

What Works for Third Grade Reading

NC Pathways to Grade-Level Reading Working Paper

Early Intervention: Health and Development on Track, Beginning at Birth

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Appendix A. Developmental Screening in North Carolina

I. Pathways Measure of Success

Percentage of children showing improvement with early intervention services

II. Definitions

The following terms are referenced in this brief:

ABCD (Assuring Better Child Health and Development) is a developmental screening, prevention and early identification, referral and follow-up program. The program began through a grant from Commonwealth Fund in 2000, and North Carolina was one of the four original states. The NC ABCD Program is now statewide, with participation of about 1300 pediatric and family medicine practices.

Developmental delay is defined broadly by the federal IDEA Part C program as a delay in one or more of the following five areas of early childhood growth and development relative to age-expected milestones: physical development including vision and hearing, cognitive development, communication, social or emotional development, and adaptive development.ⁱⁱ Each state has its own legal definition of developmental delay.

Child Find is the component of the federal Individuals with Disabilities Education Act (IDEA) that requires every state to implement comprehensive policies to find and refer young children who may have a disability to that state's early intervention program.ⁱⁱⁱ The system includes screening for child health and development, public awareness and outreach, interagency coordination, a process for managing referrals, eligibility definitions, and a process for tracking children once referred.^{iv}

Developmental disability is an instance in which a child under the age of three needs early intervention services because the child is experiencing a development delay as defined above, or who has a diagnosed physical or mental condition, which may include genetic abnormalities, severe attachment or nervous system disorders, congenital infections, and secondary impacts from toxic substance exposure, including fetal alcohol syndrome.^v

Developmental monitoring, or developmental surveillance, involves medical professionals examining children as part of well-child visits to identify signs of developmental delay or problems.^{vi}

Developmental screening involves health care or other professionals engaging with a child (and his/her family) to determine if (s)he is learning basic skills as expected for her/his age. In North Carolina, this screening occurs during regularly scheduled well-child visits with a pediatrician or family physician at the 6, 12, 18, 24 month and 3, 4 and 5 year visits. Screening for autism spectrum disorder also occurs at the 18 and 24 month visits. The screening tool is completed by parents, recognizing that parents are the experts on their children. If a child is at high risk of developmental challenges, additional screening or assessment may be needed.^{vii}

Early Intervention is the process of providing services, education and support to infants and toddlers who have been evaluated as having a physical or mental delay, disability or special need, or whose risk factors place the child at high risk of delay.^{viii} These services are offered to parents regardless of income level as part of the federal IDEA Part C program for infants and toddlers with developmental delays or disabilities. State eligibility requirements vary, but each of the following services must be available:

- Physical and motor skills such as reaching, rolling, crawling, and walking
- Cognitive skills such as thinking, learning, solving problems
- Communication skills such as talking, listening, understanding
- Social-emotional development and skills such as playing and feeling secure and happy
- Self-help skills such as eating and dressing^{ix}

EPSDT is the Early Periodic Screening, Diagnostic, and Treatment program for children in low-income families funded through the federal Medicaid program. This program provides funding for well-child visits and needed screenings and treatments for diagnosed conditions for children living with income-eligible families.

IDEA is the federal Individuals with Disabilities Education Act. Under this federal law, all states must provide children with a free and appropriate public education. **Part C** defines the services that must be available for very young children, ages birth to three, diagnosed with atypical development. Services must be provided by qualified personnel and delivered in natural contexts at no cost to families (unless a state has established a sliding fee payment arrangement). Parents, caregivers, or a professional may refer a child for Early Intervention/IDEA Part C evaluation.^x The definition of conditions warranting IDEA Part C intervention and the allocation of funding for the delivery of these services is determined by each state.^{xi} See “special education,” below, for a description of IDEA Part B, for school-aged children.

Individual Family Service Plan (IFSP) is an IDEA plan for services to address developmental delays of young children. The IFSP may become an Individualized Education Plan if the child continues to need services beyond the age of three.

Infant and Early Childhood Mental Health refers to how well a child’s social-emotional skills are developing during the period from birth to age five.^{xii}

Low birthweight is defined as less than 2,500 grams or 5 pounds, 8 ounces. In the United States, one in 12 babies are born at low birth weight. While some low birth weight babies are born healthy, others at low birth weights experience serious health problems.^{xiii}

North Carolina Infant and Toddler Program is the state’s IDEA Part C agency.

North Carolina Interagency Coordinating Council is the forum through which policy makers, providers, and parents work together to assure that the needs of young children with disabilities are met. The council makes policy recommendations, supports service evaluations, identifies appropriate services for young children from birth through the preschool years, and guides the work of local interagency coordinating councils.^{xiv}

Social and emotional development is the process through which children develop skills necessary to build strong attachments with adults, maintain positive relationships with peers and adults, construct a healthy personal identity, and manage their own behaviors through self-regulation.^{xv} Social-emotional

development is often described in terms of a child’s temperament, attachment, social skills or social competence, and emotional regulation.^{xvi}

Special education is a program of instructional services designed to meet the specific educational needs of children with delays or disabilities. Services for preschool children (ages three through five) and school-aged children (K-12) are provided free of charge through the public education system. These services are available through IDEA Part B.^{xvii}

Transition services assist a toddler with a continued delay or disability (and his or her family) to move from a Part C early intervention program or service to Part B of the IDEA program or some other appropriate continuing service. The IDEA program specifies a formal process for transferring from Part C to Part B.^{xviii}

III. Early Intervention: Why it Matters

About 15 percent of American children ages three to 17 years have a developmental or behavioral disability. These include autism, intellectual disability, attention-deficit/hyperactivity disorder, and/or language or communication delays. Many children with developmental disabilities are not identified before they reach fourth grade at about age ten.^{xix}

