



Why Brain Development Is So Important for Young Children



It is true that our brain continues to develop throughout our lifetime, but the first few years of life are especially important. Why? Because the brains of infants and young children are more impressionable.

That's good and bad. On the positive side, infants and toddlers benefit more from learning and early enriching experiences. Conversely, they are more vulnerable to environments that are harmful and not nurturing.

While we've known for a long time that education begins before kindergarten, the emphasis on how humans learn from birth is relatively new. The Community Foundation set out to explore how communities can help support and encourage innovation in the area of child development.

In this issue, you'll hear what programs are positively impacting the development of children throughout our state. You'll see how research is being used to shape training programs for early childhood educators. You'll understand how focusing on programs that prevent abuse and neglect can create safe environments for developing children.

Join me in discovering some of the ways Arkansas people, programs and organizations are helping infants and toddlers reach their unlimited potential.

In service,

What Children Need to Have Their Best Life 2

Putting Brain Science to Work for Arkansas Children 6

The Upstream Solution to Child Abuse and Neglect: Prevention 11

Arkansas Viewpoints: "What can Arkansans do to ensure all children have the opportunity to grow and develop to their maximum potential?"......13

Government Resources Boost Voucher Numbers, Quality and Innovation...... 14

"Altruism is a learning process. Generosity becomes habitual."...... Back Cover

On the cover: Justin and Melissa Carter live for interactions with their 1-year-old son Lachlan.

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President and CEO — Heather Larkin

Editor — Lea Whitlock

Contributor — Jessica Szenher

Designer — Lesley Cooper

Heather Larkin President and CEO

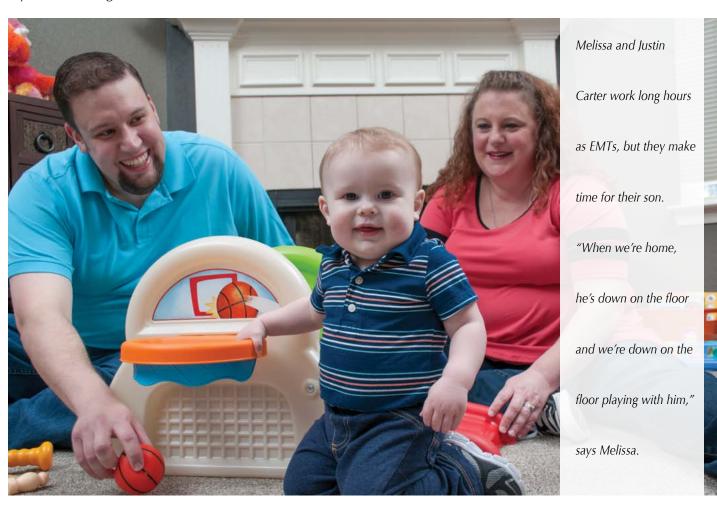
Visit **AspireArkansas.org** to view indicator data related to early childhood development:

- Families Child Abuse and Neglect
- Families Children Living in Poverty
- Families Food Insecurity
- Health Early Prenatal Care
- Health Infant Mortality



What Children Need to Have Their Best Life

By Kim Dishongh



Melissa and Justin Carter's living room is filled with colorful, noisy toys and they spend much of their time there on the floor with their 1-vear-old son, Lachlan.

"We talk to him constantly," says Melissa Carter. "And we play, play, "They tell him about mundane day-to-day activities — they use a hairbrush to brush their hair, they explain — and encourage him to bang his toy hammer on his favorite toy as long as he wants, knocking balls through to make a tinkling sound on the xylophone below, they explain. They let him explore his surroundings, respond to his cues and follow his lead.

"I want him to like sounds and all kinds of textures and musical instruments, and if we go to the store and he reaches out and touches something I'll let him touch it," Carter says. "I like to touch things in the store, to see how they feel, so I let him do that, too."

