or negatively the development of children. For young children a critical part of that environment is parent-child interaction. If the parent-child interaction is consistently positive and encourages children to learn and explore their environment, then children's development will be enhanced. Children's physical development will be promoted if the home environment is free of violence and dangerous materials, provides nutritional food, and offers opportunities for physical activity.

Home visitors provide individual support to parents who struggle with parenting roles because of a variety of personal or environmental factors.

Practice Features:

Early childhood home visiting is defined here as a strategy for delivering a broad range of services and supports to at-risk families who are expecting a baby or have young children.[1] Home-visiting models vary on a number of dimensions. For example, the length of involvement with the family, frequency and length of the home visits, and focus or content of the home visits may vary. However, there are some characteristics that are usually present. Generally, visits are conducted in the home; the content is individualized, to varying degrees, to meet the needs of the parent; and the target child(ren) is(are) present during at least part of the visit.

Research Evidence:

The research evidence on home visiting was found in two reviews that summarized the evidence regarding the outcomes of home-visiting programs. One review of the effectiveness of home visiting was published in 2011 by Home Visiting Evidence of Effectiveness (HomVEE).[2] The HomVEE review included 710 studies of home-visiting program models that served families with pregnant women and children from birth to 5 years of age. This review only included home-visiting models that meet the Health and Human Services criteria as evidence based.[1] The second review by Howard and Brooks-Gunn examined evaluations of nine home-visiting programs from the United States, New Zealand, and the Netherlands.[3] They examined outcomes related to parenting and child well-being including abuse and neglect.

These reviews found evidence for improvements in child health, maternal health, child development and school readiness, positive parenting practices, and the home environment. They also found reductions in child maltreatment, parenting stress and depression, and parenting harshness.

Research Evidence for General Home Visiting

Programs	Parent outcomes						Child outcomes		
	Home environment	Maternal health	Reduce parenting harshness	Positive parenting practices	Linkages and referrals	Reduced depression and parenting stress	Child health	Child development and school readiness	Reductions in child maltreatment
Healthy Families America	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nurse Family Partnership	✓	✓	✓	✓			✓	✓	✓
Parents as Teachers				✓				✓	

References

1. Avellar, S. and D. Paulsell, *Lessons learned from the Home Visiting Evidence of Effectiveness review*. 2011, U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation: Princeton, NJ.
2. Paulsell, D., et al., *Home Visiting Evidence of Effectiveness Review: Executive Summary.* 2011, U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation: Washington, DC.
3. Howard, K.S. and J. Brooks-Gunn, *The role of home-visiting programs in preventing child abuse and neglect.* Future of Children, 2009. **19**(2): p. 119-146.

Healthy Families America®

Goals:

The goals of Healthy Families America (HFA) are the following: 1) to build and sustain community partnerships to systematically engage overburdened families in home-visiting services prenatally or at birth, 2) to cultivate and strengthen nurturing parent-child relationships, 3) to promote healthy childhood growth and development, and 4) to enhance family functioning by reducing risk and building protective factors.[1]

Theory of Change:

In order for children to grow, develop, and reach their individual potential, they need a stable, secure, responsive, and supportive home environment. When families are faced with multiple challenges, such as previous experiences of abuse or neglect, current substance abuse and mental health issues, or violent surroundings, they often are not able to provide an environment that is supportive of positive outcomes for children. Programs that provide families who are at risk with long-term guidance about positive parenting, child health, and child development are likely to help prevent child abuse, neglect, and other poor childhood outcomes.

Program Features:

Healthy Families America is a home-visiting program developed to work with families who may have histories of trauma, intimate partner violence, mental health issues, and/or substance abuse issues. [1] HFA has defined three critical elements of the program. The first critical element involves entrance into the program including the following:

- initiation of services prenatally or at the birth of the baby,
- use of a standardized assessment tool to systematically identify families who are most in need of services, and
- offer voluntary services that use positive outreach efforts to build family trust.

The second critical element focuses on service content and includes the following components:

- services are provided over the long term (three to five years) using well-defined criteria for increasing or decreasing frequency of services,
- services should be culturally competent and materials must reflect the diversity of those being served,
- comprehensive services should support the parent as well as parent-child interaction and child development,
- families are linked to a medical provider and any additional services as needed, and
- staff should have limited caseloads (10 to15 families).

The third critical element focuses on staff characteristics and includes the following:

- service providers are selected based on their ability to establish a trusting relationship with families,
- service providers receive intensive training specific to their role, and
- staff receive ongoing, effective supervision.

For more information regarding Healthy Families America use this link: http://www.healthyfamiliesamerica.org.

Target Audience:

Families with infants (prenatal to shortly after birth) who are at risk for adverse childhood experiences, including child maltreatment

Research Evidence:

Two research reviews of HFA report evidence for its effectiveness. A review of home visiting conducted by the Department of Health and Human Services (HomVEE) in 2011 included three studies that compared families who were randomly assigned to receive HFA services with families who did not get HFA services. These studies found substantial evidence for the effectiveness of Healthy Families America.[2] This review reports the following results.

Healthy Families America (HFA) had favorable impacts in eight domains (child development and school readiness; child health; family economic self-sufficiency; linkages and referrals; maternal health; positive parenting practices; reductions in child maltreatment; and reductions in juvenile delinquency, family violence, and crime). The findings in child development and school readiness, child health, family economic self-sufficiency; positive parenting practices, and reductions in child maltreatment were replicated in more than one group of participants. At least one positive finding in all eight domains was sustained for at least one year after program inception. At least one favorable impact in child development, school readiness, and reductions in child maltreatment lasted for at least one year after participants completed the program.

A research review by Howard and Brooks-Gunn (2009) of the evidence from HFA sites included three studies where families were randomly assigned to receive either HFA interventions or not to receive HFA interventions. There were positive results for a reduction of parent-reported parent abuse and neglect, but no effects were found for substantiated abuse and neglect, child health and safety, home environment, and parent responsivity. Parenting harshness, depression and parenting stress, and child cognition had some positive effects for some, but not for all groups.[3]

Research Evidence for Healthy Families America

	Parent outcomes						Child outcomes		
Research evidence	Home environment	Maternal health	Reduced parenting harshness	Positive parenting practices	Linkages and referrals	Reduced depression and parental stress	Child health	Child development and school readiness	Reductions in child maltreatment
Paulsell et al. 2011)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Howard & Brooks-Gunn (2009)			✓	✓				✓	✓

References

1. Prevent Child Abuse America. *Healthy Parents America*. [Website] 2012; Retrieved from: http://www.healthyfamiliesamerica.org.
2. Paulsell, D., et al., *Home visiting evidence of effectiveness review: Executive summary*. 2011, U.S. Department of Health and Human Services, Office of Planning, Research and Evaluation, Administration for Children and Families: Washington, DC.
3. Howard, K.S. and J. Brooks-Gunn, *The role of home-visiting programs in preventing child abuse and neglect.* Future of Children, 2009. **19**(2): p. 119-146.

Nurse-Family Partnership®

Goals:

The goals of Nurse-Family Partnership (NFP) are the following: 1) to improve pregnancy outcomes, 2) to improve child health and development, and 3) to improve the economic self-sufficiency of the family.[1]

Theory of Change:

Providing mothers with education about and support during their pregnancy and childbirth experiences are strategies that reduce the likelihood of pregnancy and birth complications. Children from low income families who experience fewer complications during pregnancy and birth begin life with fewer challenges to overcome. Helping first-time mothers learn good techniques for providing children responsible and competent care helps to shape positive parent-child interactions. Positive parent-child interactions set children on a path toward optimal social-emotional development and positive cognitive outcomes.

Program Features:

In Nurse-Family Partnership, nurses conduct home visits beginning at pregnancy and continuing until the child is 2 years old.[1] The home-visiting nurse must be trained in how to develop therapeutic relationships and in the content of the home visits. The program is built around 64 home visits, each lasting between 60 and 90 minutes. The mothers are enrolled as early as possible, ideally by the 16th week of pregnancy. Nurses begin weekly home visits as soon as the mother is enrolled and continue for the first six weeks after delivery. Home visits are reduced to every other week until the child is 21 months old and then occur monthly until the child's second birthday.

The focus of the home-visiting content changes over time. During pregnancy, the nurse focuses on helping pregnant women find prenatal care, improve their diet, and reduce the use of cigarettes, alcohol, and illegal substances. Nurses also help the mother prepare emotionally for the arrival of the baby by educating her on the birth process and the immediate challenges of the first few weeks after delivery. They provide individualized parent coaching aimed at increasing awareness of specific child development milestones and behaviors, and encourage parents to use praise and other nonviolent techniques. Another focus is the promotion of economic self-sufficiency among mothers by encouraging them to develop a vision for their future, stay in school, find employment, and plan future pregnancies.

For more information regarding Nurse-Family Partnership use this link: http://www.nursefamilypartnership.org.

Target Audience:

Low income, first-time mothers who enroll early in their pregnancy

Research Evidence:

A summary of the evidence is based on a systematic search of the literature conducted by the Coalition for Evidence Based Policy and two reviews of studies that compared the outcomes for women who were randomly assigned to either the Nurse-Family Partnership program or the control group conducted by Olds et al., (1999) and Olds (2010).[2, 4] The reviews found the program to produce sizeable, sustained effects on important mother and child outcomes. Not all positive outcomes are replicated in every trial, but there is clear evidence that this program improves the well-being of families with young children, particularly those with mothers who have low psychological resources (i.e., intelligence, mental health, self-confidence).[3, 4]

The specific effects that were replicated in two or more of the studies are the following: 1) reduction in measures of child abuse and neglect (including injuries and accidents), 2) reduction in mothers' subsequent births, 3) reduction in prenatal smoking among mothers who smoked at the start of the study, and 4) improvement in cognitive and/or academic outcomes for children born to mothers with low psychological resources (i.e., intelligence, mental health, self-confidence).[3]

The program benefitted the neediest families (low-income, unmarried women). Among these women, the program helped reduce rates of childhood injuries that may be associated with child abuse and neglect and helped mothers defer subsequent pregnancies and move into the work force. Having fewer children enabled women to become economically self-sufficient, and eventually avoid substance abuse and criminal behavior. One of the clearest messages that emerged from this research is that the functional and economic benefits of the nurse home visiting program are greatest for the families at the highest risk.[2]

Research Evidence for Nurse-Family Partnership

	Parent outcomes						Child outcomes	
Research evidence	Reduced parenting harshness	Maternal health	Home environment	Reductions in child maltreatment or injuries	Reduction in subsequent births	Positive parenting practices	Child development and school readiness	Child health
Coalition for Evidence-Based Policy (2008)	✓	✓		✓	✓	✓	✓	✓
Olds et al. (1999)				✓	✓	✓		
Olds (2010)	✓	✓	✓	✓	✓		✓	

References

1. Nurse Family Partnership. *Nurse Family Partnership.* [Website] n.d. Available from: http://www.nursefamilypartnership.org/.
2. Olds, D. L. (1999). The nurse home visitation program. *Future of Children, 9*(1), 190-191.
3. Advisory Panel, *Evidence Summary for the Nurse Family Partnership. Department of Education*. 2008, Coalition for Evidence Based Policy: Washington, DC. Updated March 2012
4. Olds, D. (2010). The Nurse Family Partnership: From trials to practice. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), *Childhood Programs and Practices in the First Decade of Life*. New York: Cambridge University Press.

Parents as Teachers™

Goals:

The goals of Parents as Teachers (PAT) are to provide the following: 1) information, 2) support, and 3) encouragement to parents so they can help their children learn, grow, and develop to their fullest potential.[1]

Theory of Change:

The early years of a child's life are critical for optimal development and provide the foundation for success in school and in life. Parents are their children's first and most influential teachers. Providing parents with information to assist them in understanding their role and use of specific parenting strategies helps them better support their children's development. Educating parents about young children's health issues and providing information on early detection of developmental delays helps improve their children's readiness for school.

Program Features:

Parents as Teachers is a home-visiting model providing a broad context of parenting education and family support, and building protective factors, especially for families in vulnerable situations.[1] PAT parent educators use a relationship-based and parenting-focused approach. Parent educators conduct the home visits focusing on parent-child interaction, development-centered parenting, and family well-being.

The PAT model has four components that all affiliate programs are required to provide: 1) one-on-one personal (or home) visits, 2) group connections (or group parent meetings), 3) health and developmental screenings for children, and 4) a resource network for families. Affiliate programs offer families 10 to 12 home visits annually (at minimum). Programs must offer higher-need families 24 visits annually. In some cases, visit frequency may be gradually decreased as the family transitions out of PAT and into other services. Home visits by a trained parent educator last 60 minutes. Affiliate programs offer group connections (or meetings) monthly and determine the length of services. Some programs may choose to focus services primarily on pregnant women and families with children from birth to age 3 years; others may offer services from pregnancy through kindergarten entry.[2]

For more information regarding Parents as Teachers use this link: www.parentsasteachers.org.

Target Audience:

Parents of children birth to 5 years of age, individual programs may target specific groups, such as teen parents

Research Evidence:

Research evidence for Parents as Teachers comes from two systematic reviews. The first of these reviews is the Home Visiting Evidence of Effectiveness Review (HomVEE). PAT meets the HomVEE

criteria of an evidence-based program because at least one high- or moderate-quality impact study of the model found favorable statistically significant impacts in two or more domains. Studies that compared the outcomes of families that were randomly assigned to PAT intervention groups and those that did not receive PAT found favorable impacts in the following areas: 1) child development, 2) school readiness, and 3) positive parenting practices. Favorable impacts in child development and school readiness were replicated in at least one other study sample. The evidence available indicated that favorable impacts in child development and school readiness and positive parenting practices were sustained for at least one year post program inception but did not indicate any of the impacts lasted one year after the program ends.[3]

The Promising Practices Network (PPN) review of programs done in 2008 found that PAT improves the lives of children and families. The PPN describes Parents as Teachers as a promising practice.[4] PPN reviewed 10 publications evaluating Parents as Teachers. They found mixed results in terms of positive outcomes for families participating in PAT. Although not all studies found positive outcomes, many of these studies found some group differences between children and families that did and did not participate in PAT. There was some evidence of cognitive and language improvements, social development, reduced welfare dependence, and enrollment in remedial special education. Several studies found greater effects with children from low-income households.

Research Evidence for Parents as Teachers

	Parent outcomes			Child outcomes				
Research evidence	Reduced welfare dependence	Positive parenting practices	Improved identification of developmental delays	Increased cognitive development	Increased physical or motor development	Increased social/ emotional development	Increased child school readiness	Increased child development
Paulsell et al. (2011)		✓					✓	✓
Promising Practices Network (2008)	✓		✓	✓	✓	✓		✓

References

1. Parents as Teachers National Center. *Parents As Teachers*. [Website] 2010. Retrieved from: www.parentsasteachers.org.
2. Administration for Children and Families. *Implementing Parents as Teachers (PAT) Program Model Overview*. 2011. Retrieved from: http://homvee.acf.hhs.gov/document.aspx?rid=3&sid=16.
3. Paulsell, D., et al., *Home Visiting Evidence of Effectiveness Review: Executive Summary.* 2011, U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation: Washington, DC.
4. Promising Practices Network on Children, Families and Communities. *Parents as Teachers: Key evaluation findings*. 2008. Retrieved from http://www.promisingpractices.net/program.asp?programid=88#findings.

HEALTH

Introduction

This chapter provides a general overview of the effectiveness of programs that aim to improve child health through nutrition, physical activity, and obesity-prevention strategies. It presents the evidence for the effectiveness of Be Active Kids, Color Me Healthy, Nutrition and Physical Activity Self-Assessment for Child Care, and Preventing Obesity by Design. The last program is Assuring Better Child Health and Development (ABCD), which focuses on the consistent use of developmental screenings within primary care practices and referrals to Early Intervention agencies

Healthy Nutrition and Physical Activity

Goals:

The goals of healthy nutrition and physical activity programs are the following: 1) to increase children's intake of vegetables and fruits, 2) to decrease children's intake of unhealthy foods (sugar and fat), 3) to increase amount of time children spend in moderate to high intensity physical activity, and 4) to decrease the amount of time children participate in sedentary activities.