Undetected developmental problems and emotional disturbance may cause physical delays, the inability to maintain relationships, and serious impediments to learning. Poor peer relationships are associated with later emotional and mental health problems, school dropout, delinquency, aggression, poor social skills, and lack of empathy.^{xx}

In 2015, the North Carolina IDEA Part C program served just over 10,000 young children through IDEA Part C: about 1,400 infants ages birth to one year, 3,100 toddlers ages one to two years, and 5,700 toddlers ages two to three years. Through age two, more boys than girls were served.^{xxi}

Children who receive early and regular developmental screenings and early access to high quality early intervention services, if needed, demonstrate improved social competence and cognitive abilities in the short-term and often achieve long-term educational benefits, including math and reading skills on par with peers.^{xxii} Early detection and diagnosis helps parents and child care and early education teachers make appropriate decisions about educational programs.^{xxiii}

Early intervention programs can be a wise investment to increase the efficiency of other systems that interact with children with disabilities, including the school system and social safety net programs. The Federal Reserve Bank of Minneapolis classifies Early Intervention Services as “economic development initiatives” as some programs return up to \$8 for every \$1 invested.^{xxiv}

IV. Early Intervention: Connections to Other Pathways Measures of Success

Just like the domains of child development, the Pathways Measures of Success are highly interconnected. The table and text below outline the measures that *influence or are influenced by* Early Intervention.

Health and Development on Track, Beginning at Birth	Supported and Supportive Families and Communities	High Quality Birth-to-age-Eight Learning Environments with Regular Attendance
Healthy Birthweight	Formal and Informal Family Supports	High Quality Birth-through-age-Eight Early Care and Education
Social-Emotional Health	Safe at Home	
Physical Health	Positive Parent-Child Interactions	

Healthy Birthweight

Children born at low birthweight have more chronic health and development conditions than babies born at normal birthweights. Low birthweight children experience higher rates of vision and hearing impairment and cerebral palsy, miss more days of schools, and have more learning difficulties.^{xxv} These are conditions that can be identified by developmental screenings early in babies’ lives. See the Pathways brief on *Healthy Birthweight*.

Social-Emotional and Physical Health

Very young children’s social-emotional development, also called infant mental health, is closely intertwined with behavioral indicators of developmental delay. Developmental screening can identify infant behavioral symptoms of early anxiety and even depression in the first years of life. These may appear as slow growth and physical delays, infant crying that cannot be consoled, sleep problems, and fearfulness.^{xxvi} These may be addressed through evidence-based interventions available through Early Intervention.^{xxvii} Young children who experience development delays may also experience problems with social interactions and social competence, including spending more time playing alone. Peer interactions may be fewer and more negative.^{xxviii}

Early intervention catches physical delays and differences early in a child’s life and intervenes with appropriate treatment. Undetected developmental problems may cause delays in acquiring speech and language.^{xxix} Having age-appropriate motor skills and coordination has been shown to have an effect on cognitive and social-emotional development, as well as academic achievement.^{xxx}

Formal and Informal Family Supports, Safe at Home, and Positive Parent-Child Interactions

While biological factors like low birthweight and prematurity can be predictive of developmental challenges, social, familial, and economic influences on the child and family may also result in long term developmental and academic challenges.^{xxxi} Recent research reveals that children’s developmental delay may be associated with stressful family life events, including parental work stressors, caregiver anxiety, family violence, and low social support. Children living in families struggling with both low income and maternal depression are particularly at risk for developmental delays in language and communication,^{xxxii} and one in two low-income mothers with young children may experience depression.^{xxxiii} High-quality parent-child interactions improve children’s outcomes with early intervention.^{xxxiv} High-quality early intervention programs provide needed supports for families, educate and empower parents to advocate for their children,^{xxxv} and help to improve the quality of parent-child interactions.^{xxxvi} New research indicates that risk factors may impact developmental delays differently

over the first five years of children’s lives, reflecting the impact of child health and family and community environment factors.^{xxxvii}

High Quality Birth-through-age-Eight Early Care and Education

Screening for and detecting developmental delays provides an opportunity for children’s needs to be met early on, reducing the need for remedial or special education services later in life.^{xxxviii} Childcare providers may be among the first people to notice that young children are having physical, learning, communication, or social emotional challenges. Conversations with parents and assistance in connecting them with supports and services is a key responsibility of the early care and early education field. Practitioner awareness of IDEA Part C and developmental benchmarks in early care settings can serve as a protective factor for children needing referrals.^{xxxix}

V. Policy Options to Ensure Effective Early Intervention

Support State Systems for Developmental Screening and Linking Children and Families to Resources.

Continue to review primary care practice and county ABCD screening rates and expand investment in the ABCD developmental screening program to reach all Medicaid-eligible children participating in EPSDT-recommended well-child visits. These data should be disaggregated by county and by race/ethnicity. See Appendix A for more information on ABCD.

ABCD is a national developmental screening, promotion, prevention, early identification, and referral/linkages program led by the National Academy for State Health Policy and supported by The Commonwealth Fund.^{xi} Since 2000, it has involved 27 states. ABCD began in North Carolina in 2000 as a quality improvement project in primary care, and by 2004 the program had expanded to include all 14 Community Care of North Carolina (CCNC) regional networks across the state.^{xii} The program was designed to identify and develop a set of best practices by which primary care physicians can promote healthy development, identify children five years of age or younger with developmental delays and arrange for early intervention.^{xiii} In ABCD, primary care clinicians screen children to ensure early identification of delays, help parents learn how to support their children’s needs, promote healthy development and offer anticipatory guidance.