They give him a wide variety of solid foods, often the same ones they're eating, and they don't bat an eye at the mess he makes as he pushes it around the tray of his high chair,

tosses bits to the floor and crams fistfuls into his mouth.

"Even on his worst day, it doesn't take more than 10 minutes to get him cleaned up," says Justin.

Those in the know — including Lachlan's grandmother, Janice Carter, program coordinator at Arkansas State University Childhood Services — point out that the things they are doing will give Lachlan the best chance at being a successful human.

"One of the biggest things that we all need to remember is that this birth to 5 period in our lives is when the brain is wiring for about 85 percent of what it's going to survive on this earth," says Janice Carter. "It's not 85 percent of all you're ever going to learn as far as facts and that kind of thing, but it's our ability to make our bodies work in space and function and to be able to have exact hand eye coordination. We're wiring here the next surgeons and programmers and mechanics and who knows what else."

Carter supervises a team of assessors who look at childcare programs across the state and offer technical assistance and training to staff where needed. She also teaches workshops on brain development.



She has passed on much of what she has learned about how to best nurture young children over the years to her son and daughter-in-law so they can channel that knowledge into helping Lachlan. Talking to him is one of those things. "They learn the sounds of their native language in the first six months so they need to hear lots of language and sometimes people don't talk to babies because they think babies can't talk. They should speak their native language to their children as much as possible," she says, cautioning against playing music or having the television on loud enough to drown out conversation.

Melissa Sutton, program coordinator of the Conscious Discipline/BehaviorHelp Support program with Arkansas State University Childhood Services, says that before they can learn anything, they need to feel safe with and connected to the adults who are caring for them. Security comes from having basic needs met — things like food, shelter, a safe place to sleep — and from having schedules and routines so they know what's coming next and understand their other needs will be met.

"Spend time with your child, be very intentional, provide a consistent schedule, make sure they know they're going to have time with you," Sutton says. "You know, 'after dinner every night I will play with you,' so it's consistent and they don't have to demand it."

Sutton's group has trained more than 7,000 teachers across the state to see that some of the behaviors once interpreted as misbehavior warranting punishment are actually rooted

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in a child's need for security and connection. Sometimes these behaviors can be addressed by creating a routine that makes children feel secure; sometimes they provide teachable moments. A child who hits another child, for example, may need to understand the mechanism for engaging with a friend.

"They don't know how to join play without being taught," Sutton explains. "We can say to that child, 'Oh, you want to play with him? When you want to play with him, tap him on the shoulder or say, 'Wanna play?'

The lessons taught through Conscious Discipline are wide-reaching, she says.

"It doesn't just work in the classroom, it works everywhere. It works in your relationships with families and with co-workers and that's why Arkansas has been willing to make this commitment. We've seen fewer behavior referrals in schools where they implement Conscious Discipline," she says. "I feel so blessed to have this opportunity to help teachers and children get this experience, get these skills at such a young age, because it really does have the power to change how we look at things and how we interact with each other."

Geania Dickey, an early childcare education consultant who worked with Arkansas Advocates for Children and Families to start Arkansas Better Beginnings, sees a connection between what children learn in early childhood and how they turn out as adults.





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"People are coming out of high school without the soft skills that they need — the communication skills, the working as a team. The social and emotional development of kids in that first five years of development is really, really important," Dickey says. "That's why that whole understanding and trusting of adults and knowing that they're there for you and that they help keep you safe is really important for children to feel and know because it plays out through other relationships later. We're trying to make that link to where soft skills start, and as an employer and they're their future employees, they should care about what's happening."

Dickey says parents have to be intentional in teaching children about the world around them. Something as simple as putting a child in the middle of the bed and letting him help fold the laundry rather than putting him in front of the television to keep him occupied is one way to engage him,

"Every parent could do that — you don't need money and you don't need toys, but you do need focus, and I think that's hard because we bring work home and we have a lot of things to do. But I think that it's really important to include them in what we're doing and not thinking of it as extra," she says. "Those relationships make children feel safe and secure but they're also learning about real-life."