Theory of Change:

The prevention of obesity in young children requires a healthy diet and physical activity. With young children it is essential that caregivers in both home and child care facilities provide healthy foods and many opportunities for physical activity. Adults can help children understand why these activities are important and help them develop the appropriate habits.

Practice Features:

Nutritional and physical activity programs provide information about healthy eating and the need for appropriate amounts of physical activity. These programs vary on a number of dimensions. For example, some have a curriculum, some focus on the development of an environment that encourages activity, the target audience might be the parent, caregiver, child or different combinations, and the context might be the home, child care center, or the community. Interventions with young children include activities such as increasing exercise, offering mothers parenting support groups with a focus on the topic of eating and exercise, and reducing fat content of food served in child care facilities. The programs build on the essential role of adults in these issues and frequently on the fact that children's physical activity habits are more likely to change if children perceive the activity as fun.

Research Evidence:

Although many interventions with a focus on healthy nutrition, physical activity, and obesity prevention have been conducted with children in school settings, there have been only a few strong research studies conducted in child care centers or with families of young children. A review and research synthesis of interventions conducted with preschool children found some success in weight reduction.[1, 2] The

review included seven studies of preschool children that used physical activity and nutritional strategies in interventions, lasted at least 3 months, and had an outcome variable of weight status, Body Mass Index (BMI), or body fat.[1] Four of the seven studies found a significant reduction in weight or body fat status; two found no change, and one demonstrated mixed findings dependent on the race of the child. Effective results were found across a variety of intervention settings (in-home, child care, preschool, and clinic).When measured, effectiveness of intervention varied across race/ethnicity of the child, suggesting that future studies might include effective cultural diversity implementation strategies.

The research review included six studies that examined interventions in child care settings. Among these studies there were mixed results. One study found favorable changes in BMI-for-age percentile, percent body fat, and fitness in an intervention group. One study found reduced cholesterol and consumption of fat in meals, but no effect on weight-to-height ratio. A third study found children in the intervention group had smaller increases in BMI compared to the control group. This was not replicated with a Latino sample. A study that targeted television viewing found that the percentage of children in the intervention group watching more than two hours a day decreased from 33% to 18%. This study found no effect on children's BMI.[2]

Research Evidence for Healthy Nutrition, Physical Activity, and Obesity Prevention

	Child outcomes				
Research evidence	Decrease in BMI	Decrease in weight	Reduction in TV watching	Reduction in amount of saturated fat in meals	Lowered cholesterol
Bluford et al. (2007)	✓	✓	✓	✓	✓
Robert Wood Johnson Foundation (2011)	✓		✓	✓	✓

References

1. Bluford, D.A.A., B. Sherry, and K.S. Scanlon, *Interventions to prevent or treat obesity in preschool children: A review of evaluated programs.* Obesity, 2007. **15**: p. 1356-1372.
2. Robert Wood Johnson Foundation, *Preventing obesity among preschool children: How can child-care settings promote healthy eating and physical activity*. 2011, Author: Princeton, NJ.

Be Active Kids®

Goals:

The goal of Be Active Kids (BAK) is to give young children the tools they need to develop positive physical activity and nutrition habits.[1]

Theory of Change:

Physical activity for children can be increased when adult caregivers understand how to facilitate the natural tendency of young children to move. In addition to educational materials, providing caregivers with special training about how to increase children's knowledge of healthy eating, physical activity, and food safety should lead to healthier lifestyles for children.

Program Features:

Be Active Kids is a program developed by health professionals to educate preschoolers about healthy options for physical activities, eating habits, and food safety.[1] Designed for use in any preschool classroom setting, the Be Active Kids program consists of special training for the child care provider as well as a kit of educational materials, interactive games, and hands-on lesson plans to help engage children in learning about healthy lifestyles.[1]

There are 10 specific areas covered by the curriculum. The focus of the modules is the following:

- Understand the importance of physical activity, movement, skill development and play
- Assess the environment in terms of health issues
- Set goals and create an action plan related to physical activity
- Integrate physical activity into planning routines
- Alter policies related to physical activity
- Incorporate staff wellness, including physical activity
- Provide parent education related to physical activity and play
- Alter indoor and outdoor environments to enhance physical activity and active play
- Choose and use physical activity equipment appropriately
- Sustain an active and healthy environment

Be Active Kids also offers several training modules to assist in the continuing education of early childhood professionals. The training modules vary in length from one to five hours. Be Active Kids trainings relate to the following NC Division of Child Development topic areas: 1) planning a safe, healthy learning environment; 2) children's physical and intellectual development; 3) child growth development; and 4) productive relationships with families.

For more information regarding Be Active Kids use this link: http://beactivekids.org/bak/Front/Default.aspx.

Target Audience:

Early care and education professionals who work with children 4 and 5 years of age

Research Evidence:

The evidence for Be Active Kids includes two studies, both of which include a control group of children who did not receive the BAK curriculum. Dunn et al. (2001) and Smith et al. (2007) evaluated the effectiveness of the program.[2, 3] Early care professionals that used the educational materials viewed them as useful and were likely to use them in the future. After being trained, a majority of early care professionals responded that they believed Be Active Kids increased children's knowledge about healthy eating, increased the general physical activity of the children, and increased children's knowledge about healthy physical activity. Almost all of the professionals reported an increase in their perception of the importance of teaching healthy lifestyles to children.[2, 3] Ten weeks after the implementation of BAK, professionals showed significant improvement in their self-efficacy to teach nutrition and food safety to children. Both the professionals' positive attitudes about the importance of nutrition for reducing risk of chronic disease in childhood and adulthood and their positive attitudes about the importance of physical activity for improving child health and adult health significantly increased.[3]

Children who participated in the program recognized significantly more fruits and vegetables than children who did not participate. The children in the program also were more likely to be able to name at least three healthy foods as well as understand or at least demonstrate what constitutes physical activity. [2, 3] There was also a significant increase in the number of BAK children who had three or more servings of vegetables a day.

Research Evidence for Be Active Kids

	Child outcomes							Adult outcomes	
Research evidence	Reduction in TV watching	Increase in children drinking skim or low-fat milk and eating 3 or more servings of vegetables a day	Ability to recognize more fruits and vegetables	Ability to demonstrate knowledge of healthy foods	Ability to demonstrate knowledge of physical activity	Adult reported increase in children's physical activity levels	Adult reported increase in children's healthy eating habits	Increase attitude about importance of good nutrition	Increase attitude about importance of physical activity
Dunn et al. (2001)			✓	✓	✓	✓	✓		
Smith et al. 2007	✓	✓						✓	✓

References

1. Be Active Kids. *Be Active Kids.* [Website]. n.d. Available from: http://beactivekids.org/bak/Front/Default.aspx.
2. Dunn, C., et al., *Be Active Kids: A nutrition and physical activity education program for four- and five-year-olds.* Forum for Family and Consumer Issues, 2001. **6**(3).
3. Smith, M., et al., *Be Active Kids evaluation report*. 2007, Blue Cross Blue Shield of North Carolina: Durham, NC.

Color Me Healthy

Goals:

The goals of Color Me Healthy are the following: 1) to introduce children at an early age to nutritious foods, 2) to help children explore opportunities for physical activity, and 3) to have young children share nutrition and activity messages with those living in their homes.[1]

Theory of Change:

Activities that help children learn to like healthy foods are likely to improve their consumption of healthy food and snacks. Activities that make participation in physical activities fun and enjoyable are likely to increase children's willingness to engage in these activities. Encouraging the development of these habits early in life should increase the likelihood that children will continue these healthy habits as they grow older.

Program Features:

Color Me Healthy is a program delivered in child care centers, home child care programs, and Head Start classrooms. This curriculum is used with 4- and 5-year-olds and is designed to show children that healthy food and physical activity are fun. This is accomplished through the use of activities designed to stimulate all of the child's senses.[1]

The Color Me Healthy curriculum includes a teacher's guide, picture cards, classroom posters, a compact disk, and cassette tape with seven songs, and reproducible parent newsletters. The teacher's guide contains 12 lessons designed to be used during "circle time" that last 15 to 30 minutes and can be taught daily or weekly. Also included in the kit are six "imaginary trips" that allow children to use their imagination to travel to different places or events.

The newsletters are designed to provide families with information about healthy eating and physical activity. They also provide suggestions about how the family can be active together and ways to encourage more fruit and vegetable consumption. They are written on a fifth-grade reading level.

In the North Carolina counties that offer Color Me Healthy, staff training is provided by N.C. Cooperative Extension agents and a local community partner, usually the county health department.

For more information regarding Color Me Healthy use this link: http://www.colormehealthy.com.

Target Audience:

Children in child care 4 to 5 years of age and their families

Research Evidence:

The evidence for the effectiveness of Color Me Healthy (CMH) comes from two individual studies and

a rating by the Healthy San Bernardino Promising Practices database as an effective program.[2] One of the two studies randomly assigned the 17 participating child care centers to either the group that used the curriculum or the group that did not use it.[3] The second study asked early care participants who attended training to complete an evaluation survey immediately after the training and again eight weeks later.[4]

The results from the first study found that there was a significant increase in the consumption of fruit and vegetable snacks for the children in the CMH group three months after the completion of the CMH program.[3] The second study found that early care professionals reported that using CMH curriculum increased children's physical activity, knowledge about movement, knowledge about healthy eating, willingness to try new foods, and improved fruit and vegetable recognition.[4] These early care professionals also reported improvement in their awareness of the importance of teaching nutrition to young children.[4]

Research Evidence for Color Me Healthy

	Child outcomes	Child care provider reported child outcomes				
Research evidence	Increased consumption of fruit and vegetable snacks	Increased physical activity	Increased knowledge about movement	Increased knowledge about healthy eating	Increased willingness to try new foods	Improved fruit and vegetable recognition
Witt, et al. (2012)	✓					
Dunn, et al. (2006)		✓	✓	✓	✓	✓

References

1. North Carolina Division of Public Health. *Color Me Healthy*. 2012. Retrieved from http://www.colormehealthy.com/.
2. San Bernardino County Department of Public Health. *Healthy San Bernardino: Promising Practices database*. 2006. Retrieved from http://www.healthysanbernadinocounty.org/modules.php?op=modload&name=PromisePractice&file=index.
3. Witt, K.E., & Dunn, C. , *Increasing Fruit and Vegetable Consumption among Preschoolers: Evaluation of Color Me Healthy.* Journal of Nutrition Education and Behavior, 2012. **44**(2): p. 107-113.
4. Dunn, C., et al., *Design and implementation of a nutrition and physical activity curriculum for child care settings.* Preventing Chronic Disease, 2006. **3**(2): p. 1-8.

Nutrition and Physical Activity Self Assessment for Child Care

Goals:

The goals of Nutrition and Physical Activity Self Assessment for Child Care (NAP SACC) are the following: 1) to improve the nutritional quality of food served, 2) to improve the amount and quality of physical activities, 3) to improve child care center nutrition and physical activity policy, and 4) to encourage staff-child interactions.[1]

Theory of Change:

Child care environments should support the healthy development of young children. Child care center directors and staff play an important role in supporting children's level of physical activity and healthy nutritional in-take. When child care directors and staff identify their goals in nutrition and physical activity and receive targeted technical assistance, it is likely there will be improvements in nutrition for children, physical activity for children, and eventually child obesity rates, as well as gains in personal health and wellness for staff.

Program Features:

NAP SACC interventions include the following components:

- Self-Assessment: The child care director and key staff complete the NAP SACC self-assessment tool, assessing the center on areas of nutrition and physical activity. The self-assessment is completed every six months.
- Action Planning: Based on self-assessment answers, with guidance and support from the NAP SACC consultant, centers choose three to four areas for improvement and create an Action Plan for making the improvements.
- Workshops: The NAP SACC consultant delivers four workshops to the child care center staff covering the topics: 1) childhood overweight, 2) nutrition for children, 3) physical activity for children, and 4) personal health and wellness for the staff.
- Targeted technical assistance: NAP SACC consultants maintain regular contact with the centers to provide support and guidance in making the improvements.

Evaluate, Revise, and Repeat: The NAP SACC self-assessment instrument is completed a second time to see where improvements have or have not been made. At this time the Action Plan is revised to include new goals and objectives and technical assistance continues.[1]

For more information regarding Nutrition and Physical Activity Self Assessment for Child Care use this link: http://www.napsacc.org/.

Target Audience:

Early care professionals and preschool children ages 2to 5 years of age

Research Evidence:

Research evidence for NAP SACC comes from two studies which assessed a group of centers that received NAP SACC services and a group of centers that did not. Centers were not randomly assigned. The first study was a pilot study that was conducted to determine the impact of the NAP SACC intervention.[2] Both groups completed a pre-test self-assessment. NAP SACC consultants worked with the intervention child care center directors to develop an Action Plan to improve at least three areas, in nutrition and/or physical activity, from the self-assessment. After three workshops on childhood healthy weight, healthful eating and physical activity and six months of ongoing technical assistance by the consultant, the center director completed the self-assessment once again. The control group directors also completed a post-test self-assessment. The child care centers that got NAP SACC training showed a greater increase in their total pre- and post-test scores, as well as the individual nutrition and physical activity scores, compared with the centers that did not have training.

A larger intervention-control study was done using the Environmental and Policy Assessment and Observation (EPAO) instrument as the primary outcome measure.[3] The EPAO assesses child care center nutrition and physical activity environments, policies and practices. The EPAO which is a one-day classroom observation and review of center documents was administered before and immediately following the NAP SACC intervention. All intervention centers showed a positive change compared to a negative change in the control centers.

Research Evidence for Healthy Nutrition and Physical Activity Self Assessment for Child Care

	Center outcomes	
Research evidence	Improved nutrition	Increased physical activity
Benjamin et al. (2007)	✓	✓
Ward et al. (2008)	✓	✓

References

1. University of North Carolina Center for Health Promotion and Disease Prevention. *Nutrition and Physical Activity Self Assessment for Child Care (NAP SACC)*. n.d. Retrieved from http://www.napsacc.org/.
2. Benjamin, S.E., et al., *Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC): Results from a pilot intervention.* Journal of Nutrition Education and Behavior, 2007. **39**: p. 142-149.
3. Ward, D.S., et al., *Nutrition and physical activity in child care: Results from an environmental intervention.* American Journal of Preventive Medicine, 2008. **35**: p. 352-356.

Preventing Obesity by Design

Goals:

The goals of Preventing Obesity by Design (POD) are the following: 1) to decrease childhood obesity, 2) to increase the time that children spend outdoors, 3) to increase the level of childhood physical activity, and 4) to improve the quality of outdoor environmental diversity.[1]

Theory of Change:

Providing children and early care professionals with more diverse and engaging outdoor environments should lead to increases in outdoor activity. This increase in outdoor activity should have some impact on children's weight. Increasing the amount of time children are outside and creating more to do in the outdoor environment should lead to increases in activity for both children and early care professionals, and thereby decrease obesity.

Program Features:

There are four key activities included in POD.[1] The first activity is to train teachers how to use the outdoors to promote physical activity and healthy nutrition. Second, POD provides re-design assistance of outdoor play and learning environments that includes preschool staff/volunteers and helps modify these environments to support children's daily nutritional and physical activity needs. Third, POD provides start-up incentives for centers to buy plant materials and tools and provides honoraria to support lead teachers in implementing projects. Finally, POD disseminates information to ensure transfer of knowledge.