ABCD has been effective in improving rates of developmental screening at well-child visits among Medicaid-eligible 0-5 year-old children from 12 percent in 1999 to 92 percent today. The National Survey of Children’s Health, which includes questions to parents regarding developmental screening at their young child’s primary care visits, found that, out of the 50 states, North Carolina had the highest rate of development screening for the 2007, 2009, and 2011-12 surveys. Screening for autism (started in 2010) has reached a rate of 79 percent.^{xiiii} These rates show that screening is reliably happening at well-child visits. The main challenge now is to increase the rates of children receiving their well-child visits.

Smart Start has been a partner in the work of the ABCD Program since 2001. Through Smart Start collaboration and funding support from the Race to the Top Early Learning Challenge, ABCD quality improvement coordinators have worked in all CCNC networks and targeted 246 practices and 1,345 providers serving 65,000 Medicaid-enrolled children aged 0 to 5 years old.^{xliv} In September 2016, North Carolina was recognized nationally for leading the nation in EPSDT services.^{xlv}

In March 2017 the ABCD State Advisory Group, a multi-stakeholder leadership group, held a state summit that brought together state leaders, parents, and other stakeholders from across the state to

review ABCD systems mapping and identify next steps to establish standardized communication and collaboration for screening, referral, linkages to resources, and feedback. The need for supporting parents in coordinating care was highlighted in the discussions at the summit.

Follow National Guidance in Screening, Family Engagement and Tracking Outcomes. The American Academy of Pediatrics has begun a multi-year project called Screening In Practices to give guidance to its members on implementation of screening, including developmental, social-emotional, autism, maternal depression, and social determinants of health. The emphasis is not only on screening, but also on engaging families, linking to resources, and tracking outcomes. The new STAR (Screening Technical Assistance & Resource) Center website (www.aap.org/screening) has information on screening tools and implementation, including materials from the successful ABCD project in North Carolina. The national advisory board for the project has intentionally not endorsed particular screening tools, but has included tools that are validated and family-centered.

The North Carolina 2016 *Health Check Program Guide*, in keeping with AAP guidance, does not specify the developmental screening tools to be used in the Health Check process, but requires a validated tool, per AAP guidance.

Expand IDEA Part C Eligibility to Include At-Risk Children. *Working with the North Carolina Interagency Coordinating Council, explore feasibility and cost for expanding eligibility parameters of IDEA Part C to include children at risk of conditions based on the current science of trauma and toxic stress.*

Five states have adopted IDEA Part C eligibility criteria that include at-risk circumstances: Illinois, Massachusetts, New Hampshire, New Mexico, and West Virginia.^{xlviii} North Carolina does not currently include an at-risk determination in its IDEA Part C eligibility guidelines.

In 2015, just over 10,700 infants and toddlers were served through IDEA Part C in North Carolina, and in 2016-17, the agency applied for \$12.6 million to manage and deliver its services.

The National Early Childhood Technical Assistance Center (NECTA) at the University of North Carolina's Frank Porter Graham Child Development Institute created the *Interactive Guide to Implementing and Sustaining Effective Service Delivery Approaches: Stages and Steps*.^{xlix} The guide, anchored in effective national, state, and local service delivery approaches and strategies, may be a useful tool to assess North Carolina's infrastructure, capacity, and areas for greater IDEA Part C investment, including expanding services to reach at-risk children.

Support Care Coordination for Children with Risk Factors. Many young children with health problems, developmental issues or who are living with toxic stress may not be eligible for Part C or Part B services, but may benefit from care coordination. In North Carolina, such care coordination is provided through Community Cares for Children (CC4C), with the goal of improving children's health outcomes and reducing costs for enrolled children. The program works with families of at-risk children from birth through age five, promoting family strengths, supporting families in identifying and linking to community resources, and communicating with children's medical homes. CC4C plays a significant role in care and service coordination for young children in the foster care system.

Expand Resources for Mental Health Services to Address Needs Identified with Maternal Depression Screenings. *Partner with CCNC and health researchers to determine, as data is now becoming available, (1) the extent to which mothers are being screened for maternal depression at infant well-baby visits, (2) the sufficiency and effectiveness of needed services, and (3) the extent of racial/ethnic and/or geographic disparities in screening and service delivery to mothers with post-partum depression.*

Because research has shown that maternal depression following the birth of a child can negatively impact children’s early development, screening for post-partum maternal depression is an important early intervention issue. Maternal postpartum depression screening is available statewide through the North Carolina *Health Check* program,ⁱ and the ABCD program trains practices on screening, referral and linking families to resources.ⁱⁱ

In July 2016, North Carolina Medicaid began to reimburse providers for maternal depression screens administered to mothers during infants’ well-baby visits.ⁱⁱⁱ The first round of data collection on that project shows a statewide 73 percent screening rate at the one-month well-baby visit.^{liii}

VI. Proven and Promising Practice Options for Effective Early Intervention

Promoting Family Engagement in Well-Child Visits to Expand the Numbers of Young Children Receiving Developmental Screenings

Families need support to ensure their children get needed preventive care visits, which include important screening. North Carolina can support the efforts of *Health Check* Coordinators and medical homes in outreach to families to schedule well-child visits according to the Bright Futures periodicity schedule and promote community awareness of the importance and benefits of well-child care, screening and healthy development. NC can also support families by addressing barriers such as transportation to the doctor’s office.