Melissa and Justin Carter are putting in that effort with

Lachlan at home. But both are EMTs and have struggled to find good childcare. Each works a 12-hour rotating shift, schedules that are inconsistent with most daycare settings. And a compatible schedule, of course, wasn't their only consideration.

"Most of the work I do in communities is around childcare because if that's where they are, I want them to have the same safe place to explore and that adult/child interaction in a purposeful, rich way like they would at home with their families — and that's tricky to do because of ratios and what parents can afford and so it's a little more complex," says Dickey.

Infant workers are often paid minimum wages and pre-kindergarten teachers, even with equal qualifications, make an average of \$16,000 less than their kindergarten counterparts, Dickey says. She and others are trying to reframe the conversation about why quality care and qualified staff are important in today's society.

"It is everyone's responsibility. We understand that brain development happens in the first five years and that it behooves a nation to do that well; it's not just a parental responsibility. We're working on some communications around the importance of the first five years as it relates to a community and economics. We haven't really done that before," she says. "The conversation we've been having since I moved here in 2000 has been about early childhood

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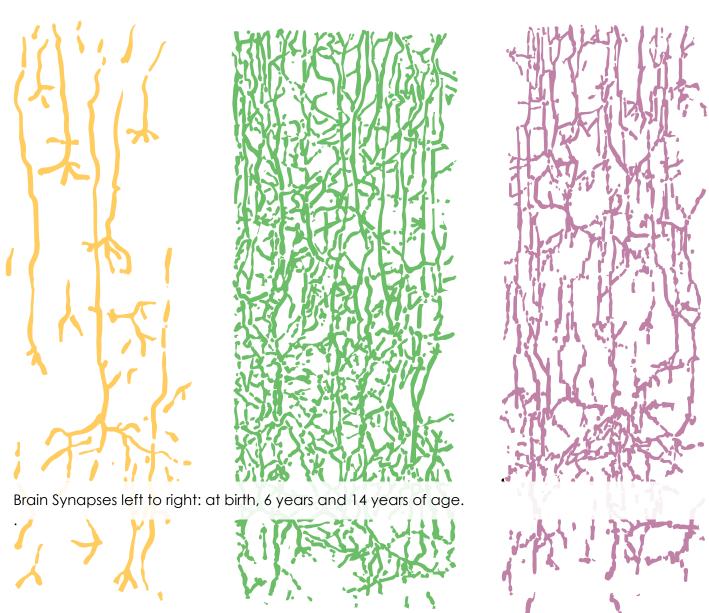
Lachlan Carter, 1, likes to play with his dog, Barley. His parents let him run his fingers through Barley's fur and talk to him about Barley, allowing him to explore his world and increase his vocabulary at the same time.



as a school-readiness time. We're reframing that to let people think about it in a broader way, like how does it support parents in going to work and then how does it support children; how does it lay a foundation for future academics?"

The Carters found a daycare they feel confident in for Lachlan. "With daycare he gets social interaction and he sees that there are rules and it's not just us — we're not the only ones that have rules or bedtime or naptime or whatever — he gets to be with other kids and be around other people and to me that's really good for socializing him," says Melissa Carter.

And though they work long hours and often come home drained, they focus their energy on him when they are home as a family. "It's what we do," says Justin Carter. "We love being with him. It's just worth it."



Putting Brain Science to Work for Arkansas Children

Brain science demonstrates that for children to reach their full potential, communities need to support the ability of families and childcare programs to provide specific experiences when the brain benefits most – in the first few years of life.

"Responsive interactions at the right stages of development help determine how well children think and regulate emotion," said Nikki Edge, Ph.D., Assistant Director of the Research and Evaluation Division in the Department of Family and Preventive Medicine at the University of Arkansas for Medical Sciences (UAMS).