POD has a strong community engagement component which recognizes the project as a vehicle for community empowerment and knowledge transfer, which, in turn, drives the project execution. External professionals are seen as partners in the process and provide technical support and knowledge. Centers receive assistance with design of the outdoor learning environment. Typical improvements include wheeled toy pathways, water and sand play, multipurpose lawns, outdoor classrooms, shade trees, shrubs, permanent edible landscapes, and designated vegetable gardens.

Centers commit to participating in POD activities for a year. This year begins with an assessment of the outdoor learning environment using the Preschool Outdoor Evaluation Measurement Scale (POEMS). Teachers and parents are asked to complete a short survey about what they like and dislike about the outdoor space. Center personnel then attend a full-day workshop where they review their POEMS data, discuss their site, and learn about the process for designing a new outdoor learning environment. A design team discusses the plans, which are implemented with the help of staff at the Natural Learning Initiative (sponsors of POD).

For more information regarding Preventing Obesity by Design use this link: http://naturalearning.org/content/projects

Target Audience:

Early care professionals and preschool children

Research Evidence:

The evidence for POD comes from a collaborative report by the Natural Learning Initiative, NC State University College of Design, including program evaluations from 27 participating child care centers serving infants to 5-year-olds.[2] Results are based on pre- and post- intervention POD participant surveys, POD participant feedback, and POD staff observations.[2] Results showed that there was a moderate increase in physical activity in children after outdoor playground renovations and that the children were also more likely to engage in play or behavior independent of teacher guidance. The survey results indicated that outdoor activity space usage increased both in number of times used and in duration of time period spent outside, in all seasons and for all ages of children.[2]

Although there is limited research on POD, this program bases its outdoor design features on evidence that relates increased children's physical activity level to diverse "green" child care outdoor environments (having trees, shrubbery, and broken ground integrated with non-green components), versus child care settings with few outdoor features and little or no green.[3-9] Research has linked health benefits with greener outdoor environments, including less childhood exposure to harmful ultraviolet (UV) radiation, improved motor development, and decreased days spent home because of illness.[3-9]

Research Evidence for Preventing Obesity by Design

	Child outcomes		
Research evidence	Increased physical activity	Increased outdoor play	Increased independence of teacher guidance during outdoor play
NLI (2012)	✓	✓	✓

References

1. The Natural Learning Initiative. *Preventing Obesity by Design*. 2012 [cited 2012; Available from: http://naturalearning.org/content/projects.
2. The Natural Learning Initiative (NLI), *Impact of Preventing Obesity by Design POD*. 2012, College of Design, NC State University: Raleigh, NC.
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Assuring Better Child Health and Development

Goals:

The goals of the Assuring Better Child Health and Development (ABCD) program are the following: 1) to make certain that all children receive appropriate developmental screenings and referrals and 2) to increase the likelihood that medical professionals will conduct developmental screenings and make these referrals.[1]

Theory of Change:

Primary care physicians are often the only professionals seeing young children on a regular basis and are in a unique position to identify children who may be exhibiting signs of developmental disability or delay. When primary care physicians use a developmental screening tool, they are more likely to identify children who might have developmental challenges. Increasing medical professionals' awareness of the need for developmental screenings and technical assistance about how to use standardized, validated screening tools should lead to increases in the identification of children who may be exhibiting signs of developmental delay and increase referrals for these children in order for them to receive appropriate Early Intervention services.

Program Features:

ABCD is an intervention in primary-care physician offices.[1] An ABCD staff person provides technical assistance and/or support to deliver high-quality comprehensive primary health care, including medical professionals' use of standardized, validated, developmental and behavioral screening tools. If a developmental disability, delay, or other concern is identified through the screening process, a referral is made to connect the family with the services and resources needed for their child.

The Assuring Better Child Health and Development Project began in North Carolina in August 2000, by piloting formal developmental screening and surveillance for children receiving Early Periodic Screening, Diagnosis, and Treatment (EPSDT) services in pediatric and family practices. The project's express purpose is to assist medical professionals in implementing an efficient and practical process for screening to promote early identification and referral and to facilitate primary care physicians' ability to link to early intervention and other community services. In most North Carolina practices a formal screening is conducted using the *Ages and Stages Questionnaire* (ASQ) or the *Parents' Evaluation of Developmental Status (PEDS)*. Screenings are performed at the 6-, 12-, and 18-month or 24-, 36-, 48-, and 60-month visits.[1]

For more information regarding Assuring Better Child Health and Development Project use this link: http://www.nashp.org/abcd-state/north-carolina.

Target Audience:

Medical professionals providing pediatric primary care

Research Evidence:

Three studies examining changes in screening rates for medical professionals participating in North Carolina's ABCD program have found evidence of ABCD's effectiveness. Screening rates jumped from 15 percent of children being screened during visits before ABCD was started to more than 70 percent after implementation in North Carolina.[2] These results are similar to those in other states. A study of five states implementing ABCD revealed that all five reported increases in screening by at least 40 percent.[4]

In North Carolina, increased rates of screening translated into increases in referral to early intervention programs, from 2.6 percent of children before screenings started to 7 or 8 percent after screenings began.[3] In the last several years, the percentage of referrals from physicians has increased, and the average age at referral has decreased.[3] In addition to examining increases in screening and referrals, researchers have surveyed North Carolina parents and providers to examine their attitudes about the program. Parents reported that they found the developmental information about their children helpful, and they wanted to receive such information from their provider. The parents reported that they did read the developmental and behavioral materials given to them by the staff.[3] Providers were also surveyed, and reported that the Ages and Stages Questionnaire was an effective tool and that they would recommend it to other providers. They reported using the completed questionnaire as a guide for discussing development with parents and that, for the tool to be used properly, attention must be given to when and where the questionnaire is given to parents. Finally, they reported that parents appreciated the time spent discussing their child's development.[3]

Research Evidence for Assuring Better Child Health and Development Project

Research evidence	Increased screenings	Increased referrals	Referrals took place when children were younger	Parents reported that information about child development is helpful	Physicians reported parents appreciated talking with them about their children's development
Earls & Hay (2006)	✓	✓			
Pinto-Martin et al. (2005)		✓	✓	✓	✓
Kaye & Rosenthal (2008)	✓				

References

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2 Earls, M.F. and S.S. Hay, *Setting the stage for success: Implementation of developmental and behavioral screening and surveillance in primary care practice-The North Carolina Assuring Better Child Health and Development (ABCD) project.* Pediatrics, 2006. **118**: p. 183.
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APPENDICES

Appendix A
Programs and Practices At-A-Glance

Appendix B
Evaluating the Evidence for Smart Start Funded Programs and Practices: Technical Guide

Appendix B-1. Websites that Rate Research Evidence of Programs or Practices in Early Childhood

Appendix B-2. How To Determine Whether a Program or Practice Is Evidence-Based

Appendix B-3. Evidence-Based Checklist

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Appendix B-6. Evidence-Informed Checklist

Appendix C
Definitions of Research Terms

Appendix A
Programs and Practices At-A-Glance

Program or Practice	*Level of Evidence*	*Target Population*
Early Care and Education		
Mentoring	EB - Well-established	Early Care and Education Professionals
Consultation/Coaching	EB - Well-established	Early Care and Education Professionals
Supporting Social-Emotional Competence in Infants and Young Children	EB - Established	Early Care and Education Professionals
Child Care Health Consultants	EI - Promising	Early Care and Education Professionals
Program Quality Enhancements/ Maintenance Incentives	EI - Promising	Child Care Facilities
Education Supports	EI - Promising	Early Care and Education Professionals
Professional Quality Incentives including WAGE$	EI - Promising	Early Care and Education Professionals
Child Care Subsidy	EI - Promising	Children ages 0-5 Parents of children ages 0-5
CCR&R Consumer Education and Referral	EI - Promising	Parents of children ages 0-5
CCR&R Technical Assistance	EB - Well-established	Early Care and Education Professionals
CCR&R Training	EB - Established	Early Care and Education Professionals
CCR&R Professional Development Advising	EI - Promising	Early Care and Education Professionals
Early Literacy		
Reach Out and Read	EB - Well-established	Parents of children ages 6 months-5 years
Raising A Reader	EB - Established	Parents of children ages 0-5
Motheread/Fatheread	EI - Promising	Children ages 0-5 Parents of children ages 0-5 Early Care and Education Professionals
Dolly Parton's Imagination Library	EI - Emerging	Children ages 0-5
Every Child Ready to Read	EI - Emerging	Children ages 0-5 Parents of children ages 0-5

Program or Practice	*Level of Evidence*	*Target Population*
Family Support-Parent Education		
Incredible Years	EB - Well-established	Children ages 0-5 Parents of children ages 0-5 Early Care and Education Professionals
Triple P-Positive Parenting Program	EB - Well-established	Children ages 0-5 Parents of children ages 0-5 Early Care and Education Professionals
Nurturing Parenting Program	EB - Established	Parents of children ages 0-5
Baby FAST and Pre-K FAST	EI - Emerging	Children ages 0-5 Parents of children ages 0-5
Circle of Parents	EI - Emerging	Parents of children ages 0-5
Family Support-Home Visiting		
Healthy Families America	EB - Well-established	Pregnant mothers and parents of infants
Nurse-Family Partnership	EB - Well-established	Women who are low-income and pregnant with their first child
Parents as Teachers	EB - Well-established	Parents of children ages 0-5
Health		
Be Active Kids	EI - Promising	Early Care and Education Professionals who work with children ages 4-5 years
Color Me Healthy	EI - Promising	Early Care and Education Professionals who work with children ages 4-5 years Parents of Children ages 4-5 years
NAP SACC	EI - Promising	Early Care and Education Professionals who work with children ages 2-5 years
Preventing Obesity by Design	EI - Emerging	Children ages 0-5 Early Care and Education Professionals
Assuring Better Child Health and Development	EI - Emerging	Medical professionals providing pediatric primary care

Appendix B
Evaluating the Evidence for Smart Start Funded Programs and Practices Technical Guide

Smart Start is committed to providing quality programming that supports the early childhood system, young children, and their families. An important part of quality is whether or not programs and practices have research evidence that suggests their use is likely to have positive outcomes. The North Carolina Legislature now requires Smart Start to fund evidence-based and evidence-informed (EB/EI) activities. The North Carolina Partnership for Children, Inc. (NCPC) Board of Directors has adopted definitions of evidence-based and evidence-informed programs to guide Smart Start partnerships in ensuring quality programming.

NCPC and Smoky Mountain Research Institute together developed a process for assessing the level of evidence available for common Smart Start activities. This document provides information about the process that was used to assess the programs and practices included in the *Smart Start Resource Guide of Evidence-Based and Evidence-Informed Programs and Practices: A Summary of Evidence*. It also provides guidance about how to use the process to assess additional programs or practices not included in the guide.

The first section of this document presents information about why and how the available evidence was assessed and defines the terms "evidence-based" and "evidence-informed" programs and practices. The second section describes the process for evaluating evidence-based and evidence-informed programs and practices. This section also includes an example of how to determine an evidence-based program and an example of how to determine an evidence-informed program or practice.

Evidence-Based and Evidence-Informed Programs and Practices

Across the nation there is an increasing focus on the use of evidence-based practices.[1] This movement is across federal agencies such as the SAMSHA,[2] and the Department of Education,[3] as well as across various fields such as medicine, mental health, and early childhood[4-6]. This increased focus is happening because it is important to produce the best possible outcomes with the limited available resources for the children in our communities.

Smart Start and The North Carolina Partnership for Children, Inc. are also focusing on evidence-based and evidence-informed practices. This approach will ensure the Smart Start system strives to meet its vision and mission while taking seriously its role as steward of public funds.

> Vision: *Every child reaches his or her potential and is prepared for success in a global community.*
>
> Mission: *To advance a high quality, comprehensive, accountable system of care and education for every child beginning with a healthy birth.*

For Smart Start to achieve this vision and mission, it is important to strategically fund activities and programs that are likely to have positive outcomes for the early childhood system, young children, and their families. The first step in this process is to identify activities and programs with research evidence suggesting a greater probability they will have the intended positive effect. Such efforts will likely yield greater results from our public investments.

Definitions of Evidence-Based and Evidence-Informed Programs/Practices

The use of evidence-based programs and practices was mandated by North Carolina legislation in 2011 for programs that operate using Smart Start funds. The North Carolina General Assembly passed legislation in *Sections 10.5(k) and 1.5(m)* that provides guidance for employing evidence-based and evidence-informed practices. Using this guidance and input from a variety of organizations, The North Carolina Partnership for Children, Inc. Board of Directors adopted definitions of evidence-based and evidence-informed practices to guide the work of local partnerships.

The following are the definitions that were passed by the Board:

- **Evidence-based programs or practices** are those that have repeatedly and consistently demonstrated desirable outcomes through application of scientific research methods (replicated experimental, experimental, and quasi-experimental).
- **An evidence-informed practice** is one that is guided by child development theory, and practitioner wisdom, and qualitative studies, and findings from basic research and that has written guidelines, and a strong logic model, and a history of demonstrating positive results.

Process for Evaluating the Evidence

In order to evaluate the research evidence, a framework was developed to guide the assessment of the Smart Start commonly funded programs and activities. This framework was used to collect and weigh the evidence in the Resource Guide. It also can be applied to a program or practice that a local partnership might be implementing or want to implement that is not in the Resource Guide. If that is the case, the local partnership must identify the available research evidence.

Step 1: Finding the Research Evidence

The research evidence needed to determine whether a program or practice has an evidence base can be located through a variety of strategies. An easy starting point is to search existing resources that assess the research evidence on various practices. These resources, such as What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/) and the Campbell Collaboration (http://www.campbellcollaboration.org), are open access resources. Appendix B-1 provides a list of various websites that rate the level of evidence available for different early childhood programs or practices. Though these groups use different criteria to determine if a program or practice is evidence-based, the information provided by them can be used to help assess whether an intervention meets the Smart Start definition.

If none of the clearinghouses or rating organizations provides information about the program or practice, a search of free databases can be conducted. Databases such as Google Scholar, Scirus, or Education Resource Information Center (ERIC) are open access, though not all of the studies found there will be free. Many programs have their own website and will provide information about the research that has been done on their program, often free of charge.

The next step is to assess the evidence that is found for the program or practice. The quality and quantity of the research evidence will help determine if the program meets the definition of evidence-based or evidence-informed. The section below defines the types of evidence and how to assess them.

Step 2: Assess the Research Evidence

What defines whether or not a program or practice works and is evidence-based or evidence-informed? This section includes different ways for determining if a particular program or practice has been

empirically evaluated to determine its effectiveness (whether the intervention produces the outcomes it is intended to produce) or efficiency (whether the intervention is better than another intervention), and if a program or practice is either evidence-based or evidence-informed.

A program or practice is considered evidence-based if research has repeatedly and consistently demonstrated that the program or practice has desirable outcomes and benefits. The more the effects of the program or practice are replicated by different scientific research studies, the stronger the support is for the claim that the program or practice is evidence-based. Use of one of the three types of research methods described in the section below (systematic reviews, experimental studies, quasi-experimental studies) is necessary for a program or practice to be considered evidence-based.

Systematic Reviews

Systematic reviews of a program or practice look at the findings of as many studies as can be located that investigated a program or practice to determine if results taken together "tell us" that it had the outcomes developers claim that it had. These types of reviews include meta-analyses, research syntheses, and replicated experimental studies.

Meta-Analysis

A meta-analysis consists of coding different characteristics of studies of the same (e.g., Parents as Teachers) or similar (e.g., home visiting programs) programs or practices. A meta-analysis summarizes results across the studies with similar outcomes and using a statistic called an *effect size.* The effect size tells how large the difference in outcome is between the intervention groups and control or comparison groups. The effect sizes from a meta-analysis of multiple studies must be large enough for a researcher to conclude that the program or practice was effective or efficient.