Engaging pediatricians in developmental screenings and early literacy development during well-child visits has been shown to be very effective. Initiatives like Reach Out and Read build those connections and could be expanded in North Carolina.^{liv}

Reach Out and Read, founded in 1989, is a practice used by physicians to promote young children’s literacy skills as part of the well-child visit. It is included here because physicians also use the book for developmental promotion and to support parents in reading with their children. Reach Out and Read Carolinas operates in 195 sites across North Carolina, with ten more sites coming soon, pending completion of training.^{lv}

Improving Transition Planning from IDEA Part C to IDEA Part B and from Preschool to Kindergarten for Students with Special Needs

For children with special needs and vulnerabilities, supported transitions from family to school and from early developmental services to public preschool and elementary school are critical to maintain gains. The federal IDEA program defines the process and actions that must be taken for young children and their families receiving Part C services as they transition to Part B services or leave the IDEA system but continue to need supports or interventions.^{lvi}

The North Carolina General Assembly's 2016 Conference Report, summarized by the NC Early Childhood Foundation, described legislation requiring "...Department of Health and Human Services to recommend that both NC PreK and preschool teachers prepare a preschool-to-kindergarten transition plan for each child receiving assistance through NC PreK or child care subsidy programs. The plan should document the child's strengths and needs based on the five Goals and Developmental Indicator domains for children's developmental and learning progress that are based on the NC Foundations for Early Learning and Development."^{lvii} While this specific requirement is directed at children enrolled in the federal Child Care Development Fund subsidy payments, it is reasonable to expect that a similar level of transition planning would be helpful for children enrolled in IDEA Part C and IDEA Part B preschool special education services. Current individualized child outcome data could be provided to teachers and other service providers as children transition.

Expanding Early Intervention Best Practices to Family Support Settings, Including Social Service, Health, Education and Workforce Agencies

Key Principles for Providing Early Intervention in Natural Environments^{lviii} is a consensus document created and informed by a national workgroup of researchers and practitioners that offers guidance on integrating early intervention best practices into other settings serving families:

- **Use Every Day Experiences.** Infants and toddlers learn best through everyday experiences and interactions with familiar people in familiar contexts.
- **Focus on Families.** All families, with the necessary supports and resources, can enhance their children's learning and development.
- **Providers are Supporters.** The primary role of a service provider in early intervention is to work with and support family members and caregivers in children's lives.
- **Create a Dynamic, Individualized Process.** The early intervention process, from initial contacts through transition, must be dynamic and individualized to reflect the child's and family members' preferences, learning styles, and cultural beliefs.
- **Functional Outcomes.** IFSP outcomes must be functional and based on children's and families' needs and family-identified priorities.
- **Family Priorities are Central.** The family receiving team and community support has their priorities, needs, and interests are addressed most appropriately by a primary provider
- **Use Implementation Science.** Interventions with young children and family members must be based on explicit principles, validated practices, best available research, and relevant laws and regulations.^{lix}

The document also provides resources for integrating early intervention in specific family service contexts, including early childhood, education, school psychology, speech pathology, physical and occupational therapy, and medicine.

Analyzing and Using Administrative Data to Better Serve Children and Save Money

IDEA and other large administrative service and benefits databases have information on waitlists, transitions between Part C and Part B, children and family outcomes, service gaps, and disparities and disproportionality by race/ethnicity, geography, or disability status that can be analyzed and used to better serve children and families and save the state money. A shared database and standardized

communication among primary care medical homes, Part B and Part C, and families could reduce gaps and discrepancies in service provision.

Data analysis can provide valuable insight into real or perceived gaps or discrepancies in service and can be used to devise strategies to improve referrals, access or service delivery. For example, time spent on a wait list for early intervention services can result in the loss of critical developmental opportunities for a child. Since preventative services are more cost-effective and impactful than remediation services down the line, analyzing data on waitlists and using it to shorten or eliminate children's waits for services can both result in better outcomes for children and be more cost effective for the state.

A toolkit, entitled *B6 Data Reporting Tools: Educational Environments, Ages 3-5* provides training and technical assistance resources to assist states in accurately reporting educational environment data for children ages 3-5 with disabilities. This reporting is required for the federal Office of Special Education Programs Child Count and SPP/APR Indicator 6.^{lx}

Increasing Inclusion of Children with Disabilities in Early Education Environments

The federal IDEA requires that children with disabilities be educated in the “least restrictive environment,” preferably in natural environments.^{lxi} Federal fiscal year 2013 data reveals that 24 percent of all young children with disabilities (i.e., three-, four- and PreK five-year old children) do attend classroom settings with their peers. Because every young child should have access to learning and growth opportunities across community settings, the NC Inclusion Initiative published the *North Carolina Inclusion Planning Guide*. The Guide provides a series of steps for a collaborative process at the community level to plan for and execute opportunities for the inclusion of young children with disabilities in high quality early childhood programs.^{lxii} As NC PreK expands, best practices for inclusion as articulated in the *Guide* can be considered.

The inclusion of young children with disabilities as full participants in high quality early childhood settings has been shown to increase positive outcomes for all children and to provide academic and social-emotional benefits for children identified with disabilities. In addition, children with disabilities reap other benefits including the opportunity to make friends.^{lxiii} Evidence demonstrates that children with special needs served in regular education settings had better post-secondary education, employment, and independent living outcomes.^{lxiv}

Increasing Access to Infant and Early Childhood Mental Health Consultation within Early Childhood Programs

Infant and early childhood mental health consultation is an evidence-informed practice that places a specially-trained mental health consultant within early childhood programs, such as home visiting and early education. The mental health consultant works as part of the program team to build the capacity of program staff to employ “skilled observation” to recognize young children’s social-emotional needs and challenges and to engage with children and their families in trauma-responsive ways.^{lxv} While infant and early childhood mental health consultants may come from a variety of fields, formal training and licensure is required, along with demonstrated skills in mental health assessment, infant health, community programs, and the cultural context of children, families, and providers served.^{lxvi} There is

strong evidence that this type of consultation to program providers improves the social, emotional and behaviors outcomes of young children, and benefits both providers and programs.^{lxvii}

Increasing access to mental health consultation would also require increasing the pool of trained mental health specialists who are competent to work with infants and very young children and their families.