Development is a combination of genes and environment. We are born with most of the neurons we will ever have, but we need to build connections between neurons to help them communicate and process information. Dr. Edge uses the analogy that we all are born with telephone poles in our brain (the neurons). But we need interaction with our environment to string the wires between those poles (connections between neurons).

"Brains are wired by responsive interaction — that's what builds the connections between neurons," she said. "There are 100 trillion connections in one baby's brain. Those connections are happening because of serve and return experiences with

5 contintued on page 7



family members and teachers."

Babies' experiences are defined by those who care for them. Infants communicate by cooing, babbling, pointing and crying. Adults return by making noises in response, talking, picking them up, rocking them and feeding them.

"Every time a child smiles, we smile back. Or not. The heart of quality care is warm tones, teachers who are talking at eye level, who respond to communications," said Dr. Edge. "It happens from moment one. By about age 2 there has been phenomenal growth in the child's ability to communicate. We can predict third-grade reading abilities from age 2 because the wires they need have been set."

Brain science strategies work for everyone, parents as well as early childhood teachers. We can learn to be brain builders by following three major steps:

- 1. First, the physical environment should be stimulating, but not overstimulating. Infants and toddlers need books and simple toys because the way that children learn is through play. They need proper nutrition, a safe space to explore and a schedule that fits the age of the child.
- 2. Interactions are the heart of brain building. For example, young children in front of a TV may get stimuli, but they don't get response. There is no serve and return. Even TV shows dedicated to learning can't substitute for responsiveness from caregivers.
- 3. We need to help children learn to build the kind of relationships that will motivate them to do well for those who teach and love them. To build a healthy brain, we need to model the skills we are teaching be responsive, keep our own composure, problem solve ourselves.

Lack of responsiveness to infants and toddlers is detrimental to brain development. When children are in an

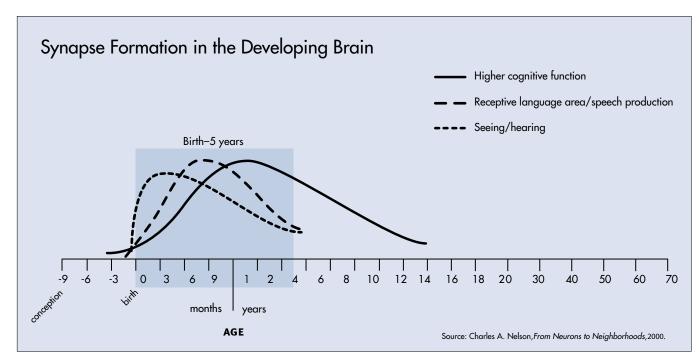
"Brain building is not a one-time thing. Our teaching works best when we make it a habit," said Dr. Edge. "The learning process doesn't occur unless we model, play and teach consistently. We want to build the kind of brain able to support good choices

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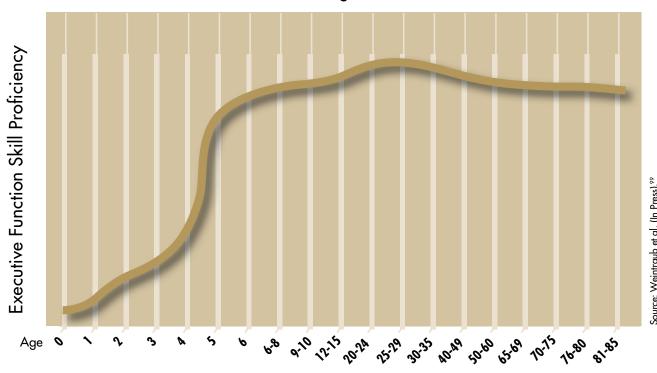
anxiety don't triumph."

environment of fear and anxiety, in a family plagued by substance abuse or experiencing food insecurity, it is more difficult for brains to develop.

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Executive Function Skills Build Throughout Childhood and Adolescence



A range of tests measuring different forms of executive function skills indicates that they begin to develop shortly after birth, with ages 3 to 5 providing a window of opportunity for dramatic growth in these skills. Growth continues throughout adolescence and early adulthood; proficiency begins to decline in later life.