Research Synthesis

A research synthesis is similar to a meta-analysis because it looks at many different studies of the same or similar programs or practices but may not use effect sizes for determining effectiveness or efficiency. An analyst generally evaluates whether the *patterns of results* from different studies provide support for a theory or logic model by examining how consistently the program or practice is associated with desirable outcomes in the different studies. The more consistently the same outcomes or benefits are found, the more likely the analyst will conclude that the program or practice is evidence-based.

Practice-Based Research Synthesis

A practice-based research synthesis specifically focuses on which *characteristics* of a program or practice are most important in terms of explaining the beneficial outcomes in different studies of the same or similar programs or practices. The main goal of a practice-based research synthesis is to sort out which aspects of a program or practice are the *active ingredients* so that those can be emphasized when the program or practice is adopted by others. An analysis of this type of systematic review will generally include statements about the evidence-based characteristics of the programs or practices.

Replicated Experimental Synthesis

A replicated experimental synthesis involves the analysis of studies where the same program or practice is *systematically repeated* (replicated) by different interveners or by the same intervener with different groups of children or adults in different programs or settings. A synthesis of the same program or practice that yields similar results in different studies would be the kind of results necessary to say the program or practice is evidence-based.

Experimental Studies

Experimental studies involve the assignment of study participants to intervention or nonintervention groups, then conducting the intervention, and testing the participants at the end of the intervention to see whether or not the groups differ on the outcomes the intervention is intended to produce. The hallmark of this type of study is random assignment of participants to groups (group design studies) or the random assignment of the timing of when individual study participants experience an intervention (single participant design studies).

Randomized Controlled Design Studies

Randomized controlled design studies *randomly assign individuals* to intervention and nonintervention groups where the outcomes of interest are assessed for both groups at the completion of the intervention (and sometimes, before the intervention is started) to determine effectiveness. A randomized controlled design study is generally conducted with large numbers of participants where the differences between the intervention and nonintervention groups at the end of the intervention need to be large enough to conclude that the intervention was effective.

Randomized Cohort Design Studies

Randomized cohort design studies *randomly assign groups* of participants (e.g., different child care classrooms) to intervention and nonintervention groups where random assignment of individual participants is not feasible, possible, or desirable. An explicit attempt is made to ensure that the groups are more similar than different on important characteristics (e.g., child age, socioeconomic status, number of children in the classrooms) so that any differences in effectiveness between groups after the intervention is completed are not caused by preexisting differences.

Single Participant Design Studies

Single participant design studies first observe the study participants prior to the intervention (called the baseline) and then observe or assess the participants after the intervention is started at different times for the different participants. The *replication of the effects across participants* is how effectiveness of the intervention is demonstrated. This is accomplished by showing that changes occur only after the intervention is introduced to the first participant, then the second participant and so on until all participants have experienced the intervention.

Quasi-Experimental Studies

Quasi-experimental design studies try to *mirror experimental design* except that study participants are not randomly assigned to intervention or nonintervention groups. Rather, an intervention is used with one group where another group that is similar to the intervention group is used as a comparison group. These types of studies typically include the collection of information about the characteristics of the participants to see if the two groups are more similar than different.

Quasi-experimental studies use sophisticated statistical methods such as propensity score analysis, fixed effects, and difference in difference models among others to control for the differences between the treatment and comparison groups. At a minimum, they should include pretests on the outcome measures of interest to see if their performance is similar enough to say that any differences in outcomes after an intervention were the result of the intervention.

Step 3: Determination of an Evidence-Based Program or Practice

As described above, a program or practice is considered evidence-based if research has repeatedly and consistently demonstrated that the intervention has desirable outcomes and benefits. The more the effects of the program or practice are replicated by different scientific research studies, the stronger the support for the claim that it is evidence-based. Therefore, multiple studies using at least one of the three types of research (systematic reviews, experimental studies, quasi-experimental studies) are necessary for a program or practice to be considered evidence-based. Appendix B-2 provides a flowchart (How to Determine Whether a Program or Practice is Evidence-Based) of the process to determine whether or not the level of research available regarding a program or practice is sufficient to meet evidence-based criteria.

This flowchart provides a step-by step procedure for determining the level of evidence available for a program or practice. The checklist has eight levels of evidence. If there is research evidence available for a program or practice at any level, then it is considered an evidence-based practice. Starting at the top of the checklist, the first question asks, "Has a meta-analysis of the program or practice been conducted?" If the answer to that question is "yes", the follow up question is "Did the meta-analysis conclude that there was sufficient evidence to say that the program or practice was effective for the desired outcomes?" The program or practice is considered evidence-based if this question is answered "yes." If an answer to either of these questions is "no" at any step, then proceed to the next level of evidence. If the research evidence is compared to each of the eight levels and the answer at each level is "no," the program or practice is not evidence-based. However, a program or practice could still be approved for funding if it is established as an evidence-informed practice.

Illustration of an Evidence-Based Program

An example of an evidence-based program that is used by a number of local partnerships is the Incredible Years (IY) program which is developed to help caregivers meet the needs of children between 3 and 5 years of age with challenging behaviors. The Incredible Years provides parents and teachers with strategies that reduce children's challenging behaviors (e.g., aggressions, acting out behavior) and increase children's social and self-control behaviors (e.g. responding appropriately to adult requests). Information from the Incredible Years website (http://www.incredibleyears.com) describes the programs they offer. The components of these programs include the following: 1) strengthening children's social skills, emotional regulation and school readiness skills; 2) using praise and incentives to encourage cooperative behavior; 3) using positive discipline, such as rules, routines and effective limit setting; and 4) using positive discipline when handling misbehavior.

Key characteristics of the research evidence are highlighted below to be used in assessing whether or not IY is evidence-based. In their book describing the multiple Incredible Years Programs, Webster-Stratton and Mihalic (2001) cite research on the programs' effectiveness.[7] The authors report that six randomized control group evaluations of the parent program indicated increases in parent positive affect and reduced use of harsh discipline, increases in effective parent limit-setting, reductions in parental depression and increases in parental self-confidence, increases in positive family communication, and reductions in conduct problems in children's interactions with parents.

The What Works Clearinghouse[8] reports that there is some evidence that the use of Incredible Years programs with adults and children can have a positive impact on the children's external behavior and social outcomes. In a Cochrane Collaboration review of group-based parent training programs, two of the intervention studies used Incredible Years. Positive effects were found on children's behavior in the classroom.[9]

Sougstad conducted a meta-analysis of 39 studies using a three-tiered approach to sort studies and analyze data.[10] The results showed very little benefit in the reduction of conduct problems when Incredible Years was used for primary prevention. Tier II studies focused on practices that "specifically target groups where parenting and/or child functions are known to be at least somewhat problematic" (pp. 77-78). In these studies, there were small to moderate decreases in child conduct problems. Tier III studies had the most severe clinically significant forms of child conduct problems and the results showed moderate to large effects on the reduction of child conduct problems.[10]

Appendix B-3 includes the complete checklist used to determine that Incredible Years is an evidence-based program when the outcome is improved behavior for children at-risk for or with conduct problems. A blank checklist is also included for your use when assessing other programs or practices.

Step 4: Determination of an Evidence-Informed Program or Practice

According to the definition provided by the NCPC Board of Directors, an evidence-informed program or practice must have the following criteria:

- Be guided by child development theory AND
- Be guided by practitioner wisdom AND
- Be based on findings from basic research (qualitative and/or quantitative) AND
- Have a strong logic model AND
- Have adopted and used implementation guidelines AND
- Have a history of demonstrated positive results.

Definition of Terms

The following definitions of terms provide necessary information that should be helpful in determining whether or not a program or practice meets the criteria for being evidence-informed.

What Is the Basis of the Evidence-Informed Program or Practice?

An evidence-informed program should be based on child development theory, practitioner wisdom and research findings.

The criterion, a *child development theory,* refers to the model that is used to explain how the practices used by the adults in the child's environment either directly or indirectly lead to positive child development outcomes. This model or framework includes a description of the experiences and opportunities that are used to influence participants' behavior and the expected or anticipated benefits of the program or practice. Many child development theories inform parents and practitioners about best practices when caring for and educating young children.

One example is *attachment theory*. Bowlby argued that the quality of attachment to the caregiver has important implications for a child's feelings of security and capacity to form trusting relationships.[11] Sensitive care giving is related to attachment security for infants and young children.[12] Programs can use this information to guide their practices. When working with parents, program staff members encourage parents to interact in a sensitive and responsive way with their children in an effort to increase the likelihood that children will form strong attachments and be able to replicate this ability in other contexts.

Attachment theory addresses how to support children's social and emotional development, but many programs work to strengthen children's literacy and cognitive skills as well. Cognitive theories by Jean

Piaget [13] and Lev Vygotsky [14] provide important insight about how children think and learn. For example, Vygotsky argued that the tendency of young children to speak out loud when they are thinking, called private speech, serves an important purpose. Private speech guides children in planning activities and behavior, such as the steps to build a tower with blocks. This speech is an important precursor to planning how to solve problems that children will use as a strategy when they get older. Caregivers may apply this theory and encourage young children to talk to themselves out loud about what they are doing.

Practitioner wisdom refers to the accumulated experience gleaned from using a program or practice and the informed understanding of when, how and why the program or practice is likely to produce expected or anticipated benefits.

Qualitative and basic research refers to evidence (qualitative or quantitative or both) that is used to inform which aspects of a program or practice are expected to have anticipated benefits. There should be several studies reporting research findings that suggest there would be a relationship between the intervention or practice and the desired outcome. For example, research shows that the more children are read to using certain characteristics, the more likely children will be strong readers later in school. Therefore, it would make sense to develop an intervention where parents were encouraged to read to their children frequently using certain techniques as they read.

What the Evidence-Informed Program or Practice Should Have to Support Implementation

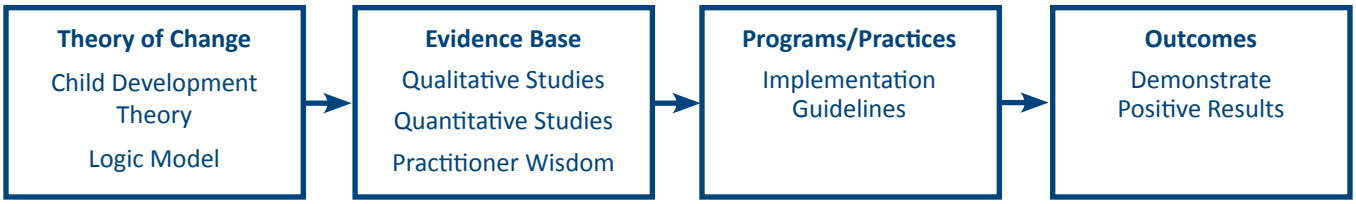
In addition to being based on child development theory, practitioner wisdom, and basic research, the evidence-informed program or practice should also have a strong logic model, implementation guidelines, and a history of positive results.

A *strong logic model* is a graphic or table that includes a description of *why* there is a need for a program or practice, with *whom* the program or practice will be used, *what* the key elements of the program or practice are, *how much* and *how well* the program or practice activities are delivered as intended, *what* the outcome for the program or practice recipients was, and *how* the outcome will achieve long term goals.

Implementation guidelines mean written procedures, steps etc. that explicitly describe how a program or practice needs to be implemented so that it is done in the intended manner.

A *history of demonstrated positive results* means data collected on an ongoing basis by the implementers of a program or practice that shows that the program or practice is associated with expected or anticipated benefits. The Resource Guide provides a review of the evidence of positive results available for commonly funded Smart Start activities. The local partnership will need to provide its own history of results for those initiatives that are not covered in the research literature.

The figure below shows one way that the criteria for an evidence-informed program or practice are related. Both theory and a strong logic model are used to describe or specify a *theory-of-change*. The theory-of-change is informed by an *evidence-base* that justifies why the theory-of-change should explain why a *program or practice* "ought to work." Both the theory-of-change and its evidence base are used to structure the development and use of guidelines for the *implementation* of a program or practice, and if implemented as intended, the program or practice should have *demonstrated positive results*.



Assessing Evidence-Informed Programs and Practices

Appendix B-4 provides a flowchart (How to Determine Whether a Program or Practice is Evidence-Informed) that illustrates the six criteria that must be met in order to conclude that the program or practice is evidenced-informed. There must be a child development theory, a strong logic model, either qualitative or basic research finding positive effects, practitioner evidence about when, how, and why to implement the program or practice, implementation guidelines, and a history of the program or practice demonstrating positive results. The program or practice is considered evidence-informed if each of the criteria is answered "yes."

Illustration of an Evidence-Informed Program

The Child Care Health Consultation (CCHC) program used by Local Partnerships illustrates the various elements of an evidenced-informed program. The evidence for Child Care Health Consultation is organized using the elements of an evidence-informed practice as defined in the *Definition of Terms* section above and includes the following sections: child development theory, logic model, quantitative or qualitative data, practitioner wisdom, implementation guidelines, and demonstration of positive results.

Child development theory. According to an article by Harvard University's Center on the Developing Child, entitled *The Foundations of Lifelong Health Are Built in Early Childhood,* vitality starts with being healthy. "The biology of early health and development illustrates how complex interactions among genes, environmental conditions, and experiences produce either positive adaptations or negative disruptions in basic biological systems—with lifelong consequences for both physical and mental health."[15] Stable and responsive relationships, safe and supportive environments, and sound and appropriate nutrition have been identified as the foundations for providing an environment that supports children's healthy development.

Caring for Our Children Standard 1.6.0.1 describes child care health consultants (CCHC's) as health professionals who are knowledgeable about infancy and early childhood development, social and emotional health, and developmentally appropriate practices. CCHC's are also knowledgeable about the role health assessments play in early detection of developmental delays and chronic health conditions and how early intervention and health care plans can support optimum growth and development for infants and young children. CCHC's facilitate access to medical and dental homes for young children and provide training and technical assistance on nutrition, physical activity, and social and emotional health for young children. They also provide guidance to early educators on healthy and safe environments which reduce the spread of infectious diseases, prevent injuries, and reduce exposure to toxins.

Logic model. A sample logic model for the CCHC program can be found in Appendix B-5.

Quantitative studies. Research has been conducted in several states regarding the impact of CCHC's on health and safety policies and standards in child care centers. The only quasi-experimental study on CCHC's was conducted by Alkon and his colleagues, who matched child care centers in five counties in California and then randomly assigned them to intervention and comparison groups.[16] There were no statistically significant pretest differences between intervention and comparison centers on the assessment instrument. On the pre/post test analysis there were statistically significant differences on 9 of the 10 policies. Though there were differences on four of the six practices, they were small. Kotch and his colleagues matched child care centers in three states and randomly assigned them to intervention and nonintervention groups. They found differences in child care center written policies, and children's dietary intake, physical activity, and Body Mass Index [http://www.cdc.gov/healthyweight/assessing/bmi].

In a small sample of children who attended a university child care center, Ulione found that when a child care nurse consultant provided staff with information concerning childhood illnesses and injuries, there was a decrease in upper respiratory illness and accidental injury rates.[17]

Practitioner wisdom. In the article entitled *Health Consultation in Early Childhood Setting*, a health care consultant describes how she works with early child care programs to develop plans to improve the quality of care for all children and to provide training for program staff.[18] The health care consultant also describes her work with individual parents to answer their questions and how she works with the parent to develop a plan for an individual child with food allergies.

Implementation guidelines. The North Carolina Child Care Health Consultation Association and the Child & Youth Branch, Division of Public Health, NC DHHS have developed a *Professional Practice Statement for Scope of Practices and Code of Ethics* (http://sites.google.com/site/nccchca/services/professionalpractice-statement). These guidelines describe the five priority practices included in the roles and responsibilities for a generalist and the seven priority practices included in the roles and responsibilities of a child care health consultant.