VIII. Evidence-Based and Promising Program Options for Effective Early Intervention

Programs identified below are largely directed at providing *intervention services* (i.e., treatment and support) for infants with mental health challenges, and their families, when developmental screening and assessment identify them as in need of service. In addition, trauma-informed practice should pervade the child- and family-serving system.

Attachment Bio-Behavioral Catch-up (ABC)

Attachment Bio-Behavioral Catch-up is an infant-parent intervention developed to treat infants ages six to 24 months who have experienced early adversity. Over ten sessions, parents are coached in a set of skills and videotaped to help them reflect on their behaviors. Traumatized infants whose parents completed the ABC sessions had more normalized stress responses.^{lxviii}

Parent-Child Interactive Therapy (PCIT)

Parent-Child Interaction Therapy is a parent-child intervention in which specially trained coaches work with parents of children ages two to seven years old with disruptive behaviors. Parents are coached to develop communication, positive discipline, and child management skills. Weekly coaching is provided. Research shows improvements in parental skills and positive behaviors toward their children and reductions in children's negative behaviors.

Trauma Informed Child-Parent Psychotherapy (TI-CPP)

Trauma Informed Child-Parent Psychotherapy is a highly effective treatment for children ages birth through six who have experienced traumatic events, and their parents. The treatment guides parents through a process of repairing parent-child "relationship breaches" resulting from traumatic events. This intervention, disseminated through National Child Traumatic Stress Network, has been implemented 143 sites.^{lxix} CPP is also one of the few empirically-validated interventions that is "routinely conducted with ethnic minorities."^{lxx}

Child First

Child First works to decrease the incidence of emotional and behavioral disturbance, developmental and learning problems, and abuse and neglect among high-risk young children and families. Child First serves pregnant women and families with children birth through age five. A mental health/developmental clinician and care coordinator work as a team to provide services that include a comprehensive assessment of child and family needs, observation and consultation in early care and education settings, a family and child plan of care, a parent-child mental health intervention, and care coordination. The program typically lasts six to 12 months, depending on a family's needs. During the first month, the

clinician and care coordinator conduct joint home visits twice per week, and thereafter visits occur either separately or jointly and at least weekly.^{lxxi}

Appendix A. **Developmental Screening in North Carolina**

Assuring Better Child Health and Development (ABCD)

The ABCD Program began in early 2000 with a grant from the Commonwealth Fund national ABCD Project. By 2004 the ABCD program had expanded to all 14 of North Carolina's Community Care for North Carolina (CCNC) regions. To improve the recognition of developmental delays in children, CCNC worked with practices to integrate standardized, validated developmental screening tools at certain well-child visits. CCNC established the NC ABCD State Advisory and ABCD Quality Improvement (QI) Groups that have met quarterly since 2001 to support primary care practices and parents in best practices, to identify barriers, and to promote policies for sustainability and spread of the ABCD program.

Since 2004, NC Medicaid has required a formal, standardized developmental and behavioral screening tool at the well-child Early, Periodic Screening, Diagnosis and Treatment (EPSDT) visits. These screenings occur at the 6-month, 12-month, 18- or 24-month, 36-month, 48-month and 60-month visits.

NC Smart Start began partnering with the ABCD Program in 2001 in several counties around the state. North Carolina received a four-year Children's Health Insurance Program Reauthorization Act (CHIPRA) grant in 2010, bringing new attention to Developmental and Behavioral screening. From 2013 through 2016, using funding from the state's Race to the Top Early Learning Grant, Smart Start partnered with CCNC to place an ABCD Quality Improvement Coordinator in each of CCNC's 14 networks. The project has tracked claims on screening rates since 2001. Quality Improvement Coordinators look closely at referral and feedback rates, in addition to reviewing screening rates through chart audits. The coordinators share data with the practices and help with referral processes.

Another measure of NC's success on developmental screenings comes from the National Survey of Children's Health, which includes questions to parents regarding developmental screening at their young children's primary care visits. North Carolina has had the highest rate of development screenings nationwide for the 2007, 2009, and 2011-12 surveys.

Developmental screening for children aged 0-5 years has reached a level of reliability in North Carolina primary care practices to show that the process has become a routine part of well-child care. This identifies North Carolina as a leader in developmental screening. ABCD Coordinators, who engaged with practices to look at the process in more detail, discovered a need for primary care practices to have a reliable system in place to ensure that positive screens result in a referral, and to link families to the array of early intervention resources. As a result, assistance with the referral process, referral tracking, and obtaining feedback is an ongoing focus of ABCD Coordinator and practice work. In 2015, this practice experience supported multi-stakeholder consensus around a statewide referral form, two-way release, and feedback form. Practices and CCNC regional networks receive guidance on coding for screening so that data on rates of screening can be provided to them quarterly for quality improvement of the process. Feedback to primary care practices from referral partners continues to be a significant need.

Key objectives of ABCD are to create a model Medicaid program for children including medical, social and developmental needs, to engage with local communities, to integrate across existing services to collaborate in care, to respond to parental developmental concerns, and monitor and track Medicaid impact. The model has two major components: to integrate a standardized developmental screening tool as part of well-child visits and to collaborate with families, state, and local agency staff to improve the effectiveness of community systems serving these children.^{lxvii} Integration of screening, engaging the family, promotion of healthy development, identification of risk, and linking families to resources is the focus of work with practices. The types of screening have been expanded to include general developmental, autism, and maternal depression screenings. Current expansion is focused on screening specifically for specific social-emotional needs and screening for social determinants of health.