Currently Dr. Edge is researching the social and emotional development of young children, teaching the teachers specific tools that develop essential soft skills. These skills include focus, planning and controlling impulses to stay on task, getting along, solving complex problems with peers, adjusting to the unexpected and working as a team. While teachers think of these as kindergarten readiness, employers think of them as skills they seek in employees.

"By age 2-3, we can teach soft skills using classroom strategies that help future employees function in the workplace," said Dr. Edge. "The economic development implication of having high-quality, age-appropriate childcare also allows more moms to work because they are confident their children's developmental needs are being met."

In programs like REACH (Reaching Educators and Children) teachers learn to teach children to name their feelings. They use emotions posters and regularly talk about and name their feelings to increase emotional literacy. The idea is to teach young children how to stop and think. Some tactics include deep breathing, blowing bubbles and mimicking the turtle who goes into his shell to think before he comes out to act.

The research-based REACH Program gives teachers tools to help children learn conflict resolution and problem-solving skills. For example, if children are fighting over a toy, teachers support the children by stating the problem and

suggesting a solution (like taking turns, getting another toy or having set times to play with the toy). The children choose a solution, rather than depending on the teacher to resolve the conflict.

REACH also helps teachers be a good example of social and emotional skills in the classroom. Other programs available in the state have similar goals.

"The program Conscious Discipline helps teachers keep their composure and change the lens through which they view a situation," Dr. Edge said. "They learn to view conflicts among children not as a problem, but as an opportunity to teach and learn, to build those little brains."

Another research-based program, BehaviorHelp, allows teachers to focus on keeping children in danger of expulsion in the classroom. Research has shown the long-term consequences of being expelled from childcare, including future school failure, adolescent behavior problems and even adult incarceration.

Through BehaviorHelp, teachers receive training, technical assistance and mental health consultation resources from UAMS Project PLAY, the Arkansas Department of Human Services Early Childhood Education or Arkansas State University. The program is geared to meet the needs of each individual child and their teacher. In fiscal year 2018, BehaviorHelp served teachers of 376 children at 206 childcare centers in 54 Arkansas counties.

7



Rockefeller Early

Childhood Center

teacher Shirley Lovelace

talks with children

about colors and

shapes. Rockefeller, in

the Little Rock School

District, is the only

central Arkansas public

school that serves

children birth to age 4.



Providing the right environment and experiences for infants and toddlers ensures healthy brain-building early on. That's easier than expensive, intensive therapy that could be needed later on if brains are not working to their full potential.

"It is incredibly powerful to remind teachers that, yes, there are some things they can't change. But we can shape the brains of those kids eight hours a day in a healthy space with a responsive caregiver," said Dr. Edge. "Eight hours a day of responsive, healthy interactions goes a long way even if the other environments are not optimal. That can be life changing, brain changing!"

Community programs that ensure food security for all children and help provide living environments that are free from trauma, domestic violence and substance abuse are keys to brain building. Another way to support child development is to become engaged in creating innovative programs like community-funded childcare or encouraging employers to consider operation of quality childcare facilities.

"It is nearly impossible to run a quality program on what parents can pay," said Dr. Edge. "Subsidizing quality childcare and regulating the experiences are big challenges. The most important part of brain building, responsive interaction, is the hardest thing to regulate."

interaction in early childhood education. Recently, Arkansas DHS/Division of Child Care and Early Childhood Education strengthened regulations requiring a 1-5 teacher ratio. While it is an improvement from 1-6, it is still difficult for one teacher to have individual responses to five infants or toddlers.

"The policies aren't catching up with the research quickly enough. I feel a sense of urgency," said Dr. Edge. "One thing everyone can do is educate policy-makers in their community about utilizing brain science research to help children reach their full potential."