An important aspect of the implementation of any program is the training of the providers. The Child Care Health Consultation program includes a training course that is designed in four parts (foundations of child care health consultation, principles and practices of child care health consultation the child care environment, and demonstration of child care health consultation skills). Three of the parts contain modules that are completed by the individual and the fourth part contains a final project which includes a child care site visit and a report that demonstrates an understanding of the material covered in the course. This process requires 112 contact hours. For more information regarding the implementation of CCHC go to http://www.healthychildcarenc.org/course.htm.

Demonstration of positive results. In a study of the use of Child Care Health Consultants in North Carolina, evidence from a pre/post study found that there were positive changes in child care policies, both the quality and completeness of the written health and safety policies, when CCHC's were in the child care centers.[19] Results from the study also demonstrated a positive impact on staff compliance with health and safety standards. Positive impacts were also found in preventive care for children, such as immunizations, health care coverage, and medical homes.

Appendix B-6 includes a completed checklist used to determine that CCHC is an evidence-informed program. A blank checklist is also included for your use when assessing other programs or practices.

Conclusion

This document explains the process that has been developed and used to assess the programs funded by Smart Start. It provides the definitions of evidence-based and evidence-informed practices approved by The North Carolina Partnership for Children, Inc. and demonstrates how they were operationalized for this project. It also provides examples of how to make a determination of evidence-based or evidence-informed programs and practices along with flow charts and checklists for both levels of evidence. These examples will help local partnerships make the determination of the level of evidence for programs and practices that are not assessed in the *Smart Start Resource Guide of Evidence-Based and Evidence-Informed Programs and Practices: A Summary of Evidence*.

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Appendices

Appendix B-1. Websites that Rate Research Evidence of Programs or Practices in Early Childhood

Appendix B-2. How To Determine Whether a Program or Practice Is Evidence-Based

Appendix B-3. Evidence-Based Checklist

Appendix B-4. How To Determine Whether a Program or Practice Is Evidence-Informed

Appendix B-5. Logic Model for Child Care Health Consultants

Appendix B-6. Evidence-Informed Checklist

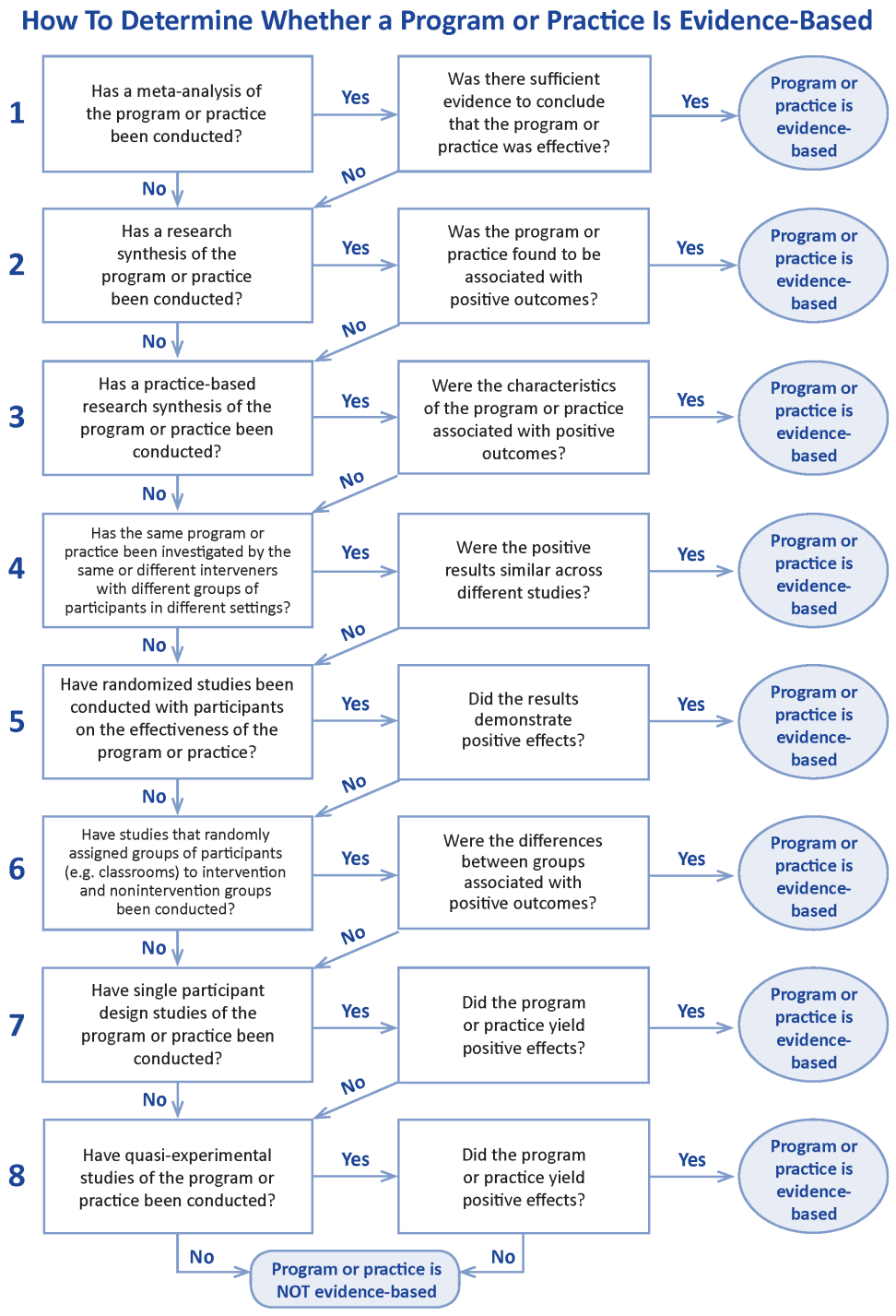
Appendix B-1

Websites that Rate Research Evidence of Programs or Practices in Early Childhood

Organization	Website
The Campbell Collaboration	http://www.campbellcollaboration.org/
The Cochrane Collaboration	http://www.cochrane.org/cochrane-reviews
The Promising Practices Network	http://www.promisingpractices.net/
What Works Clearinghouse	http://ies.ed.gov/ncee/wwc/
Zero to Three	http://www.zerotothree.org/
California Evidence-Based Clearinghouse for Child Welfare	http://www.cebc4cw.org/
National Guideline Clearinghouse	http://www.guideline.gov/ http://sophia.smith.edu/~jdrisko/rating_the_evidence.htm
SAMHSA's National Registry of Evidence-Based Programs and Practices	http://www.nrepp.samhsa.gov/
Healthy San Bernardino: Promising Practices Database	http://www.healthysanbernardinocounty.org/

Appendix B-2

How To Determine Whether a Program or Practice Is Evidence-Based



Appendix B-3

Evidence-Based Checklist

Checklist for Determining Whether a Program or Practice Is Evidence-Based

The following questions provide a step-by-step process for determining whether a program or practice is evidence-based. Answer the first question, then follow the instructions for proceeding to questions that follow. If the answers to both questions at any one step are ***YES***, then the program or practice meets the Smart Start definition for evidence-based. If an answer to any one question is ***NO*** at any step, proceed to the next question in the series.

Program or Practice: Incredible Years Date: 6-2012

---

1. Has a meta-analysis of the program or practice been conducted? Yes ☒ No ☐
- 1a. If yes, was there sufficient evidence regarding the desired outcomes to conclude that the program or practice was effective? Yes ☒ No ☐
  If yes, the program or practice is evidence-based.
- 1b. If no, go to number 2.

2. Has a research synthesis of the program or practice been conducted? Yes ☐ No ☐
- 2a. If yes, was the program or practice found to be associated with positive outcomes? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 2b. If no, go to number 3.

3. Has a practice-based research synthesis of the program or practice been conducted? Yes ☐ No ☐
- 3a. If yes, were the characteristics of the program or practice associated with positive outcomes? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 3b. If no, go to number 4.

4. Has the same program or practice been investigated by the same or different interveners with different groups of participants in different settings? Yes ☐ No ☐
- 4a. If yes, were the positive results similar across different studies? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 4b. If no go to number 5.

5. Have randomized studies been conducted with participants on the effectiveness of the program or practice? Yes ☐ No ☐
- 5a. If yes, did the results demonstrate positive effects? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 5b. If no, go to number 6.

6. Have studies that randomly assigned groups of participants (e.g. classrooms) to intervention and nonintervention groups been conducted? Yes ☐ No ☐
- 6a. If yes, were the differences between groups associated with positive outcomes? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 6b. If no, go to number 7.

7. Have single participant design studies of the program or practice been conducted? Yes ☐ No ☐
- 7a. If yes, did the program or practice yield positive effects? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 7b. If no, go to number 8.

8. Have quasi-experimental studies of the program or practice been conducted? Yes ☐ No ☐
- 8a. If yes, did the program or practice yield positive effects? Yes ☐ No ☐
  If yes, the program or practice is evidence-based.
- 8b. If no, then it is not an evidence-based program or practice.

EVIDENCE-BASED: Yes ☒ No ☐

Checklist for Determining Whether a Program or Practice Is Evidence-Based

The following questions provide a step-by-step process for determining whether a program or practice is evidence-based. Answer the first question, then follow the instructions for proceeding to questions that follow. If the answers to both questions at any one step are ***YES***, then the program or practice meets the Smart Start definition for evidence-based. If an answer to any one question is ***NO*** at any step, proceed to the next question in the series.

Program or Practice: _____ Date: _____

---

1. Has a meta-analysis of the program or practice been conducted? Yes ❑ No ❑
- 1a. If yes, was there sufficient evidence regarding the desired outcomes to conclude that the program or practice was effective? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 1b. If no, go to number 2.

2. Has a research synthesis of the program or practice been conducted? Yes ❑ No ❑
- 2a. If yes, was the program or practice found to be associated with positive outcomes? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 2b. If no, go to number 3.

3. Has a practice-based research synthesis of the program or practice been conducted? Yes ❑ No ❑
- 3a. If yes, were the characteristics of the program or practice associated with positive outcomes? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 3b. If no, go to number 4.

4. Has the same program or practice been investigated by the same or different interveners with different groups of participants in different settings? Yes ❑ No ❑
- 4a. If yes, were the positive results similar across different studies? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 4b. If no go to number 5.

5. Have randomized studies been conducted with participants on the effectiveness of the program or practice? Yes ❑ No ❑
- 5a. If yes, did the results demonstrate positive effects? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 5b. If no, go to number 6.

6. Have studies that randomly assigned groups of participants (e.g. classrooms) to intervention and nonintervention groups been conducted? Yes ❑ No ❑
- 6a. If yes, were the differences between groups associated with positive outcomes? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 6b. If no, go to number 7.

7. Have single participant design studies of the program or practice been conducted? Yes ❑ No ❑
- 7a. If yes, did the program or practice yield positive effects? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 7b. If no, go to number 8.

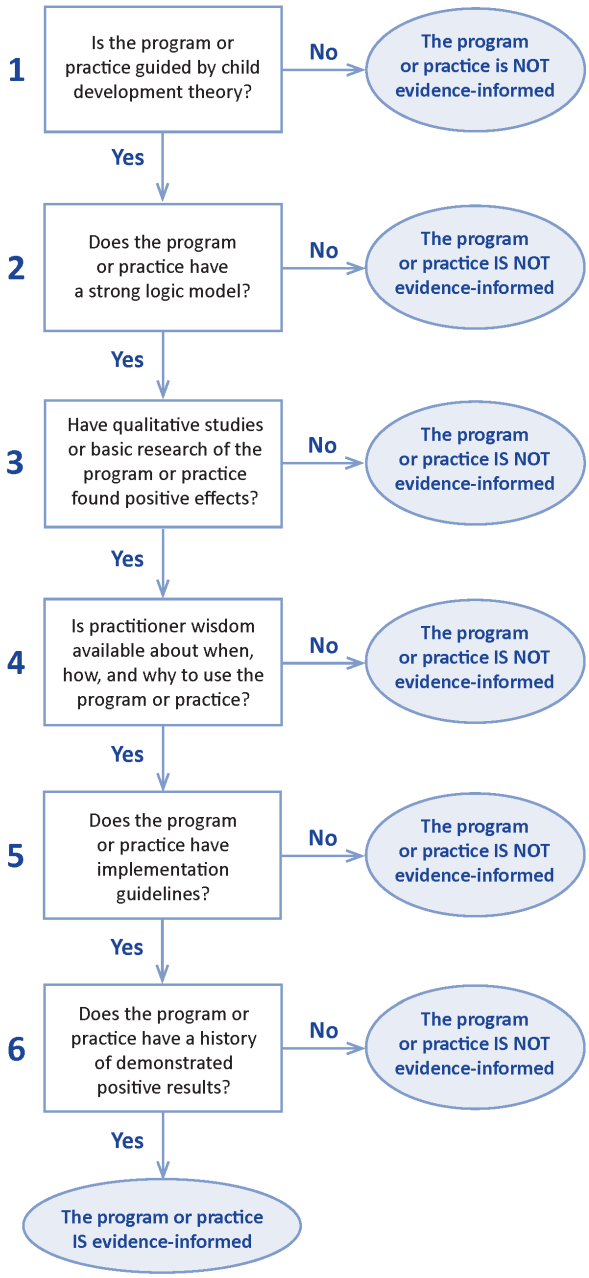
8. Have quasi-experimental studies of the program or practice been conducted? Yes ❑ No ❑
- 8a. If yes, did the program or practice yield positive effects? Yes ❑ No ❑
  If yes, the program or practice is evidence-based.
- 8b. If no, then it is not an evidence-based program or practice.

EVIDENCE-BASED: Yes ❑ No ❑

Appendix B-4

How To Determine Whether a Program or Practice Is Evidence-Informed

How To Determine Whether a Program or Practice Is Evidence-Informed



The North Carolina Partnership for Children, Inc. / Health Smart Start Activity Logic Model

Partnership: ABC Partnership Activity: Child Care Health Consultation PBIS ID: PLA40 PSC:3414

Remember to include grants/bonuses and Medicaid-related strategies in the Program Elements.

If this condition exists	*... for this population*	*... and we implement these strategies*	*... this many times for these individuals*	*... we expect this short-term change*	*... and we expect this outcome to impact the overall county.*
Need Statement: Why?	Target Population: Who?	Program or Activity Elements: What?	Outputs: How Many?	Outcomes[1]: So What?	How does outcome impact PBIS or other long-term goal?
Include: • Information about overall eligible target population for this activity. • Specific need the strategies in the activity address. • Numbers along with percents. Estimate where needed.	Include: • Target population for this specific activity. • Descriptors of the target population. Example, 1-3 star homes. • Use a separate row to align each target population with strategies, outputs, and outcomes.	Include: • Brief bullet points that describe strategies or activity components • For each strategy or component, there should be outputs outcomes.	Include outputs for each strategy or component.	Should include changes the activity expects for participants. Include: • Name of surveyor other data source for outcome. • Numbers with percents. Example: 90% (9/10).	Forecast how outcomes lead to changes in PBIS or other long-term goal. Can forecast for 2 or 3 years, if appropriate.
There are 79 licensed child care facilities (centers and homes) in ABC County that serve children 0-5. Health and safety policies are a component of the Program Standards score of the star rating system. The average star rating of child care programs in ABC County is 3.28 (PBIS County Report) (Data Source: NC Division of Child Development)	General Services: Of the total child care facility population in ABC County, 50 of the 79 (64%) licensed child care facilities will be eligible to receive general CCHC services in ABC County.	General Services will be available to licensed child care programs in the county and services may include: 1. Telephone Technical Assistance. On-site consultation may be scheduled if needed. 2. Trainings will be offered to child care staff, which may include ITS/SIDS; Medication Administration; CPR and First Aid; Emergency Preparedness, Blood-Bourne Pathogens; Oral Care; Keep It Clean; Vaccine Preventable Diseases; Hand washing Diapering, and Sanitation; etc. 3. Assistance with Special Health Care Plans for children with special health needs—CCHC will work with the provider, parents, and (as needed) with the child's physician to develop special health care plans for children with special health needs such as: asthma, food allergies, seizures; diabetes; sickle cell anemia, etc.	1. 50-100 total consultations will be scheduled. 2. 12 scheduled group trainings 3. Assistance with special health care plans for an estimated 85% of children with special health care needs	1. Sample outcome a: 95% (estimated 95/100) of providers that received TA will report on a follow-up survey that the TA addressed their needs. *or* Sample outcome b: Of the ___ providers receiving onsite consultation, 85% will score adequate at post-test on the items covered during the consultation, as measured by the NC Health and Safety Assessment or other tool. 2. Sample outcome a: Of those providers with training pre-test scores below 100%. 85% will increase their scores on the post-test. *or* Sample outcome b: 85% of providers will increase or update knowledge in at least two of the three training topic learning objectives.	