Health Check: North Carolina’s EPSDT Program for Children who have Medicaid

Early Periodic Screening Diagnosis and Treatment (EPSDT) defines the required and recommended components of preventive care for children and adolescents (ages 0-21 years). EPSDT also includes rights to needed treatment and services identified with screening, regardless of whether those services are normally covered. North Carolina’s program is called *Health Check* and ensures that children receive regular preventive care, and diagnoses and treatment of health problems.^{lxviii} *Health Check* is administered by the North Carolina Division of Medical Assistance.

As the result of the work of ABCD over the past decade, North Carolina now “requires the use of a formal, standardized developmental screening tool at Medicaid-funded well-child Early Periodic Screening, Diagnosis and Treatment (EPSDT) visits (6, 12, 18 or 24 months; 3, 4, and 5 years)”^{lxix} The NC EPSDT well-visit periodicity schedule and visit components align well with the American Academy of Pediatrics Bright Futures guidelines. The annual NC DMA Health Check Program Guide outlines these EPSDT components, requirements, and recommendations.

ⁱⁱ Center for Parent Information and Resources. (2014). *Overview of Early Intervention*. Retrieved from <http://www.parentcenterhub.org/repository/ei-overview/>

ⁱⁱⁱ Special Education Guide. (n.d.). *Early Identification: How the Child Find Program Works*. Retrieved February 18, 2017 from <http://www.specialeducationguide.com/early-intervention/early-identification-how-the-child-find-program-works/>

^{iv} NC Early Learning Network. (n.d.). *Child Find and Assessment*. Retrieved February 18, 2017 from <http://nceln.fpg.unc.edu/child-find>

^v Center for Parent Information and Resources. (2014). *Key Terms to Know in Early Intervention*. Retrieved from <http://www.parentcenterhub.org/repository/keyterms-ei/#dd>

^{vi} Centers for Disease Control and Prevention. (2017). *Child Development: Developmental Monitoring and Screening*. Retrieved January 28, 2017 from <https://www.cdc.gov/ncbddd/childdevelopment/screening.html>

^{vii} Centers for Disease Control and Prevention, *Developmental Monitoring and Screening*, op cit.

^{viii} Wrights Law. (n.d.). *Early Intervention (Part C of IDEA)*. Retrieved February 17, 2017 from <http://www.wrightslaw.com/info/ei.index.htm>

^{ix} Center for Parent Information and Resources, *Overview of Early Intervention*, op cit.

^x Special Education Guide. (n.d.). *The Steps in Early Intervention (IDEA Part C)*. Retrieved January 31, 2017 from <http://www.specialeducationguide.com/early-intervention/steps-in-early-intervention-idea-part-c/>

^{xi} The Early Childhood Technical Assistance Center. (2015). *States’ and territories’ definitions of/criteria for IDEA Part C eligibility*. Retrieved from http://ectacenter.org/~pdfs/topics/earlylid/partc_elig_table.pdf Information on each state is provided in this matrix of IDEA Part C eligibility criteria along with links to individual state programs.

^{xii} Zero to Three. (n.d.). *Infant and Early Childhood Mental Health*. Retrieved February 17, 2017 from <https://www.zerotothree.org/early-learning/infant-and-early-childhood-mental-health>