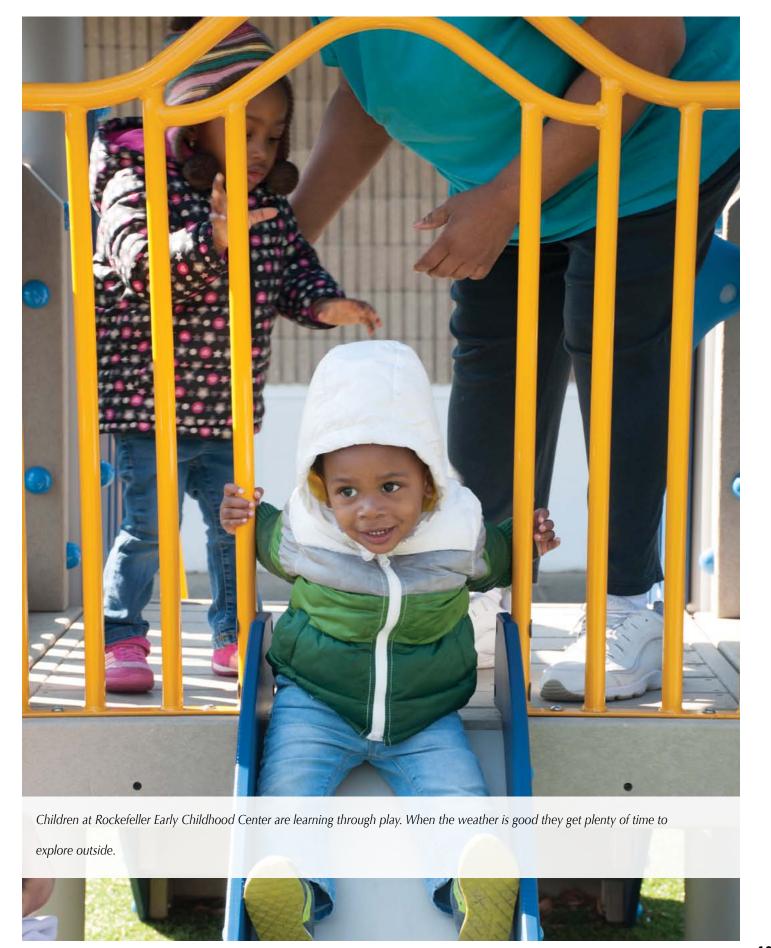
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Often current regulations fail to recognize the importance of

The Upstream Solution to Child Abuse and Neglect: Prevention



There's a popular parable among prevention experts about a villager who finds a child floating downriver, yelling for help. The villager stops what he's working on and runs to save the child. The next day, he rescues three more children, and ten the next. While the villagers are figuring out how to provide the necessary care for these newfound children, a wise villager travels upstream to determine the source of the problem. There, hopefully a solution can be found to keep children from falling into the river.

In our parable, upstream is where organizations like the Arkansas Children's Trust Fund are working to prevent children falling into situations of abuse and neglect. According to data found on **AspireArkansas.org**, Arkansas ranks 40th in the nation in reports of maltreatment or abuse. The Trust Fund, in unison with many other

concerned citizens and nonprofits, realize that the best way to prevent child abuse is to help parents develop skills and acquire resources needed to meet the developmental needs of their children and protect them from harm.

Research shows that children who experience abuse and neglect suffer not only immediate emotional or physical pain, but also endure long-term repercussions through adolescence and adulthood. National agencies like The Child Welfare Information Gateway make it their mission to provide free learning tools so individuals and agencies have the information needed to understand the detrimental effects of child abuse.

The Arkansas Children's Trust Fund works locally within the Arkansas Division of Children and Family Services to support programs and initiatives that promote positive parenting practices and encourage strong, healthy families. The fund provides a permanent funding source for the prevention of child abuse and works to ensure a brighter future for all Arkansans.

Children are more likely to have a safe and healthy home when their parents or caregivers have support from their family, friends and community. When parents don't have supportive networks and feel isolated, chances are they are more likely to make negative decisions that can lead to neglect or abuse.