[1] Outcomes provided in this logic model are examples; the sample outcome wording; numbers and percents; and measurement tools should be adjusted to fit the needs of local communities.

If this condition exists	*... for this population*	*... and we implement these strategies*	*... this many times for these individuals*	*... we expect this short-term change*	*... and we expect this outcome to impact the overall county.*
Need Statement Why?	Target Population Who?	Program or Activity Elements What?	Outputs How Many?	Outcomes So What?	How does outcome impact PBIS or other long-term goal?
Typically, centers and homes at lower star ratings, and those with issues such as low sanitation scores or administrative action, indicate a continuing need for the CCHC service. As of September 2008, of the county's 49 centers, six (13%) remain at 1-3 stars; all of these centers enroll infants and toddlers. One of these centers has a "provisional" sanitation score; 2 centers are at an "approved" sanitation rating, and 3 centers have a current or recent history of administrative action Of the county's 30 family child care homes, 12 (40%) remain at 1-3 star. (Data Source: NC Division of Child Development)	Intensive Services: 10 of the 18 (56%) qualified centers and homes will be prioritized for intensive CCHC services in ABC County. Selection criteria includes: 1-3 star ratings, infant–toddler care, current or recent history of sanitation noncompliance or demerits, current or recent history of administrative action, immunization noncompliance, and history of communicable disease).	Intensive Services are offered on-site to targeted facilities and may include: 1. Assistance with improved health and safety practices - The Child Care Health Consultant will make on-site visits to address areas that need improvement and to ensure that health and safety policies are being implemented and followed correctly. On-site assessments of health and safety practices of child care staff will be completed as well as Action Plans. 2. On-Site Health and Safety Policies and Procedures will be reviewed and/or developed 3. Record Review -The CCHC will review children's Annual Immunization Report and Child Health Report. Also, the CCHC will review the Child Health Report on file for each child and will note any child without health insurance or primary medical provider and make referrals where appropriate. 4. Emergency Preparedness Plans - The CCHC will provide follow up assistance with facilities that have attended Emergency Preparedness Training to ensure that the Emergency Preparedness Plan is implemented. If applicable, CCHC will encourage facility staff to attend Emergency Preparedness training. 5. Child-oriented trainings –CCHC will facilitate trainings on topics such as hand washing, dental care, etc. on an "as needed" basis.	1. 50% (5 of 10) of participating child care facilities will receive assistance to improve health and safety practices. Assessments and Action Plans will be completed. 2. An estimated 50% (5 of 10) of participating child care facilities will receive assistance with policies/procedures. 3. An estimated 50% (5 of 10) of participating child care centers/ homes will receive record reviews. 4. 100% (10 of 10) of participating child care facilities will receive assistance with Emergency Preparedness Plans. 5. 100% (10 of 10) of participating child care facilities will receive child-oriented training.	1. Sample outcome a: Of the ___ facilities receiving intensive, with a written action plan, 85% will have a minimum post-test score of X% on _____ (name of measurement tool, such as the NC Health and Safety Assessment.) *or* Sample outcome b: Of the ____ facilities receiving intensive technical assistance, 85% will score adequate in the area(s) of the _____(name of measurement tool, such as the NC Health and Safety Assessment) that pertain to the topics covered.	

If this condition exists	*... for this population*	*... and we implement these strategies*	*... this many times for these individuals*	*... we expect this short-term change*	*... and we expect this outcome to impact the overall county.*
Need Statement Why?	Target Population Who?	Program or Activity Elements What?	Outputs How Many?	Outcomes So What?	How does outcome impact PBIS or other long-term goal?
In North Carolina, 33.3% (40,142 of 120,472)[2] of young children 2-4 years of age are considered at risk for overweight or are overweight as measured by BMI for Age. In ABC County, 43% (764 of 1,782) of children 2-4 years are considered at risk for overweight or are overweight as measured by BMI-for-Age. (Data Source: NC-NPASS 2007 Report)		6. Parent Education – CCHC will facilitate trainings for parents on timely heath topics such as communicable disease, food allergies, etc., on an "as needed" basis. 7. Assistance with Nutrition and Physical Activity strategies — CCHC will assist participating child care facilities to implement strategies (preferably research-based programs such a Nutrition and Physical Activity Self Assessment for child Care - NAP SACC) to improve the overall health and wellbeing of children in child care	6. 100% (10 of 10) of participating child care facilities will receive training targeted for parents. 7. 100% (10 of 10) participating child care facilities will participate in initiatives to improve nutrition and physical activities.	*If NAP SACC is not used:* 7. Sample outcome: Of the ___ facilities receiving targeted assistance to improve nutrition and physical activities, 85% will score adequate in the nutrition and physical activities section(s) of the _____ (name of measurement tool, such as NC Health and Safety Assessment).	

[2] The number of children at risk for overweight reported in the NC NPASS data reflects children who receive care in public health clinics or participate in Women, Infants, and Children (WIC) clinics.

Additional Information

Job Title	FTE	Minimum Education & Experience
Child Care health Consultant (CCHC)	1.0	CCHC is a Registered Nurse employed by the ABC County Health Department. CCHC completes the Child Care Health Consultation training facilitated by the NC Child Care Health & Safety Resource Center www.healthychildcarenc.org

Community Collaboration

Describe how this activity will fit into the continuum of services available to your selected target population.

The Child Care Health Consultant will collaborate with the following agencies that deliver services to children, birth to 5 years, and focus on child health and safety issues by sharing and providing information on health and safety issues via technical assistance, trainings, and consultations. When applicable, the CCHC will make referrals to the appropriate community agencies.

- The North Carolina Partnership for Children, Inc.
- ABC County Smart Start Partnership
- ABC County Child Care Resource & Referral; Quality Enhancement staff
- ABC County Health Department, Environmental Health Specialist, and Communicable Disease Nurse; Immunization Program; Healthy Carolinians and WIC
- ABC County Health Check Coordinator
- Local physicians and pediatricians
- NC Child Care Health & Safety Resource Center, NC's Child Care Health Consultation Association, Child Care Health Consultants' Regional Networks
- State CCHC Consultant(s)
- DCD licensing consultants
- Department of Social Services
- ABC County Public Schools
- ABC County Cooperative Extension

Appendix B-6

Evidence-Informed Checklist

Checklist for Determining Whether a Program or Practice Is Evidence-Informed

The following questions provide a step-by-step process for determining whether a program or practice is evidence-informed. If the answer at every step is ***YES***, then the program or practice meets the Smart Start definition for evidence-informed. If an answer to any one question is ***NO,*** at any step, the program or practice does not meet the criteria for being evidence-informed.

Program or Practice: Child Care Health Consultants Date: 6-2012

---

1. Is the program or practice guided by child-development theory? Yes ☒ No ❑
- 1a. If yes, continue to question 2.
- 1b. If no, the program or practice is not evidence-informed.

2. Does the program or practice have a strong logic model? Yes ☒ No ❑
- 2a. If yes, continue to question 3.
- 2b. If no, the program or practice is not evidence-informed.

3. Have qualitative studies or basic research of the program or practice found positive effects? Yes ☒ No ❑
- 3a. If yes, continue to question 4
- 3b. If no, the program or practice is not evidence-informed.

4. Is practitioner wisdom available about when, how, and why to use the program or practice? Yes ☒ No ❑
- 4a. If yes, continue to question 5
- 4b. If no, the program or practice is not evidence-informed.

5. Does the program or practice have implementation guidelines? Yes ☒ No ❑
- 5a. If yes, continue to question 6
- 5b. If no, the program or practice is not evidence-informed.

6. Does the program or practice have a history of demonstrated positive results? Yes ☒ No ❑
- 6a. If yes, AND the answer at each of the previous steps is yes, the program or practice is evidence-informed.
- 6b. If no, the program or practice is not evidence-informed.

EVIDENCE-INFORMED: Yes ☒ No ❑

Checklist for Determining Whether a Program or Practice Is Evidence-Informed

The following questions provide a step-by-step process for determining whether a program or practice is evidence-informed. If the answer at every step is ***YES***, then the program or practice meets the Smart Start definition for evidence-informed. If an answer to any one question is ***NO,*** at any step, the program or practice does not meet the criteria for being evidence-informed.

Program or Practice: _____ Date: _____

---

1. Is the program or practice guided by child-development theory? Yes ❑ No ❑
- 1a. If yes, continue to question 2.
- 1b. If no, the program or practice is not evidence-informed.

2. Does the program or practice have a strong logic model? Yes ❑ No ❑
- 2a. If yes, continue to question 3.
- 2b. If no, the program or practice is not evidence-informed.

3. Have qualitative studies or basic research of the program or practice found positive effects? Yes ❑ No ❑
- 3a. If yes, continue to question 4
- 3b. If no, the program or practice is not evidence-informed.

4. Is practitioner wisdom available about when, how, and why to use the program or practice? Yes ❑ No ❑
- 4a. If yes, continue to question 5
- 4b. If no, the program or practice is not evidence-informed.

5. Does the program or practice have implementation guidelines? Yes ❑ No ❑
- 5a. If yes, continue to question 6
- 5b. If no, the program or practice is not evidence-informed.

6. Does the program or practice have a history of demonstrated positive results? Yes ❑ No ❑
- 6a. If yes, AND the answer at each of the previous steps is yes, the program or practice is evidence-informed.
- 6b. If no, the program or practice is not evidence-informed.

EVIDENCE-INFORMED: Yes ❑ No ❑

Appendix C
Definitions of Research Terms

Randomized Controlled Study—In a randomized control study people or classrooms are allocated at random (by chance alone) to receive one of two interventions. One of these interventions is the standard of comparison or control. The control may be a standard practice, a placebo ("sugar pill"), or no intervention at all. http://www.medterms.com/script/main/art.asp?articlekey=39532 The other group is the experimental or intervention group who receives the program or practice of interest.

Systematic Review—A systematic review is a literature review focused on a research question that tries to identify, appraise, select, and synthesize all high quality research evidence relevant to that question. (www.ldrc.ca/help/glossary.php) Systematic reviews of a program or practice look at the findings of as many studies as can be located that investigated a program or practice to determine if results taken together "tell us" that it had the outcomes developers claim that it had. These types of reviews include meta-analyses, research syntheses, and replicated experimental studies.

Meta-Analysis—A meta-analysis is a quantitative approach in which individual study findings addressing a common problem are statistically integrated and analyzed to determine the effectiveness of interventions. (www.thecommunityguide.org/about/glossary.html) In this approach the researcher codes different characteristics of studies of the same (e.g., Parents as Teachers) or similar (e.g., home visiting programs) programs or practices. A meta-analysis summarizes results across the studies with similar outcomes and using a statistic called an *effect size.*

Research Synthesis—A research synthesis is similar to a meta-analysis because it looks at many different studies of the same or similar programs or practices but may not use effect sizes for determining effectiveness or efficiency. An analyst generally evaluates whether the *patterns of results* from different studies provide support for a theory or logic model by examining how consistently the program or practice is associated with desirable outcomes in the different studies.

Control Group—A control group is a group of people or classrooms that closely resembling the people or classrooms in the treatment group in many demographic variables but not receiving the intervention under study and thereby serving as a comparison group when treatment results are evaluated. (www.thecommunityguide.org/about/glossary.html)

Comparison Group—A comparison group is a group of people or classrooms that are not exposed to a particular intervention. Any changes in this group are used to estimate what would have happened if the intervention had not been carried out. In experimental studies, the comparison group is generally referred to as the control group. (www.thecommunityguide.org/about/glossary.html)

Effect Size—In statistics, an effect size is a measure of the strength of a phenomenon (for example, the relationship between two variables) or a sample-based estimate of that quantity. An effect size is the estimated of the magnitude of a relationship without making any statement about whether the apparent relationship in the data reflects a true relationship in the general population.[1] The effect size tells how large the difference in outcome is between the intervention groups and control or comparison groups. The effect sizes from a meta-analysis of multiple studies must be large enough for a researcher to conclude that the program or practice was effective or efficient.

Pre-Test/Post-Test—In a single group research study, the same parents or practitioners are measured before the intervention (pre-test) and then re-measured after the intervention (post-test).[2]

References

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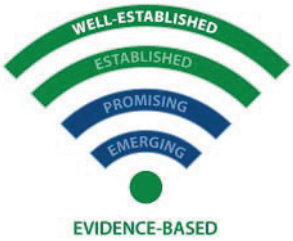
2. Babbie, E., *The practice of social research*. 9th ed. 2001, Belmont, CA: Wadsworth.

Appendix D
Research Evidence for Additional Initiatives

Parent and Family Resource Centers and Programs



Goals:

The goals of family resource centers and programs and community-based parent resource centers and programs are to provide services, resources, and supports to parents, children, and other family members in ways that positively influence parent and family well-being, improve parenting confidence and competence, improve parent-child relationships and interactions, and promotion of child behavioral, social, language, and cognitive development.

Theory of Change:

The types of services, resources, and supports that are offered or provided to families participating in parent and family resource programs include parenting classes, parent-child groups, parent support groups, parenting materials, information and referral, child development advice, mutual parent supports, adult education, and drop-in child care. Some but not all family and parent resource programs provide nutritional services, child health care, employment services, and recreation activities.

Family resource and community-based parent resource programs are premised on the belief that when needed services, resources, and supports are made available to families, and particularly parents, parents are more likely to have the physical and psychological time and energy to devote to child rearing responsibilities. These programs are also premised on the belief that the parenting services, resources, and supports available to parents will promote and develop their parenting knowledge and skills which in turn are used to promote and enhance child learning and development.

Program Features:

The core features of family resource and community-based parent resource programs include:

- Use of family support principles for guiding the ways in which program staff treat and involve families.
- Adoption of a family-centered philosophy that places emphasis on promoting positive family functioning and strengthening parenting capacity.
- Universal access to services, sources, and supports for all children and families.
- Emphasis on prevention and promotion of positive functioning rather than treatment of poor functioning.
- Provision of services, resources, and supports in individualized and flexible ways.
- Provision of services, resources, and supports in ways that are culturally sensitive and responsive.
- Involving parents and other family members in the design and provision of program services, resources, and supports.
- Voluntary and not mandated family participation in the program.

In addition to these core features, some programs place emphasis on:

- One-stop-shopping for families to receive all program services, resources, and supports in one location.
- Co-location of different programs and organizations to ensure easy access to needed services, resources, and supports.

Target Audience:

Pregnant women and families of children birth to age of entry into kindergarten, although there are now many family resource programs that serve older children and adolescents and their families

Research Evidence:

Two research syntheses and two research reviews include analyses of different types of family resource program models and practices and their relationships to different parent, child, and family outcomes [1-4]. The Layzer et al. [1] research synthesis included more than 250 studies of many different kinds of parent resource programs, and the Dunst et al. [2] research synthesis included 10 studies of the same type of community-based family resource programs. Both the Goodson [3] and Trivette and Dunst [4] reviews included analyses of findings from studies of different kinds of family resource and parent resource programs including those in the Dunst et al. [2] and Layzer et al. [1] reports.