-
- ^{xiii} March of Dimes. (n.d.). *Low Birthweight*. Retrieved January 23, 2017 from <http://www.marchofdimes.org/complications/low-birthweight.aspx>
- ^{xiv} NC Department of Health and Human Services. (2017). *North Carolina Infant-Toddler Program (NC ITP)*. Retrieved February 18, 2017 from <http://www.bearly.nc.gov/index.php/icc/icc>
- ^{xv} Head Start. (2015). *Social & Emotional Development*. Retrieved January 2, 2017 from https://eclkc.ohs.acf.hhs.gov/hslc/hs/sr/approach/elof/se_dev.html
- ^{xvi} The Urban Child Institute. (2014). Social and Emotional Development. In *Off To A Good Start* (Chapter 2). Retrieved February 9, 2017 from <http://www.urbanchildinstitute.org/resources/publications/good-start/social-and-emotional-development>
- ^{xvii} Center for Parent Information and Resources. (2016). *Special Education Services for Preschoolers with Disabilities*. Retrieved January 28, 2017 from <http://www.parentcenterhub.org/repository/preschoolers/>
- ^{xviii} American Speech-Language-Hearing Association. (n.d.). *IDEA Part C Issue Brief: Transitions (Including Part C to Part B/Exiting Part C)*. Retrieved February 18, 2017 from <http://www.asha.org/Advocacy/federal/idea/IDEA-Part-C--Issue-Brief-Transitions/>
- ^{xix} Centers for Disease Control and Prevention, *Developmental Monitoring and Screening*, op cit.
- ^{xx} Hanag, J. F., Shaw, J. S., & Duncan, P. M. (2008). *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*. Elk Gove Village, Illinois: American Academy of Pediatrics. Retrieved from https://brightfutures.aap.org/bright%20Futures%20Documents/BF3%20pocket%20guide_final.pdf
- ^{xxi} U.S. Department of Education. (2017). *IDEA Section 618 Data Products: Static Tables*. Retrieved from <https://www2.ed.gov/programs/osepidea/618-data/static-tables/index.html#partc-cc>
- ^{xxii} Schorr, L. B. & Marchand, V. (2007). *Pathway to Children Ready for School and Succeeding at Third Grade*. Retrieved from <http://first5shasta.org/wp-content/uploads/2013/07/PathwayFramework9-07.pdf> and The National Early Childhood Technical Assistance Center. (2011). *The Outcomes of Early Intervention for Infants and Toddlers with Disabilities and their Families*. Retrieved from <http://www.nectac.org/~pdfs/pubs/outcomesofearlyintervention.pdf>
- ^{xxiii} Schorr, *Pathway to Children Ready for School*, op cit.
- ^{xxiv} Adams, R.C., Tapia, C. (2013). Early Intervention, IDEA Part C Services, and the Medical Home: Collaboration for Best Practice and Outcomes. *Pediatrics*, 132(4), e1073-e1088. Retrieved from: <http://pediatrics.aappublications.org/content/132/4/e1073>
- ^{xxv} Boulet, S. L., Schieve, L. A., & Boyle, C. A. (2011). Birth Weight and Health and Developmental Outcomes in US Children, 1997-2005. *Maternal and Child Health Journal*, 15(7), 836-844. Retrieved from <http://www.medscape.com/viewarticle/749931>
- ^{xxvi} Zero to Three. (2015). *Effective Mental Health Treatment for Young Children and their Families*. Retrieved February 18, 2017 from <https://www.zerotothree.org/resources/118-effective-mental-health-treatment-for-young-children-and-their-families>
- ^{xxvii} Zero to Three, *Effective Mental Health Treatment*, op. cit.
- ^{xxviii} Hooper, S. R. & Umansky, W. (2010). *Social and Emotional Development in Children with Developmental Delays*. Retrieved from <https://www.education.com/reference/article/social-emotional-development-delays/>
- ^{xxix} Schorr, L. (2007). *Pathway to Children Ready for School and Succeeding at Third Grade*. Retrieved from <http://first5shasta.org/wp-content/uploads/2013/07/PathwayFramework9-07.pdf>
- ^{xxx} Rhode Island Kids Count. (2005). *Getting Ready: Findings from the National School Readiness Indicators Initiative, A 17 State Partnership*. Retrieved from <http://www.gettingready.org/matriarch/d.asp?PageID=303&PageName2=pdfhold&p=&PageName=Getting+Ready+-+Full+Report%2Epdf>
- ^{xxxi} Nelson et al., Predictors of Poor School Readiness, op cit.
- ^{xxxii} Schmit, S., Golden, O., & Beardslee, W. (2014). *Maternal Depression: Why It Matters to an Anti-Poverty Agenda for Parents and Children*. Retrieved from <http://www.clasp.org/resources-and-publications/publication-1/Maternal-Depression-and-Poverty-Brief-1.pdf>
- ^{xxxiii} *Maternal Depression: Why It Matters to an Anti-Poverty Agenda for Parents and Children*, op cit.
- ^{xxxiv} Mahoney, G. et al. (1998). *The Relationship of Parent-Child Interaction to the Effectiveness of Early Intervention Services for at-Risk Children and Children with Disabilities*. Retrieved from <http://tec.sagepub.com/content/18/1/5.abstract>