"When we talk about building programs that support families, we really look to what we call the Strengthening Families Protective Factors Framework," said Sherri Jo McLemore, program director for the Fund. "This is a framework that's built on research which tells us the more of these protective factors that we can put in place for a family, the less likely there is to be abuse or neglect."

These factors from the Center for Study of Social Policy have been linked to a lower incidence of child abuse and neglect and engages families, programs and communities in building five key protective factors:

Parental resilience. Parents who are emotionally resilient have a positive attitude, creatively problem solve, effectively address challenges and are less likely to direct anger and frustration at their children.

Knowledge of parenting and of child and youth development. Parents who understand how children grow and develop can provide an environment where children can live up to their potential.

Social connections. Trusted and caring family friends provide emotional support to parents by offering encouragement and assistance in facing the daily challenges of raising a family.

Concrete supports for parents. Parents need basic resources such as food, clothing, housing, transportation and access to essential services that address family-specific needs (such as child care, health care and mental health services) to ensure the health and well-being of their children.

Social and emotional health of children. Family and child interactions help children develop the ability to communicate clearly, recognize and regulate their emotions and establish and maintain relationships.

The Children's Trust Fund uses the Protective Factors Framework as a guide to supporting prevention programs around the state. "We try to build programs that focus on delivering those five things to families so there will never be abuse and neglect," said McLemore. "Let's start with parental resilience for example. We work with organizations that help parents understand how to deal with everyday challenges of life — how to problem solve, how to not get discouraged and to keep moving forward."

For more information on how to support organizations like The Children's Trust Fund, contact Foundation staff at 501-372-1116.



Strengthening Families Protective Factors Framework

- Parental resilience
- Knowledge of parenting and of child and youth development
- Social connections
- Concrete supports for parents
- Social and emotional health of children

12

What can Arkansans do to ensure all children have the opportunity to grow and develop to their maximum potential?



Delia Anderson Farmer Executive Director Economic Opportunity Agency of Washington

The availability and accessibility of high-quality early childhood education programs in our communities are vital. Research estimates that 85 percent of brain development occurs by the age of five, which means experiences during the infant and toddler years form the foundation a child needs to learn, grow and achieve their full potential in school and beyond.

Children develop and learn best in environments that are psychologically and physically safe and that nurture positive relationships among caring adults and other children. The EOA Head Start/Early Head Start Program recognizes parents as a child's first teacher and actively engages families in the learning process. This shared relationship and interaction strengthen the foundation for their child's social and emotional development, as well as promotes creativity and initiative, fosters a language-rich environment and impacts problem-solving and reasoning skills

We know that healthy child development is critical; however, the number of families seeking affordable, high-quality early childhood services exceeds the number of slots available in many Arkansas communities, especially for ages birth to three. Collaborative approaches that engage parents, early childhood service providers, policymakers, educators, advocates, funders and community leaders are necessary to expand opportunities for our children to have access to high-quality early learning experiences and develop the skills they need to succeed.

When we work together and invest early in our children, we ultimately pave the way for a brighter future and better outcomes for our children, families and communities.



Sherri Jo McLemore
Program Manager
Arkansas Children's
Trust Fund
Arkansas Department of
Human Services Division
of Children and Family
Services

The Center for Disease Control has coined a phrase that very succinctly describes what children need to grow and thrive. The CDC says, "Children need safe, stable, nurturing relationships and environments."

When it comes to stability, Arkansans must consider strategies to strengthen the household financial security of families. Supports such as earned income tax credits, subsidized child care, and increased SNAP benefits can reduce the financial burden that families feel. Work policies such as paid parental leave and consistent work schedules mean parents are less stressed and able to create predictable and consistent environments for their children.

Evidence shows us that access to quality child care and early childhood education programs builds a strong foundation for future learning and healthy development. Programs with a family engagement focus are especially important. It is also important that our state seeks to improve the quality of our early childhood programs through licensing and quality rating systems, like the state's Better Beginnings program.