The table summarizes the findings from the two syntheses and two reviews in terms of the different parent and child outcomes that were the focus of analysis. Evidence for changes and improvements were reported in all four sources for parenting knowledge, parenting skills, child social development, and other kinds of child development outcomes. Changes and improvements in parent well-being, parent self-efficacy beliefs, and family well-being were reported in two research reports. In the two meta-analyses [1, 2], the positive effects for participation in family resource programs or provision of supports in a family-centered manner were found for most but not all studies in the research syntheses.

A particular pattern of results were reported by nearly all the reviewers of the studies included in their reports. The strongest effects for family resource program participation were found for improvements in parenting knowledge, parenting skills, and parent self-efficacy beliefs, and the smallest effects were found for outcomes that were not direct targets of the family resource program interventions. This was not surprising since the theory of change for these programs are premised on the fact that some effects would be expected to be indirect mediated by other variables (e.g., Parenting classes improving parenting knowledge where improved parenting knowledge would in turn have positive effects on parenting behavior). These types of indirect effects were the focus of two meta-analyses of the provision of supports in a family-centered manner [5, 6]. In both research syntheses, staff treatment of families in a manner consistent with the core principles of family resource programs were indirectly related to parent and family well-being mediated by self-efficacy beliefs. Similarly, the influences of how staff treated families were indirectly related to parent-child interactions mediated by parenting competence and confidence beliefs. These types of indirect relationships were reported in both meta-analyses for the influence of treating families in a family-centered manner and a number of different child outcomes.

The extent to which one-stop-shopping family resource centers or programs where different services, resources, and supports available from the same program or organization were co-located in the same center had added benefits was a special focus of the search for studies of the effectiveness of family resource programs. The Layzer et al. [1] research synthesis included some 40+ studies where different services were available as the same center or location. Results showed that providing different services

to children and families in the same location was associated with better outcomes compared to programs where services were provided in different locations to the same children and families. The particular combination of services that were provided at the same center or location however could not be determined from the ways in which the findings were reported by Layzer et al. [1].

Research Evidence for Parent and Family Resource Programs

	Parent/family outcomes					Child outcomes	
Research evidence	Parent knowledge	Parent skills	Parent well-being	Family well-being	Parent efficacy beliefs	Child social development	Child development
Dunst et al. (2006)	✓	✓	✓	✓	✓	✓	✓
Goodson (2008)	✓	✓				✓	✓
Layzer et al. (2001)	✓	✓		✓		✓	✓
Trivette & Dunst (2005)	✓	✓	✓		✓	✓	✓

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Short-Term Home Visiting to Families with Newborns

Goals:

The goals of short term home visiting to families with newborns are the following: 1) reduce maternal postpartum depression, 2) support breastfeeding, 3) strengthen maternal-infant interactions, 4) enhance maternal role satisfaction and competence, and 5) reduce the number of unusual medical events for the infant.

Theory of Change:

The provision of short term home visiting during the neonatal period is based on the belief that support for mothers during this period will promote positive outcomes for the child. The premise is that the extra support and resources that are provided through home visits are likely to support a strong maternal-infant relationship, and reduce the number of unusual medical events for infants, particularly in families who might have unique challenges during this developmental stage because of conditions such as premature birth, limited resources because of poverty, and maternal mental health problems.

Program Features:

There are two types of short-term home visiting programs. One type of postnatal home visiting program provides universal home visiting to all mothers in the targeted geographic location. The home visitors are nurses or trained paraprofessionals and generally provide 1 to 6 home visits, usually beginning within a week of hospital discharge.

Another type of short-term home visiting program targets vulnerable families with newborns. The foci of these programs vary but can include any or some combination of the following factors: premature birth, poverty, prenatal mental health problem, history of domestic violence in the home, either parent having a history of abuse with other children, etc. The home visitors are often nurses, social workers, or trained paraprofessionals who provide several home visits based on the needs of the families. These providers will make referrals and help families link to other community resources based on their unique needs.

Target Audience:

All Parents of newborns (Universal) or parents of newborns who are at-risk for postnatal challenges (Targeted)

Research Evidence:

Universal Short-Term Home Visiting

A summary of the research findings on the effectiveness of universal short-term home visiting programs is derived from one meta-analysis of nine studies [1] and from five other studies [2-6] that assigned mothers to an intervention group or a control group that received the “regular” care provided in their community. The results from these studies showed that there was no impact on postpartum depression

or anxiety [1-3, 6], breastfeeding [2, 3, 5, 6], maternal physical health [1, 2], and unusual medical events for the infants (i.e., emergency room visits, non-routine pediatric visits, accidents) [2-6]. One study [6] reported that mothers in the intervention group reported a greater sense of parenting competence than mothers who did not get the intervention.

Blended Universal & Targeted Short-Term Home Visiting

Dodge and Goodman [7], reported the following outcomes for the intervention group: less maternal anxiety, fewer emergency room visits and overnight stays in the hospital, higher home quality and more positive parenting behaviors [7]. This intervention appears to vary from the other universal programs described above. Though this was a universal intervention, Dodge and Goodman report using a risk assessment to triage families with more risk factors, who then received more intervention.

Targeted Short-Term Home Visiting

The research findings on the effectiveness of targeted short-term home visiting programs are from three studies that assigned mothers to an intervention group or a control group which received the "regular" community care. Families were targeted for a variety of reasons. In one study of vulnerable families that was reported in two articles, positive results were found at six weeks in the following areas: less postpartum depression, greater maternal competence, and better mother-child interaction [8]. However, at the 12-month assessment, there was no difference between the two groups in the continuation of breastfeeding, maternal competence, mother-child interaction, or the number of unusual infant medical events [9]. A study of mothers whose infants had low birth weight reported better mother-child interactions for the intervention group, but no difference between the groups in terms number of unusual medical events [10].Teenage mothers were the focus on a study that reported better health outcomes for mothers and fewer incidences of child abuse or neglect among the intervention group, but no difference between groups in terms of knowledge with respect to breastfeeding or infant vaccinations schedule [11].

A variety of professionals were used in both the universal and targeted home visiting studies reviewed here. In the Shaw review of 12 studies, 4 studies used nurses, 3 studies used midwives, 2 used trained paraprofessionals, 1 used a pediatrician, 1 used a group of professionals (nurse, social worker, pediatrician), and 1 study did not report who provided the intervention [1]. In the other 10 studies that examined universal or targeted short-term home visiting, 9 studies reported using nurses and one study used midwives [2-7]. In over 85% of the studies found in 11 publications, the interventionist was a person with some medical training.

	Maternal outcomes					Infant outcomes
Research evidence	Postpartum depression/ anxiety	Breast feeding	Maternal physical health	Maternal parenting competence	Mother–Child interaction	Unusual medical events
Universal programs						
Shaw et al. (2006)						
Escobar et al. (2001)						
Lieu et al. (2000)						
Morrell et al. (2000)						
O'Connor et al. (2003)						
Paul et al. (2012)				✓		
Combined universal and targeted programs						
Dodge & Goodman (2013)	✓				✓	✓
Targeted programs						
Armstrong et al. (1999)*	✓			✓	✓	
Fraser et al. (2000)						
Quinlivan et al. (2003)			✓			✓
Shaprio (1995)					✓	

Note:

Many programs that are targeting mothers based on a variety of risk factors choose to use long-term home visiting. When mothers are dealing with a variety of challenges, the research has shown that more long-term intense work with families is required. For example, Healthy Families America, Nurse-Family Partnerships, and Parents as Teachers offer intensive home visiting in some cases for up to five years [12-14]. These long term home visiting programs have a great deal more evidence having a rating of Evidence Based-Well Established.

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Facilitated Parent-Child Playgroups

Goals:

Parent-child playgroups in general [1] and facilitated and supported playgroups in particular [2-7] are organized gatherings of parents and young children that offer different kinds of activities to promote parenting competence and confidence, and to provide opportunities for child socialization and learning, parent-child interactions and play, and supportive exchanges among participating parents.

Theory of Change:

Playgroups are viewed as ecological settings [2, 8, 9] that provide opportunities to promote interactions between playgroup facilitators, parents, and children where the experiences that occur during playgroup sessions are conceptualized as sources of learning opportunities for both parents and young children. The types of experiences and opportunities afforded by playgroups are expected to have positive effects on parenting behavior, parent well-being, social support exchanges, and community connectedness, and child social-emotional, socialization, cognitive, and language development.

Playgroup Features:

The terms facilitated playgroups and supported playgroups [2, 4, 7, 10] both refer to playgroups that employ professionals in early childhood development or other child disciplines who plan and implement parent and child playgroup activities in some organized or semi-organized order to develop a routine for playgroup participants. Playgroup facilitators typically have backgrounds and experience in early childhood education, child development, or other disciplines focusing on early childhood development [4, 6]. In some countries, facilitators typically have a bachelor's degree [6], whereas in other countries facilitators have less formal education but extensive experience with young children and their parents [11]. One important role of playgroup facilitators is to model developmentally appropriate interactions with children and their parents. Another important practitioner role is to facilitate social exchanges between the parents who attend the playgroups.

Playgroups typically occur on a weekly basis or sometimes twice a week where sessions are generally held for a predetermined number of weeks depending on the playgroup model or approach. Facilitated playgroups differ in how formal or informal are child and parent-child activities [e.g., 4, 5, 12]. The younger the child who participates in playgroups, the less formal and structured are playgroup activities. As children approach school entry, playgroups tend to become more structured to provide the children opportunities to benefit from planned learning opportunities [10]. Playgroups tend to be organized in a manner where the same or similar age children are playgroup participants [see e.g., 1, 2].

Playgroups that are more structured typically include a number of different activities conducted over a 2 or 3 hour period of time (depending on the age of the children). Playgroups generally start with some opening or welcoming activity (most often a welcoming song by the playgroup facilitator), and the use

of different activities which vary from structured or semi-structured (formal) to more informal parent, parent-child, and child activities [4]. Playgroups typically end with a group goodbye song or activity.

The settings where playgroups are held differ depending on the parents and communities where they live. Playgroups are often held at community centers, preschool programs, public libraries, and other locations familiar to parents [4, 10]. The duration and frequency of playgroups differ depending on the types of playgroups and whether they follow a particular approach or model [4, 10]. Berthelsen et al. [4] found, for example, that parents duration of participation in playgroups differed from as few as six months to more than two years.

Target Audience:

Parents and young children birth to 5 years of age. Playgroups are typically open to any interested parent, but playgroup organizers often target first-time parents, parents from poor socio-economic backgrounds, and recent immigrant parents.

Research Evidence:

There are about a dozen studies that include quantitative [1, 3-5, 13] or qualitative [2, 4, 6, 7, 11, 12, 14] analyses of the effects of playgroup participation on parent, parent-child, and child outcomes. The studies include a mixture of investigations comparing different types of playgroups (e.g., facilitated vs. non-facilitated) [5] or playgroup participants vs. non-playgroup participants [3, 13]. Studies tend to include either parent outcomes [2, 6, 7, 11, 14] or child outcomes [1, 13] with only a few exceptions [3-6].

The table includes the studies where results showed positive effects for playgroup participation. The majority of studies included positive effects for different types of parenting outcomes (knowledge, practices, beliefs), followed by community connectedness, different types of social support (parenting, information, relational, peer, etc.), and parent well-being. Three-fourths of the studies included positive results for changes or improvements in parent-child interactions. The child outcomes that were most often found to be associated with playgroup participation included changes or improvements in child development (and especially language acquisition), child play, child social-emotional behavior, and child-child socialization. Jacobs [15] describes the child and family literacy benefits of a number of different types of parent and child group experiences.

The four quasi-experimental studies of the effects of playgroup participation on parent and child outcomes provide the most convincing evidence for the effects of playgroups on parent and child outcomes [1, 3-5]. Both Scharfe [3] and Vandell [13] compared the playgroup experiences of participants vs. non-participants and found more positive effects for the parents and children who participated in playgroups. Scharfe [3] found that parents involved in playgroups (compared to non-participants) demonstrated positive changes in their parenting self-efficacy beliefs, personal well-being, and secure attachment to their children over a 10 week period of time. Children in the study also demonstrated more secure attachment to their parents during the same period of time. Vandell [13] reported similar differences for playgroup participants compared to non-playgroup participants for improvements in parent-child interactions, child social-emotional outcomes, and parent-child socialization.

Terrete et al. [5] compared the effects of facilitated playgroup participation to those of non-facilitated playgroup participation, and reported value-added effects from facilitated playgroups for child receptive and expressive language development, parenting competence, and sensitive parenting styles of interaction. Hancock et al. [1] compared the effects of playgroup participation of parents and children

from low and middle socioeconomic backgrounds and found positive outcomes for both groups, but value-added effects for the parents and children from low socioeconomic backgrounds. Hancock et al. [1] also found that the younger the age of a child when first enrolled in a playgroup, and the longer the child participated in the playgroup, the more positive parent-child and child outcomes were realized.

Berthelsen et al. [4] performed a number of analyses to identify factors associated with and the conditions under which parents were more likely to participate in playgroups. The more parents and children benefited from the playgroups, the more often they attended playgroup sessions. The more engaging and helpful were the playgroup facilitators, the more often the parents and children attended the playgroups. Additionally, the more the parents found playgroup facilitators and playgroup activities helpful in terms of their parenting practices, the more often they attended the playgroups. Warr et al. [12] reported similar effects for how playgroup facilitators engaged parents and children in playgroup activities.

Research Evidence for Facilitated Parent-Child Playgroups

	Parent outcomes				PC outcomes	Child outcomes			
Research Evidence	Parenting behavior	Well-being	Social support	Community connectedness	Parent-child interactions	Social-emotional	Child development	Socialization	Play
Berthelson et al. (2012)	✓	✓	✓	✓	✓	✓	✓		✓
Carroll (1995)	✓	✓	✓						
Hancock et al. (2012)					✓	✓	✓		✓
Jackson (2011)	✓		✓	✓					✓
Jacobs (2004)							✓		
LaRosa & Guilfoyle (2013)		✓	✓	✓					
McFarland-Prazza et al. (2012)	✓		✓	✓	✓		✓		✓
Scharfe (2011)	✓	✓		✓		✓			
Strange et al. (2014)	✓		✓	✓	✓				
Terrett et al. (2012)	✓				✓		✓		
Vandell (1979)					✓	✓		✓	✓
Warr et al. (2013)			✓	✓	✓	✓		✓	

PC = Parent-Child.

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Lending Libraries

Goals:

The main goal of the majority of lending libraries is to provide physical and social settings for parents, practitioners, and children to borrow learning and instructional materials (books, toys, etc.). Some lending libraries also provide opportunities that encourage (1) parents to engage in social interactions and exchanges with other parents; (2) practitioners to provide parents advice, guidance, and support; and (3) children to socialize with other children and to borrow and play with toys and other learning materials [1-4]. Lending libraries tend to focus on loaning materials to either parents or early childhood practitioners (and sometimes both), and therefore the materials available to be borrowed tend to differ depending on the purpose and function of a lending library [5, 6].

Theory of Change:

Lending libraries are conceptualized as sources of materials and ideas to promote learning and/or experiences that provide opportunities for different types of social and nonsocial interactions and exchanges to foster the development of young children. [5, 7, 8]. The particular types of activities that are afforded parents, children, and practitioners at lending libraries are in turn expected to improve knowledge and skills and have other positive outcomes (e.g., strengthening parenting competence and confidence, enhancing child development, improving practitioner early childhood teaching practices) [1, 5, 9]. Lending libraries that include a focus on early childhood professional borrowing are expected to result in improvements in their instructional practices which in turn are expected to have positive child effects.