- ^{xxxv} Friend, A. C., Summer, J. A., & Turnbull, A. P. (2009). Impacts of Family Support in Early Childhood Intervention Research. *Education and Training in Developmental Disabilities*, 44(4), 453-470. Retrieved from <http://www.pittstate.edu/dotAsset/202734.pdf>
- ^{xxxvi} Mahoney, G., Boyce, G., Fewell, R. R., Spiker, D., Wheeden, A. (1998). *Topics in Early Childhood Special Education*, 18(1), 5-17. Retrieved from <http://tec.sagepub.com/content/18/1/5.abstract>
- ^{xxxvii} Nelson, B. B., Dudovitz, R. N., Coker, T. R., Barnert, E. S., Biely, C., Li, N., ... Chung, P. J. (2016). Predictors of Poor School Readiness in Children Without Developmental Delay at Age 2. *Pediatrics*, 138(2), 1-12. Retrieved from <http://pediatrics.aappublications.org/content/early/2016/07/14/peds.2015-4477>
- ^{xxxviii} Child Trends. (2013). *Screening and Risk for Developmental Delay: Indicators on Children and Youth*. Retrieved from http://www.childtrends.org/wp-content/uploads/2013/07/111_Developmental-Risk-and-Screening.pdf
- ^{xxxix} Center for Parent Information and Resources. (2013). *Resources Especially for Child Care Providers and Preschools*. Retrieved from <http://www.parentcenterhub.org/repository/childcare/>
- ^{xl} The Commonwealth Fund, *Archived: State Health Policy and Practices*, op cit.
- ^{xli} Community Care of North Carolina. (n.d.). *Assuring Better Child Health and Development*. Retrieved November 8, 2016 from <https://www.communitycarenc.org/population-management/medical-home/ABCD/>
- ^{xlii} Earls, M. (July 2016). *Assuring Better Child Health and Development (ABCD) Program Improves Screening Rates*. CCNC Data Brief No. 7, Community Care of North Carolina, Inc.
- ^{xliii} Earls, M. op cit.
- ^{xliv} Earls, M. op cit.
- ^{xlv} Zero to Three. (2016). *North Carolina Medicaid requires developmental screening in health settings*. Retrieved from <https://www.zerotothree.org/resources/863-north-carolina-medicaid-requires-developmental-screening-in-health-settings>
- ^{xlviii} The Early Childhood Technical Assistance Center, *States' and territories' definitions*, op cit.
- ^{xlix} National Early Childhood Technical Assistance Center. (n.d.). *Interactive Guide to Implementing and Sustaining Effective Service Delivery Approaches: Stages and Steps*. Retrieved January 10, 2017 from <http://ectacenter.org/effectiveservicedelivery/splash.asp>
- ^l *N.C. Health Check Program Guide*. (2016). (p. 42). Retrieved from [https://ncdma.s3.amazonaws.com/s3fs-public/Health Check Program Guide 2016 10.pdf](https://ncdma.s3.amazonaws.com/s3fs-public/Health%20Check%20Program%20Guide%202016%2010.pdf)
- ^{li} Dr. Marian Earls, personal communication (2017).
- ^{lii} "CMS directs use of CPT code 99420 (Health Risk Screen), one (1) unit per administration, with EP modifier when billing for this service. When conducted as part of a comprehensive Health Check Early Periodic Screening visit, this screen may be billed to the infant's Medicaid coverage. Providers should carefully review this Program Guide's section on *General Guidance on Use of Structured Screening Tools* and follow all documentation requirements." *NC Health Check Program Guide*, op cit., p. 43
- ^{liii} Dr. Marian Earls, personal communication (2017).
- ^{liv} Reach Out and Read. (2014). *About Reach Out and Read*. Retrieved from <http://www.reachoutandread.org/about-us/>
- ^{lv} C. Boulware, personal communication, 11 November, 2016. <http://www.rorcarolinas.org/findaprogram.html>
- ^{lvi} National Early Childhood Technical Assistance Center. (2008). *Early Childhood Transition from Part C to Part B: Timeline Requirements*. Retrieved February 18, 2017 <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/Disabilities/Services%20to%20Children%20with%20Disabilities/Transitions/EarlyChildhoodT.htm>
- ^{lvii} Early NC Childhood Foundation. (2016). *Select Birth-to-Eight Provisions in FY 2016-17 Conference Report and the House and Senate Budget Proposals*. Retrieved from <http://buildthefoundation.org/wp-content/uploads/2016/06/2016-Conference-Report-Provisions.pdf>
- ^{lviii} Workgroup on Principles and Practices in Natural Environments. (2008). *Agreed Upon Mission and Key Principles For Providing Early Intervention Services in Natural Environments*. Retrieved from http://ectacenter.org/~pdfs/topics/families/Finalmissionandprinciples3_11_08.pdf
- ^{lix} Whipple, W. (2014). *Key Principles of Early Intervention and Effective Practices: A Crosswalk with Statements from Discipline Specific Literature*. Retrieved from http://ectacenter.org/~pdfs/topics/eiservices/KeyPrinciplesMatrix_01_30_15.pdf
- ^{lx} *B6 Data Reporting Tools: Educational Environments, Ages 3-5*. (2016). Retrieved from <https://ideadata.org/resource-library/545d18f6140ba052308b456f/>

-
- ^{lxi} Policy Advisory The Law on Inclusive Education, CONNECT: The Center to Mobilize Early Childhood Knowledge, 2009 <http://nceln.fpg.unc.edu/sites/nceln.fpg.unc.edu/files/resources/CONNECT-The Law on Inclusive Education.pdf>
- ^{lxii} NC Early Learning Network. (n.d.). *Inclusion Resources*. Retrieved February 18, 2017 from <http://nceln.fpg.unc.edu/inclusionresources>
- ^{lxiii} CONNECT: The Center to Mobilize Early Childhood Knowledge. (2009). *Policy Advisory: The Law on Inclusive Education*. Retrieved from <http://nceln.fpg.unc.edu/sites/nceln.fpg.unc.edu/files/resources/CONNECT-The Law on Inclusive Education.pdf>
- ^{lxiv} Blackorby, J., and Wagner, M. Longitudinal postschool outcomes of youth with disabilities: Findings from the National Longitudinal Transition Study. *Exceptional Children*, 1996. Cited in *Inclusion Planning Guide*. (2014). Retrieved from <http://nceln.fpg.unc.edu/inclusionresources>
- ^{lxv} Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). *Expert Convening on Infant and Early Childhood Mental Health Consultation*. Retrieved from https://www.samhsa.gov/sites/default/files/programs_campaigns/IECMHC/iecmhc-expert-convening-summary.pdf
- ^{lxvi} SAMHSA, *Expert Convening*, op. cit.
- ^{lxvii} SAMHSA, *Expert Convening*, op. cit.
- ^{lxviii} The California Evidence-Based Clearinghouse for Child Welfare. (2016). *Attachment and Biobehavioral Catch-up (ABC)*. Retrieved from <http://www.cebc4cw.org/program/attachment-and-biobehavioral-catch-up/detailed>
- ^{lxix} SAMHSA's National Registry of Evidence-based Programs and Practices. (2017). *Child-Parent Psychotherapy (CPP)*. Retrieved from <http://legacy.nreppadmin.net/ViewIntervention.aspx?id=194>
- ^{lxx} The National Child Traumatic Stress Network. (2012). *CPP: Child-Parent Psychotherapy*. Retrieved February 18, 2017 from http://nctsn.org/sites/default/files/assets/pdfs/cpp_general.pdf
- ^{lxxi} *Child First*. (2011). (p. 1). Home Visiting Evidence of Effectiveness. Retrieved from <http://homvee.acf.hhs.gov/Model/1/Child-First/42/1>
- ^{lxxvii} Community Care of NC, *Assuring Better Child Health and Development*, op cit.
- ^{lxxix} North Carolina Division of Medical Assistance. (n.d.). *Health Check and EPSDT*. Retrieved on November 8, 2016 from <https://dma.ncdhhs.gov/medicaid/get-started/find-programs-and-services/health-check-and-epsdt>
- ^{lxxx} Community Care of NC, *Assuring Better Child Health and Development*, op cit.