Parents who have inadequate parenting skills or are experiencing stress have more difficulty parenting and providing the care their children need. Parents who experienced maltreatment or family dysfunction during their own childhood may need extra support in this area. Arkansas should increase the availability of parenting education programs across the state and expand our investment in early childhood home visiting programs such as Healthy Families America or the Parents As Teacher program.

ARKANSAS VIEWPOINTS



Government Resources Boost Voucher Numbers, Quality and Innovation

Expansion of federal childcare block grant funding authorized by Congress in the spring of 2018 has allowed Arkansas Department of Human Services to clear its waiting list for childcare vouchers, increasing the number of children receiving assistance for full-time childcare from 5,307 to 7,167 in less than a year.

The childcare assistance program serves infants and toddlers, pre-K and, for children up to age 12, afterschool and summer programs. Families must have household income below 200 percent of the federal poverty level to qualify. In addition, at least one parent must work 30 hours or more per week. Facilities receiving vouchers must be certified for quality as a part of DHS Better Beginnings.

"We all want every child to have the same opportunity for quality care and their parents to have peace of mind while they work," said Tonya Williams, director of the DHS Division of Childcare and Early Education. "But increasing numbers isn't the whole story. We are making strides in improving quality and encouraging innovation in childcare with these added resources."

The DHS Division of Child Care and Early Education has been supporting professional development for caregivers and workforce development. They are studying the turnover and compensation issues that plague many childcare providers and working to find solutions. One is the adoption of the TEACH national model that provides scholarships, credentialing and certification incentives to caregivers.

There are two major predictors of quality child development for young children — teacher/child interaction and the use of curriculums to help children learn. Child development hinges on reciprocity, especially with infants and toddlers.

"It is all about serve and return when engaging with young children. The importance of wiring very young children's brains for words and sounds cannot be underestimated," said Williams. Studies confirm that most sensory and language development occurs in a child's first year.

The block grants have also allowed DHS to initiate a \$1 million matching grants program for community organizations to receive funding for innovative childcare programs. Organizations interested in the matching grants may call Jeffrey Griffin at **501-320-6082** to learn more about applying for the grants.

"We're hoping that nonprofits, foundations and providers will work together to present new ideas that we can help fund," Williams said. "We don't want to put too many barriers on the funding, as long as the proposals improve the quality of early childhood education."

13

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"Altruism is a learning process. Generosity becomes habitual."

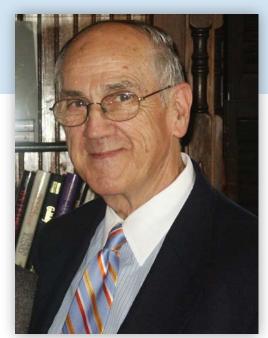
Dr. Tom Bruce

Much like children learn new skills as they grow, Dr. Tom Bruce would say altruism is a learning process. "I learned that needs and problems tend to turn people off. But when you look at human potential, it gets people excited."

Tom Bruce (1930-2016) was a physician and an educator, but to many people in Arkansas he was known as a philanthropist. He saw the world through two sets of lenses: exploring the underlying problems and understanding better ways to solve them. "I've gone from treating the individual to advocating for the public's health — how we keep the broader community healthy."

Dr. Bruce was a key advisor to the Community Foundation for many years and conducted research around Arkansas' charitable needs and identifying the gaps our donors can help to fill. In the years following his service as program director at the W.K. Kellogg Foundation, he returned to Arkansas and applied his new skills to better understanding community needs, especially those of children and families in the Delta region, and identifying solutions.

Among his many contributions to Arkansas, Dr. Bruce's personal philanthropy lives on through his family and their fund at the Community Foundation. Their generosity will continue to deeply affect programs addressing community development, youth programs, health, social services and higher education in years to come.



Dr. Tom Bruce