Model Features:

Most of what has been written about the key features of lending libraries describes these programs as toy lending libraries, although, as Powell and Seaton [5] noted, this descriptor does not adequately capture or reflect the scope of their activities or outcomes. As noted by Ozanne and Ballantine [10] and Stooke and McKenzie [2], toy lending libraries serve a number of purposes and functions for parents, practitioners, and children. These include but are not limited to opportunities for parents and practitioners to borrow books, toys, and other learning materials; opportunities for practitioners to promote parents' access to supports, resources, and services; and opportunities for children to play and learn. The particular activities that "take place" at lending libraries vary as a function of their goals and objectives. In addition to "borrowing opportunities," program activities can include parenting activities (e.g., reading books with their children) and opportunities for professionals to provide advice and suggestions about parenting, parent-child interactions, and child learning and development.

Many lending libraries are located in communities where practitioners work and parents live [1, 5, 10], and are often colocated with public libraries, community-based family resource programs, childcare programs and preschools, parenting programs, and other programs and organizations serving parents

and young children [2, 11, 12]. Those that are colocated with other community-based or early childhood programs tend to be open longer hours (e.g., public libraries) and tend to be more easily accessible compared to stand-alone lending libraries [2, 5].

Target Audience:

Parents and young children birth to 5 years of age and early childhood practitioners.

Research Evidence:

The evidence for the benefits of lending libraries comes from a mix of parent and practitioner surveys [6, 10-12], qualitative case study interviews of parents and professionals [1, 2, 5], quantitative analyses of the borrowing patterns of library users [2, 10], and quasi-experimental between comparison group studies to ascertain if different lending library features and practices are associated with variations in parent and child outcomes [9, 10]. Most studies have focused primarily on parent outcomes, however, some have included child outcomes and a few have included evaluations of early childhood professional lending libraries and practitioner outcomes.

The table shows the parent, parent-child, child, and child care provider outcomes that were realized from participation in lending libraries. Inasmuch as the methodologies used in the eight studies differed considerably, a replication logic [13-15] was used to appraise the evidence where each study was considered a separate case, and the extent to which the same or similar activities were associated with the same benefits was the focus of examination. As can be seen in the table, the results, regardless of type of study or methodology, tended to be the same or similar for the same activities and outcomes, and therefore yielded suggestive evidence for the benefits of lending libraries.

The common denominator in most studies is either parent or child borrowing (a) educational or parenting materials, (b) children's toys and other play material, and/or (c) other items and material available at the lending libraries. The types of toys and educational materials that parents and children borrowed or used while at the libraries included, but were not limited to, children's educational toys, children's books, parenting books and materials, and child and parent videos or DVDs. The types of materials borrowed or used by practitioners included, but were not limited to, activity kits, toys, books, and access to computers and printers. Study participants reported that the availability of the lending library resources had positive benefits in a number of areas of functioning.

Parent involvement at the lending libraries was most often associated with the provision or exchange of different types of formal and informal supports; participation in informal and formal informational exchanges with other parents or library staff; parent and practitioner interactions that provided library staff and other early childhood professionals the opportunity to provide parenting advice, guidance, and other types of assistance; and changes or improvements in parenting behavior or practices. Many lending libraries had space for parent-child play (e.g., to "try out" borrowed toys) which were associated with increases in positive parent-child interactions. Both planned and informal child play activities were associated with child engagement and play [16] with toys and other learning materials (e.g., children's books).

A number of contextual variables have been found to be related to increased lending library use and in turn parent, parent-child, and child benefits. Lending libraries that were located in the communities in which parents live were associated with increased use of the libraries [5, 11, 12]. Colocating lending libraries with other early childhood or parent programs was associated with increased use of other types of services,

supports, and resources [2, 5, 11, 12]. The more a lending library was inviting and family-friendly, the more likely parents accessed library resources and the longer they stayed at the library [2, 5, 10].

The more hours a lending library is open to parents and practitioners, the more it has been found to be associated with greater use by parents and professionals [5, 10]. Lending libraries operated by paid staff were found to run more effectively than those run by volunteers [5]. Charging parents small fees for using lending libraries does not seem to have any negative consequences except perhaps for parents with little or no expendable income [3].

Two studies included some type of between group comparisons that shed light on other conditions that influenced lending library use. Franyo and Settles [9] compared the check-out activity of library material at four lending libraries and found that the larger the number and variety of materials available to be borrowed, the greater the frequency of borrowing adult books, children's books, children's materials (toys, games, puzzles), and videos. Ozanne and Ballantine [10] compared four different types of lending libraries and found that active efforts to promote parents' visits to the libraries was associated with more (a) frequent library visits, (b) parent and child involvement while at the libraries, (c) social support exchanges between the parents, practitioners, and other parents, and (d) a stronger sense of community belonging.

A single evaluation included extensive information on the lending library practices of early childhood professionals and technical assistance providers [6]. Thorman found that the materials borrowed by professionals were incorporated into the day-to-day practices of early childhood practitioners, and that the range of materials available to be borrowed was used in their classrooms and other intervention settings (e.g., parents' homes). The practitioners in the Thorman [6] study also reported different kinds of benefits to both themselves and the children and parents with whom they worked. No other studies of practitioner lending patterns or child outcomes related to the use of materials in the classroom were located. One report [5] included descriptive information on early childhood professional lending patterns.

Research Evidence for Lending Libraries

	Parent outcomes			PC[a] outcomes	Child outcomes				CCP[b] outcomes	
Research Evidence	Social Support	Parenting behavior	Parent-practitioner interactions	Parent-child interactions	Socialization	Early literacy	Play	Engagement	Expand Classroom Curriculum	Child Classroom Activities
Brodin & Bjorck-Akesson (1992)	✓				✓		✓	✓		
Franyo & Settles (1996)	✓			✓	✓					
Ozanne & Ballantine (2010)	✓	✓	✓				✓	✓		
Ozanne & Ozanne (2011)	✓			✓	✓		✓	✓		
Powell & Seaton (2007)	✓	✓	✓		✓		✓	✓		✓
Sidorow (2012)	✓		✓			✓		✓		
Stooke & McKenzie (2009)	✓	✓	✓	✓	✓	✓	✓	✓		
Thorman (2014)	✓	✓	✓						✓	✓

[a]PC = Parent-Child. [b]CCP = Child Care Provider.

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Parent-to-Parent Support

Goals:

Parent-to-parent support involves either the provision of support from an experienced and knowledgeable parent to a parent experiencing stress or other psychological distress associated with the birth and rearing of a child with a condition that is considered atypical [1-3] or parent-to-parent support groups where parents of young children and other family members engage in supportive and mutually beneficial exchanges based on common interests or concerns [4]. The majority of these types of experiences typically involve support exchanges in response to parents' needs associated with child conditions leading to poor outcomes [e.g., 5]. These child-related conditions include, but are not limited to, a developmental disability, a special health care need, a health impairment, a mental health issue, or a rare childhood disease [1, 6-8]. Parent-to-parent support also includes the provision of support to women experiencing difficult pregnancies, teenage and first-time parents, and parents needing advice or guidance with parenting and child rearing [4]. Parent-to-parent programs are often called parent support networks, peer support programs, family support networks, or family-to-family support programs [1, 7, 9-11].

Theory of Change:

Parent-to-parent programs and practices are based on social support theory which includes the tenet that emotional, informational, instrumentation, and other types of advice and assistance (social supports) provided in response to either stress-related incidents (e.g., birth of a child with a condition placing him or her at-risk for poor health or developmental outcomes) or the need for resources to address family or child-related concerns (e.g., information on child intervention options) lessen the negative psychological effects associated with difficult life events [12, 13]. The support(s) provided by parents that are responsive to other parents' individual needs, concerns, priorities, etc., are expected to decrease stress, enhance positive adaptations, and enhance and promote positive child, parent, and family functioning [8].

Program Features:

Parent-to-parent programs typically have a parent coordinator who "takes" referrals for a parent or from another family member on behalf of a parent and who uses information obtained during a referral to match the parent with a more-experienced parent knowledgeable about parents' concerns or requests. In larger parent-to-parent programs, other parents, in addition to the program coordinator, obtain information about parents' concerns and match the parent with another more-experienced parent. The parent-to-parent coordinator at the time of referral obtains information about the reason for referral and information about the parents' child, child condition, diagnosis, or special challenges, the types of support needed or requested, the characteristics of the parent with whom the parent will be matched, and any specific preferences or concerns to be taken into consideration as part of a parent-to-parent match. Formal training for parents who will provide support to other parents is considered both essential and

necessary for parent-to-parent programs to be effective [14-16]. The same is the case for parent-to-parent support group facilitators [17].

Parent-to-parent support groups typically involve the exchange of information, advice, guidance, etc., and other types of social supports among parents with similar needs, concerns, or preferences [2]. These groups are most often conducted at regularly scheduled times and often include supportive exchanges during special events or those offered on special topics at parent meetings or workshops (e.g., parents night out). Parent-to-parent support groups are generally run by parents with experience in the purpose of the groups or by professionals who have personal experience with the main focus of a support group [5, 18].

The program features generally considered the defining characteristics of a well-developed and operated parent-to-parent program and parent-to-parent support groups include mutually beneficial exchanges between parents, parents who are respectful of one another, parents who are good listeners and who offer or provide support in response to other parents' concerns and requests, and parents who are nonjudgmental and accepting of parents' unique family situations [19-21]. The benefits of these features are expected to include, but are not limited to, enhanced coping, psychological health, family adaptations, family functioning, and advocacy [3, 8, 10, 19, 22].

Target Audience:

The target audience of parent-to-parent support as part of early childhood intervention includes mothers, fathers, and other family members in households with young children birth to 5 years of age where the children have conditions that cause psychological disturbances, stress, or other problems related to poor or maladaptive coping. Most parent-to-parent programs, however, work with parents with children of any age, although those funded by Smart Start are for children birth to 5 years of age.

Research Evidence:

Four research reviews of both quantitative and qualitative studies of parent-to-parent and parent peer support groups which included both quasi-experimental and experimental studies provide some evidence for both types of supportive interventions [9, 10, 22, 23]. Hoagwood et al.'s [9] review included 11 experimental studies, Ireys et al.'s [10] review included three experimental studies, Robbins et al.'s [22] review included 12 experimental studies, and Shillings et al.'s [23] reviews included seven experimental studies. The results showed that the majority of intervention group parents demonstrated improved personal and family functioning and that parent-to-parent support has a wide range of positive effects (Table). The findings were much the same for parent-to-parent support and parent support groups [10, 22]. The positive benefits included changes and improvements in parent psychological health, family functioning, family coping, and positive parent and family adaptations to each child and family's unique circumstances.

Results for the research reviews are supplemented by both quantitative [24] and qualitative [8, 25-27] studies where the investigators found that parent-to-parent support has positive benefits not only on the parents receiving support but the parents providing support. In both the research reviews and supplemental studies, however, there were outcomes for which there were no differences between parent-to-parent and nonintervention group parents. This led most investigators to conclude that parent-to-parent is a promising but is not yet a practice that has sufficient research to claim that it is evidence-based. This is the case because the investigators of the studies in the research reviews as well as individual studies often yielded mixed results in terms of which outcomes were and were not found associated with the parent-to-parent interventions.

Research Evidence for Parent-to-Parent and Parent Peer Support Group Interventions

	Parent outcomes			Family outcomes		
Research Evidence	Decreased stress	Decreased anxiety	Enhanced well-being	Better coping	Better adaptations	Improved functioning
Hoagwood et al. (2009)	✓	✓		✓		✓
Ireys et al. (2001)	✓	✓				
Robbins et al. (2008)	✓	✓	✓	✓		
Shilling et al. (2013)	✓		✓		✓	✓
Singer et al. (1999)	✓			✓	✓	✓

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Outreach to Increase Parent Awareness of the Importance of Early Childhood

Goals:

Outreach to the general public and to parents in particular aims to (a) increase awareness of child development and/or the benefits of early childhood education, (b) promote child and parent participation in a wide range of Partnership activities, and (c) increase access to community resources and services to promote child learning [1, 2]. These goals are typically achieved by a number of different outreach activities, including public awareness and dissemination activities [3, 4].

Theory of Change:

Outreach activities of any kind are premised on the belief that information about the benefits of early childhood development, education, and parent involvement are a necessary but not sufficient condition for parents to access early childhood resources, activities, and services for their children [5, 6]. As noted by Atkin and Rice [7], public awareness campaigns and other outreach activities "attempt to inform or influence behaviors in [specified] audiences…using an organized set of communication activities featuring an array of mediated messages [and activities] (p. 3).

Types of Practices:

Outreach includes the use of a number of different materials and activities depending on the specific objective of dissemination, public awareness, community engagement, etc. The materials and activities include, but are not limited to, brochures, posters, public service announcements, newspaper articles and announcements, radio and television spots, parent newsletter articles, professional organization newsletter articles, community events, presentations to parents or professionals, speaking engagements, agency collaborations, and program or agency websites. The use of any of these materials or activities is typically part of social marketing campaigns [8].

Target Audiences:

Parents of young children birth to 5 years of age and professionals who work with parents and their young children.

Research Evidence:

The importance of outreach to improve knowledge and understanding of the importance of early childhood development and education has been voiced often [1, 9-11]. While there have not been studies of outreach to parents of young children, researchers in other fields have documented evidence of the effects of outreach. These studies have identified the characteristics of effective outreach to influence changes in people's behavior which can be used to inform the development and delivery of outreach to improve parent knowledge and to promote parent and child use of early childhood resources and services [12]. The table lists research reviews of different types of outreach studies and

the characteristics of outreach activities that have been found to be effective in changing attitudes, knowledge, and behavior in ways intended.

No matter the method of outreach delivery (e.g., brochure, public service announcement); tailoring messages to a specific audience (e.g., parents of young children who are recent immigrants) is more effective than non-tailored or general messages [13-18]. Tailored messages or tailored communication refers to "any number of methods for creating communications individualized for their receivers, with the expectation that this individualization will [have intended] effects" [19, p. 454]. Targeted groups are more likely to respond to outreach messages that convey the positive benefits of taking action or changing behavior (termed gain-framed messages) [18, 20]. Both message tailoring and gain-framed messages are more effective when they "come across" as highly personalized (as if the message was prepared specifically for the recipient) [21, 22].

Outreach activities are more likely to be more effective if done on multiple occasions [23, 24]. This includes the distribution of outreach materials [25], public service announcements [26], and face-to-face contacts [23]. Face-to-face outreach is considerably more effective than outreach that is not done by personal contacts [23]. Evidence indicates that collaborative activities can be especially effective for changing people's behavior [23, 27]. Outreach by credible messengers can bolster the effects of reaching target audiences [28]. In many cases, the use of opinion leaders (trusted colleagues) to deliver targeted messages can also increase the positive benefits of outreach [22, 29] .

"One time" activities or passive distribution of outreach material are not likely to be very effective, especially compared to outreach approaches that intensively target small, specific groups over a long period of time using multiple strategies [23].

Research Evidence on the Characteristics of Effective Outreach

	Message framing			Method of delivery		
Research reviews	Tailored messages	Gain-framed messages	Personalized messages	Multiple contacts	Face-to-face contacts	Credible messenger
Clow et al. (2005)				✓	✓	
Dunst & Gorman (2006)			✓	✓	✓	
Gallagher & Updegraff (2013)	✓		✓			
Kreuter et al. (1999)	✓		✓			
Latimer et al. (2000)	✓	✓				
O'Brien et al. (1997)				✓	✓	✓
O'Brien et al. (2003)					✓	✓
O'Keefe & Jensen (2007)	✓	✓				
Shaw et al. (2005)	✓		✓			
Trepte & Scherer (2005)					✓	✓

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